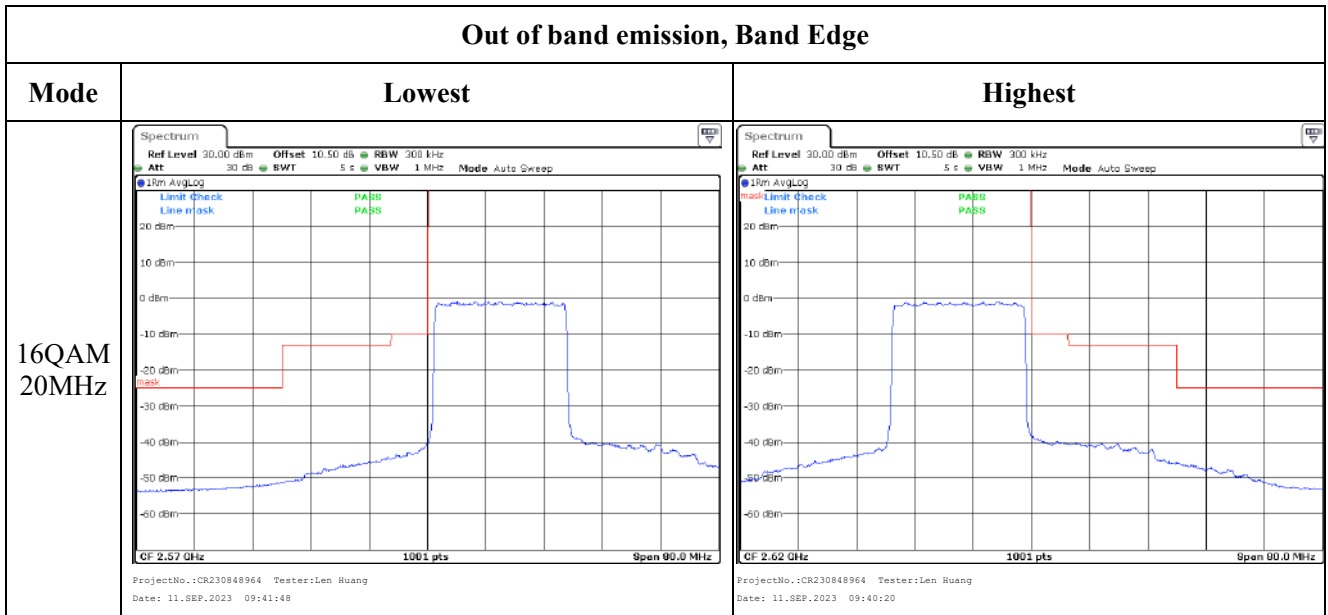


Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 11.SEP.2023 09:18:17</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 11.SEP.2023 09:19:50</p>
16QAM 10MHz	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 11.SEP.2023 09:25:44</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 11.SEP.2023 09:23:29</p>
16QAM 15MHz	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 11.SEP.2023 09:36:18</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 11.SEP.2023 09:38:09</p>

Out of band emission, Band Edge



4.13 Antenna Port Test Data and Results for LTE Band 40

Serial Number:	2A93-1	Test Date:	2023/9/9
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	28.3	Relative Humidity: (%)	46	ATM Pressure: (kPa)	100.2
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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
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
Weinschel	Power Splitter	1515	RA914	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

Test Frequency for Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	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	23.15	/	23.14	22.56	24
	RB1#13	23.26	/	23.24		
	RB1#24	23.17	/	23.09		
	RB15#0	22.18	/	22.19		
	RB15#10	22.18	/	22.18		
	RB25#0	22.23	/	22.20		
5MHz 16QAM	RB1#0	22.45	/	22.22	21.82	24
	RB1#13	22.52	/	22.32		
	RB1#24	22.41	/	22.18		
	RB15#0	21.22	/	21.23		
	RB15#10	21.25	/	21.23		
	RB25#0	21.18	/	21.26		
10MHz QPSK	RB1#0	/	23.20	/	22.80	24
	RB1#25	/	23.50	/		
	RB1#49	/	23.21	/		
	RB25#0	/	22.21	/		
	RB25#25	/	22.21	/		
	RB50#0	/	22.23	/		
10MHz 16QAM	RB1#0	/	22.17	/	21.71	24
	RB1#25	/	22.41	/		
	RB1#49	/	22.17	/		
	RB25#0	/	21.26	/		
	RB25#25	/	21.26	/		
	RB50#0	/	21.25	/		

LTE Band 40 Upper:**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	23.13	/	23.08	22.51	24
	RB1#13	23.21	/	23.17		
	RB1#24	23.07	/	23.02		
	RB15#0	22.13	/	22.13		
	RB15#10	22.11	/	22.10		
	RB25#0	22.13	/	22.11		

5MHz 16QAM	RB1#0	22.36	/	22.15	21.75	24
	RB1#13	22.45	/	22.25		
	RB1#24	22.29	/	22.09		
	RB15#0	21.16	/	21.12		
	RB15#10	21.17	/	21.13		
	RB25#0	21.11	/	21.16		
10MHz QPSK	RB1#0	/	23.23	/	22.76	24
	RB1#25	/	23.46	/		
	RB1#49	/	23.12	/		
	RB25#0	/	22.16	/		
	RB25#25	/	22.12	/		
	RB50#0	/	22.12	/		
10MHz 16QAM	RB1#0	/	22.14	/	21.65	24
	RB1#25	/	22.35	/		
	RB1#49	/	22.07	/		
	RB25#0	/	21.22	/		
	RB25#25	/	21.18	/		
	RB50#0	/	21.15	/		

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

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

Duty Cycle

Operation Band	Modulation	Bandwidth	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	Limit (%)
LTE Band 40 Lower	QPSK	5M	3	10.005	29.99	38
		10M	3	10.005	29.99	38
	16QAM	5M	2.995	10.005	29.94	38
		10M	3	10.005	29.99	38
LTE Band 40 Upper	QPSK	5M	3	10.005	29.99	38
		10M	3	10.005	29.99	38
	16QAM	5M	3	10.005	29.99	38
		10M	3	10.005	29.99	38
Result:					Pass	

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	5.300	/	5.080
5MHz 16QAM	4.511	/	4.511	5.180	/	5.160
10MHz QPSK	/	8.942	/	/	10	/
10MHz 16QAM	/	8.942	/	/	9.72	/
LTE Band 40 Upper:						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle channel	High Channel
5MHz QPSK	4.511	/	4.511	5.28	/	5.26
5MHz 16QAM	4.531	/	4.511	5.2	/	5.28
10MHz QPSK	/	8.942	/	/	9.8	/
10MHz 16QAM	/	8.942	/	/	9.84	/
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

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

FCC §2.1055, §27.54: Frequency Stability

LTE Band 40 Lower:						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2305.179	2305.000	2314.759	2315.000
	-20	3.85	2305.277	2305.000	2314.889	2315.000
	-10	3.85	2305.271	2305.000	2314.879	2315.000
	0	3.85	2305.334	2305.000	2314.772	2315.000
	10	3.85	2305.142	2305.000	2314.882	2315.000
	20	3.85	2305.300	2305.000	2314.793	2315.000
	30	3.85	2305.185	2305.000	2314.777	2315.000
	40	3.85	2305.219	2305.000	2314.874	2315.000
Frequency Stability vs. Voltage	20	3.35	2305.134	2305.000	2314.824	2315.000
	20	4.4	2305.134	2305.000	2314.838	2315.000
Result:					Pass	

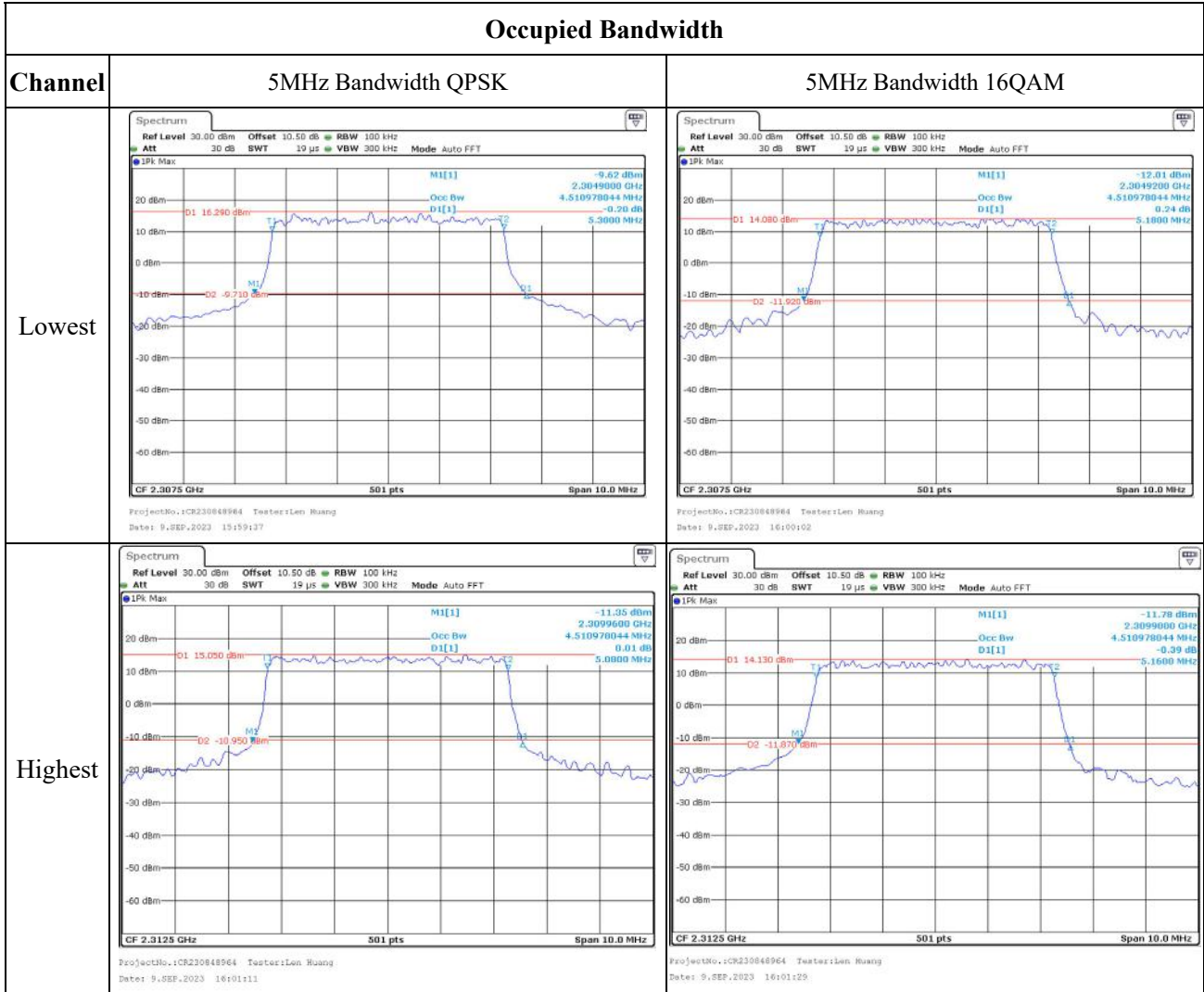
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2305.253	2305.000	2314.801	2315.000
	-20	3.85	2305.236	2305.000	2314.757	2315.000
	-10	3.85	2305.165	2305.000	2314.878	2315.000
	0	3.85	2305.237	2305.000	2314.733	2315.000
	10	3.85	2305.269	2305.000	2314.729	2315.000
	20	3.85	2305.164	2305.000	2314.734	2315.000
	30	3.85	2305.118	2305.000	2314.845	2315.000
	40	3.85	2305.113	2305.000	2314.843	2315.000
Frequency Stability vs. Voltage	20	3.35	2305.193	2305.000	2314.820	2315.000
	20	4.4	2305.213	2305.000	2314.798	2315.000
Result:					Pass	

LTE Band 40 Upper:						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2350.121	2350.000	2359.812	2360.000
	-20	3.85	2350.270	2350.000	2359.886	2360.000
	-10	3.85	2350.155	2350.000	2359.867	2360.000
	0	3.85	2350.125	2350.000	2359.786	2360.000
	10	3.85	2350.337	2350.000	2359.852	2360.000
	20	3.85	2350.233	2350.000	2359.886	2360.000
	30	3.85	2350.251	2350.000	2359.835	2360.000
	40	3.85	2350.226	2350.000	2359.783	2360.000
Frequency Stability vs. Voltage	20	3.35	2350.160	2350.000	2359.857	2360.000
	20	4.4	2350.186	2350.000	2359.741	2360.000
					Result:	Pass

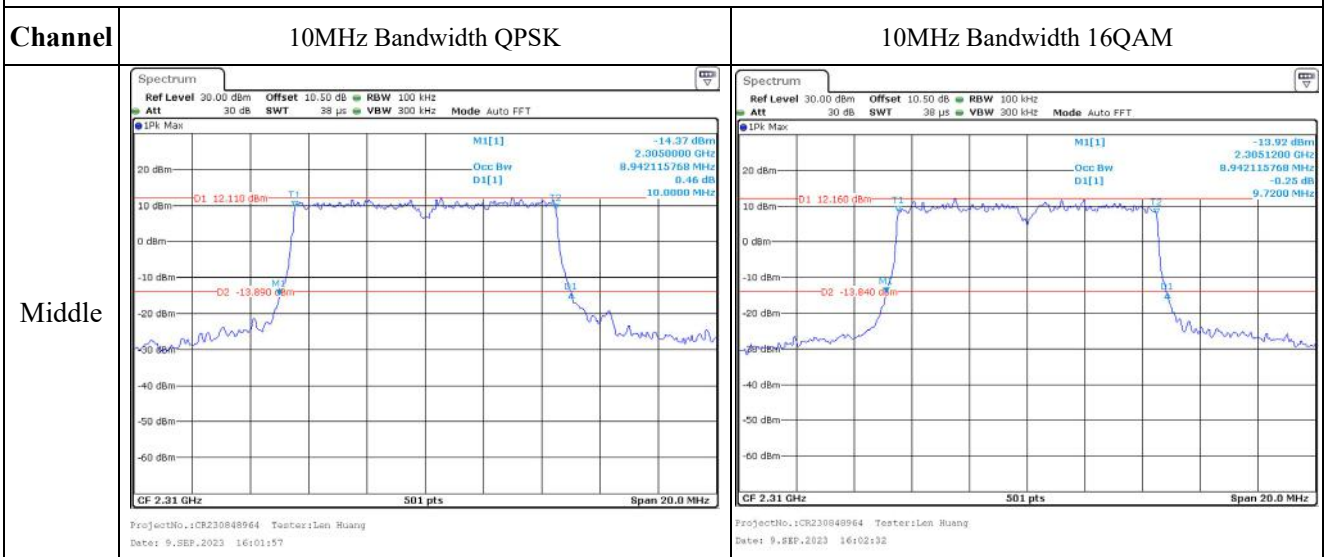
Test Mode: 10M 16QAM						
Test Channel: Lowest for Lower Edge,Highest for Upper Edge						
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2350.240	2350.000	2359.821	2360.000
	-20	3.85	2350.149	2350.000	2359.720	2360.000
	-10	3.85	2350.253	2350.000	2359.844	2360.000
	0	3.85	2350.247	2350.000	2359.788	2360.000
	10	3.85	2350.245	2350.000	2359.734	2360.000
	20	3.85	2350.255	2350.000	2359.725	2360.000
	30	3.85	2350.178	2350.000	2359.730	2360.000
	40	3.85	2350.306	2350.000	2359.855	2360.000
Frequency Stability vs. Voltage	20	3.35	2350.268	2350.000	2359.824	2360.000
	20	4.4	2350.312	2350.000	2359.768	2360.000
					Result:	Pass

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

LTE Band 40 Lower:



Occupied Bandwidth

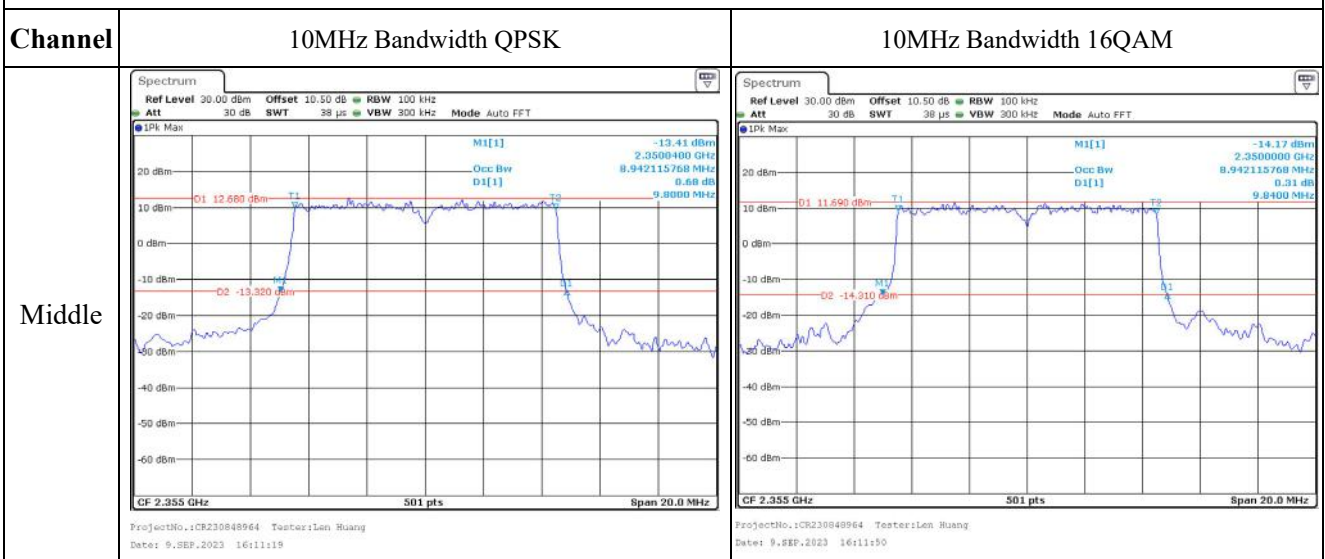


LTE Band 40 Upper:

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 16:09:15</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 16:09:36</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 16:10:33</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 16:10:54</p>

Occupied Bandwidth

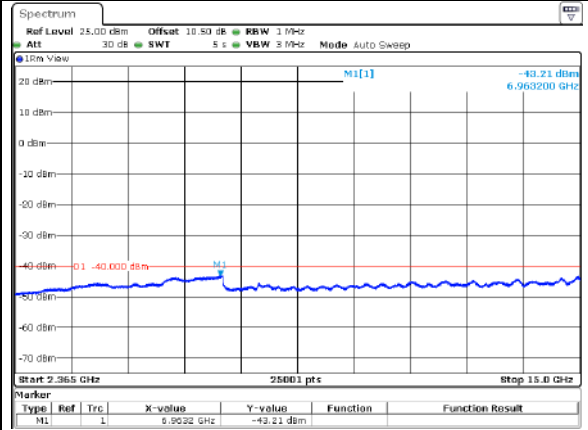
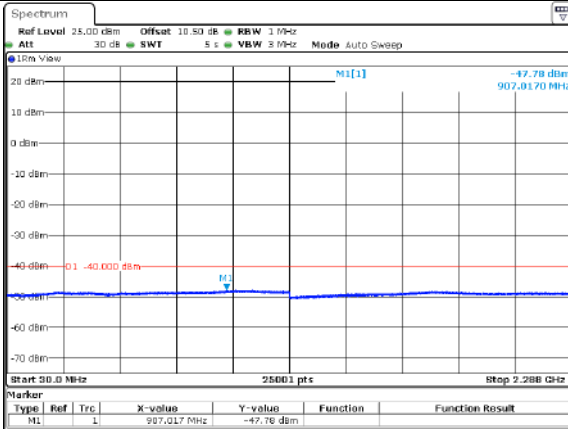


LTE Band 40 Lower:

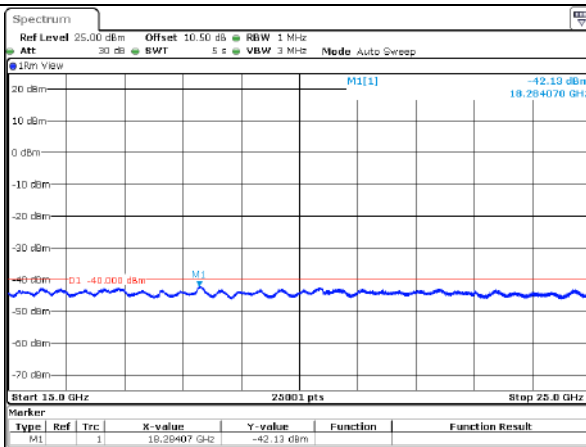
Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK



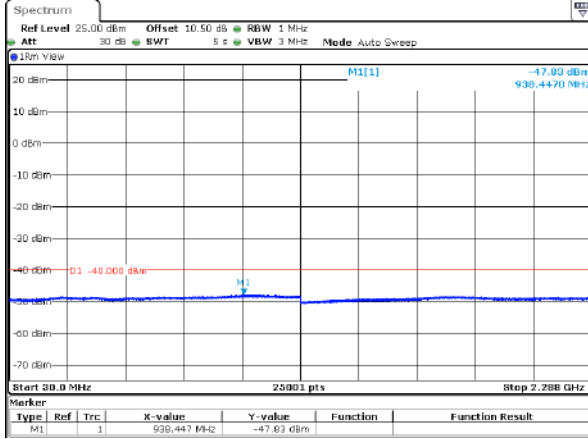
Lowest



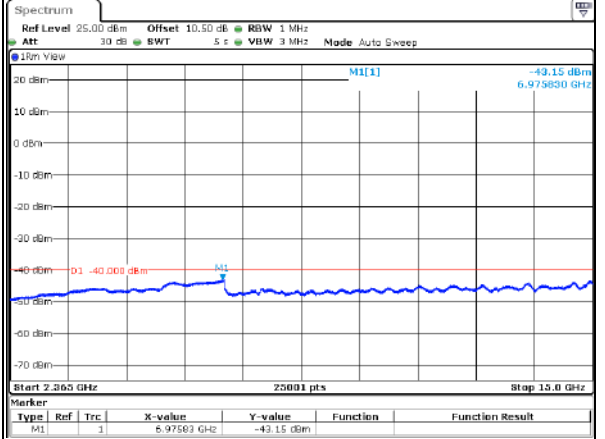
Spurious Emissions at Antenna Terminal

5MHz Bandwidth QPSK

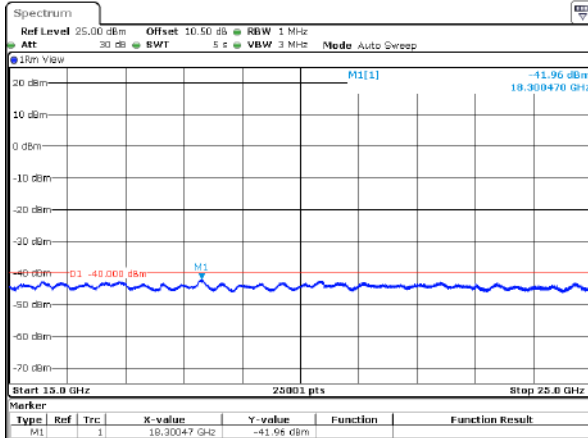
Highest



ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:04:10



ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:04:53

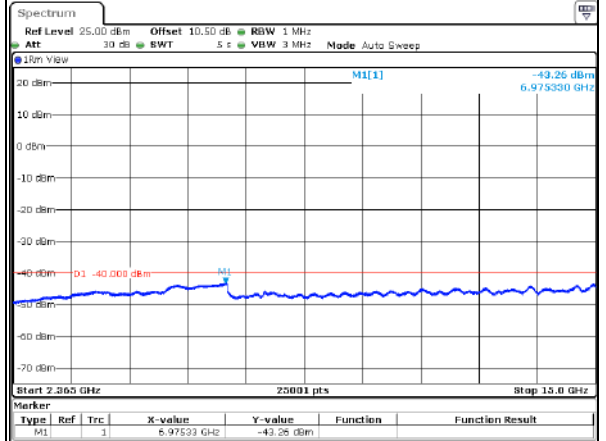
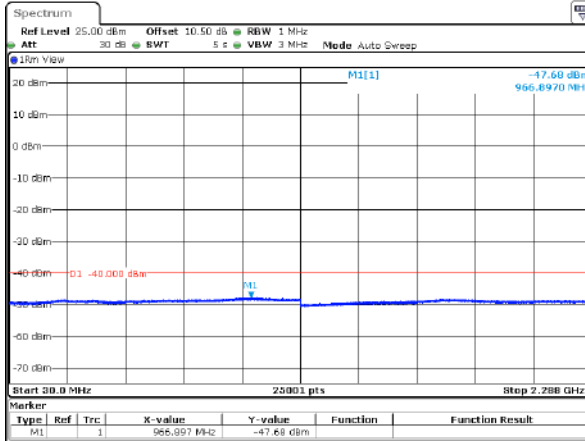


ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:05:35

Spurious Emissions at Antenna Terminal

Channel

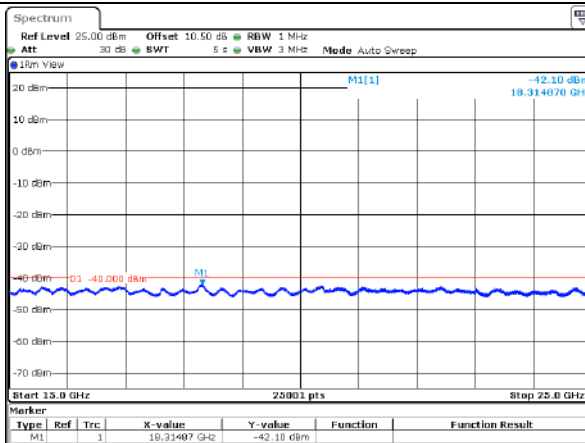
10MHz Bandwidth QPSK



ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:06:39

ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:07:20

Middle



ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:08:03

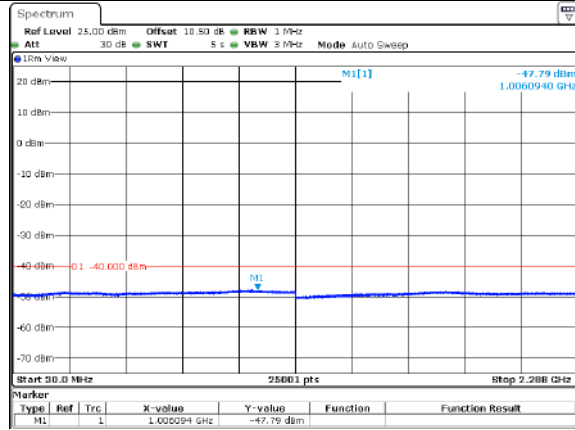
LTE Band 40 Upper:

Spurious Emissions at Antenna Terminal

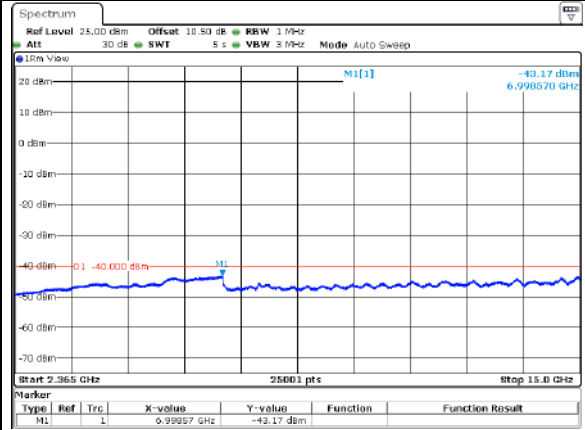
Channel

5MHz Bandwidth QPSK

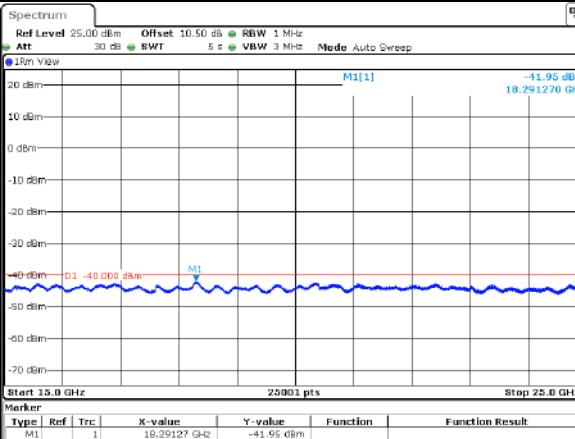
Lowest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 17:09:58



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 17:10:39

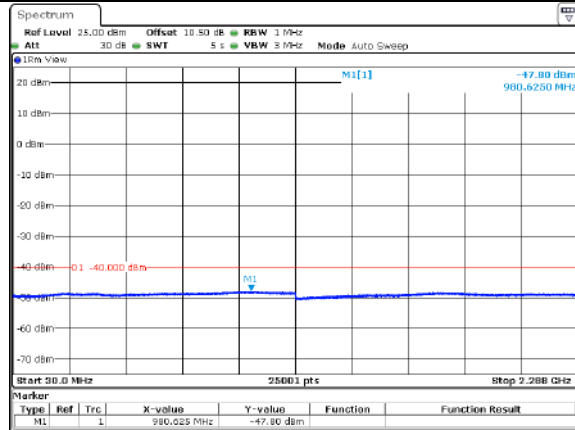


ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 17:11:22

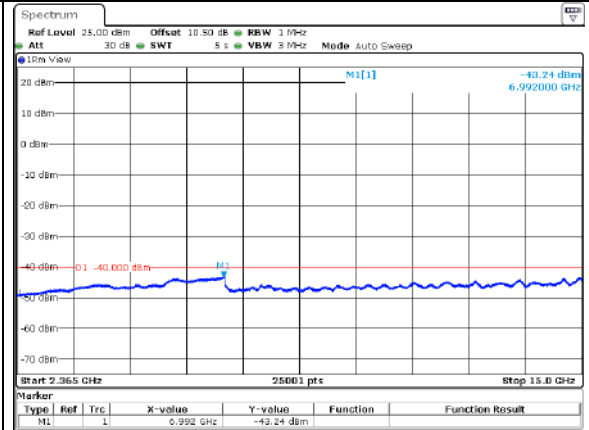
Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

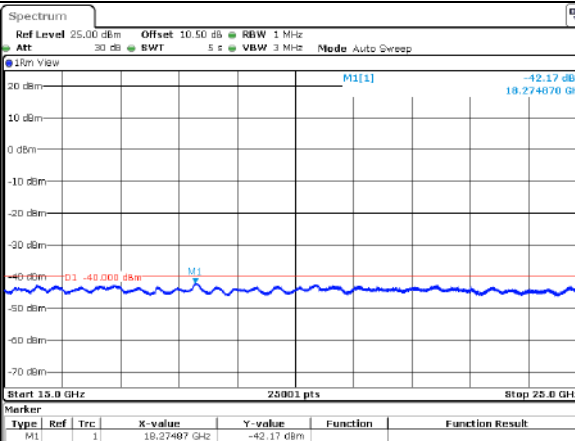


ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 17:14:34



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 17:15:16

Highest

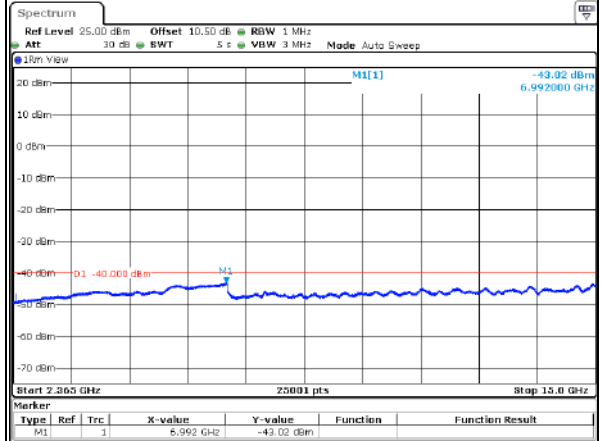
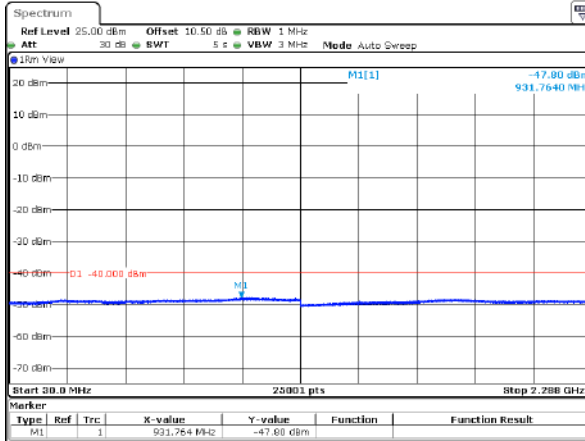


ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 17:15:57

Spurious Emissions at Antenna Terminal

Channel

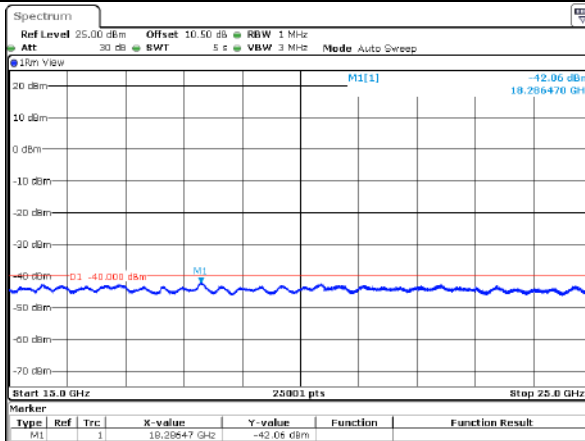
10MHz Bandwidth QPSK



ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:17:09

ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:17:51

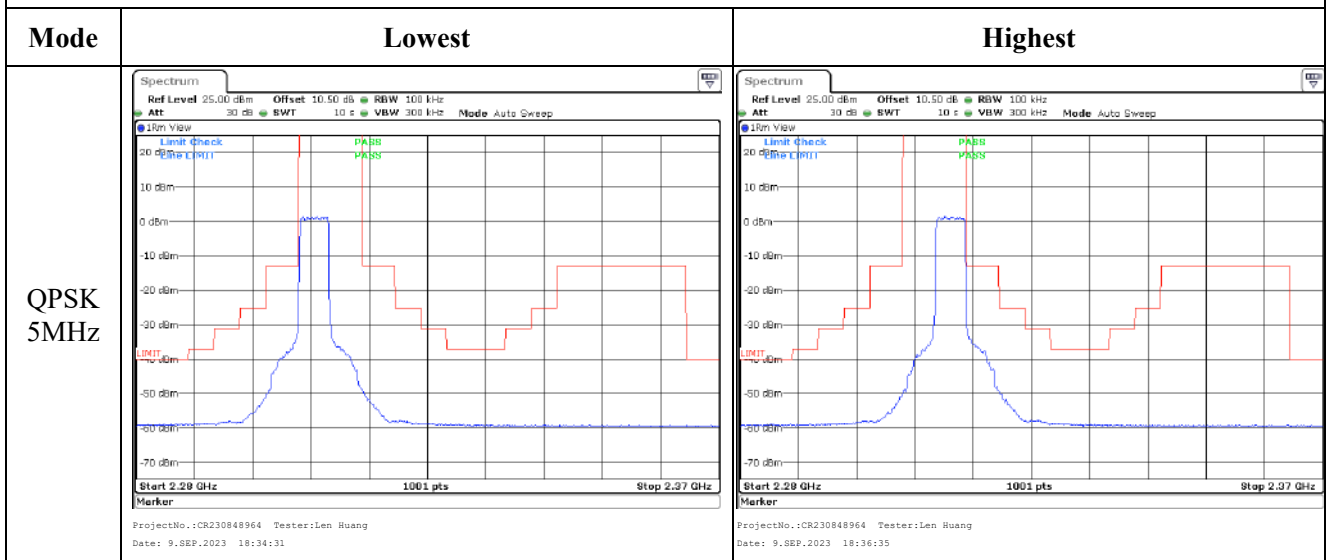
Middle



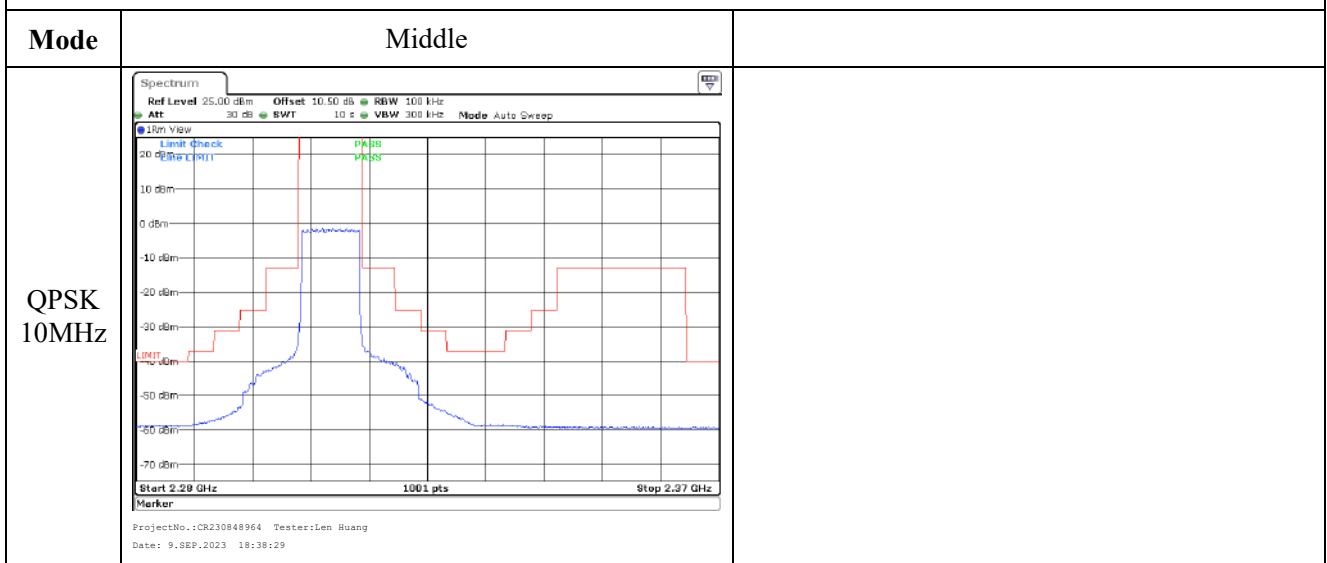
ProjectNo.:CR230848964 Tester:Len Ruang
Date: 9.SEP.2023 17:18:32

LTE Band 40 Lower:

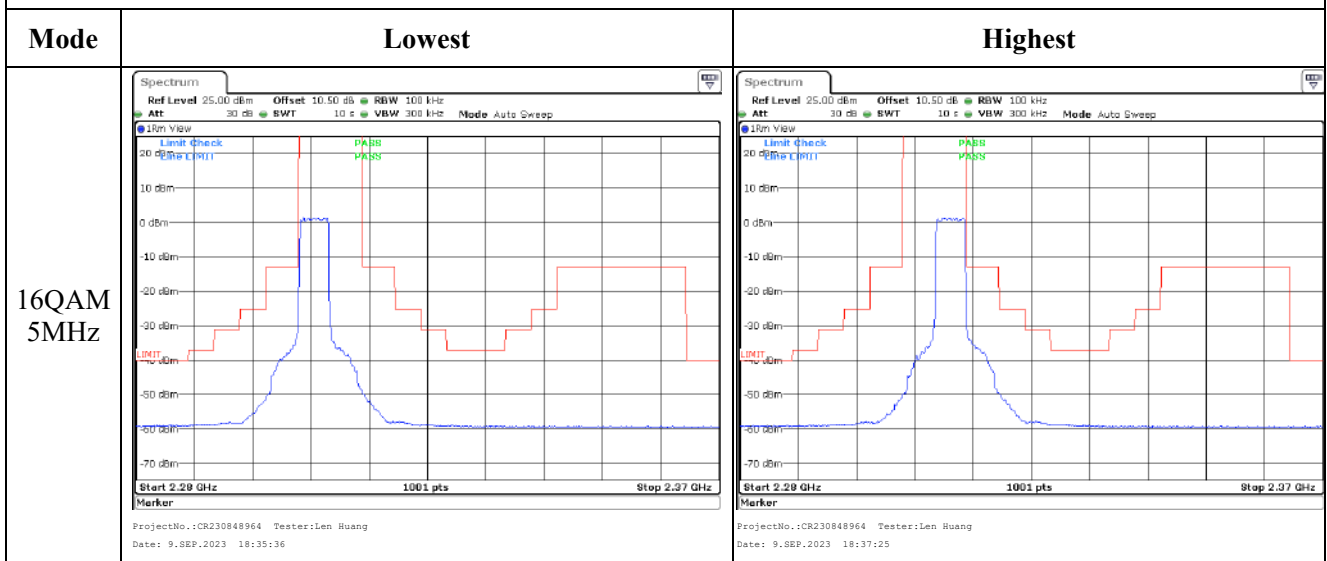
Out of band emission, Band Edge



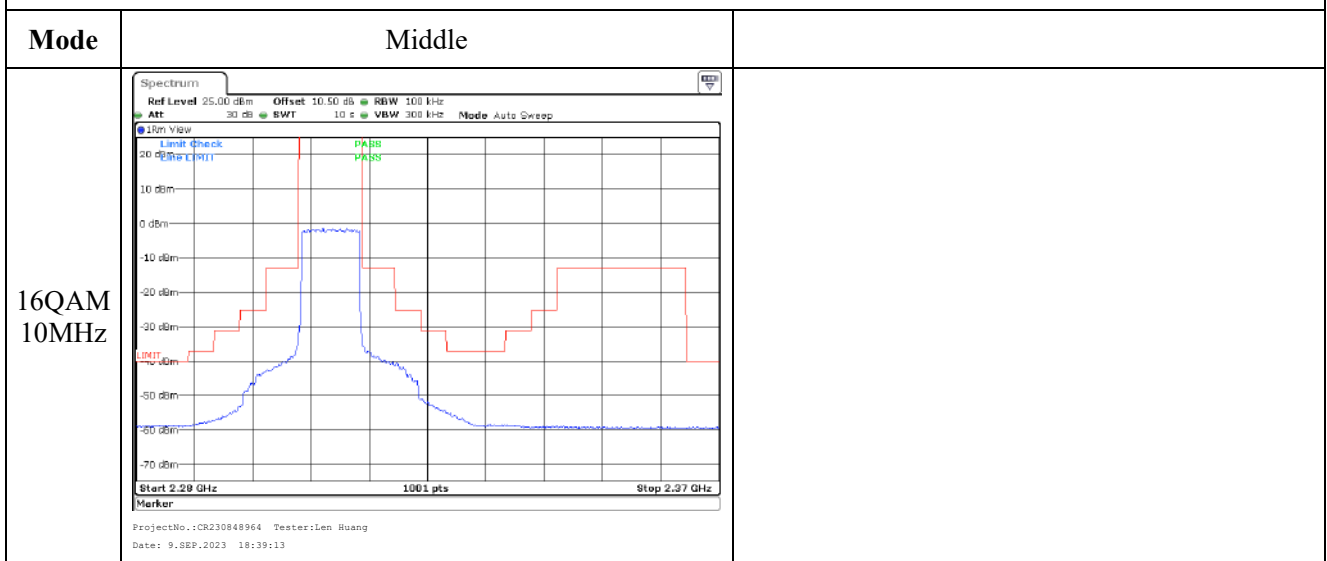
Out of band emission, Band Edge



Out of band emission, Band Edge

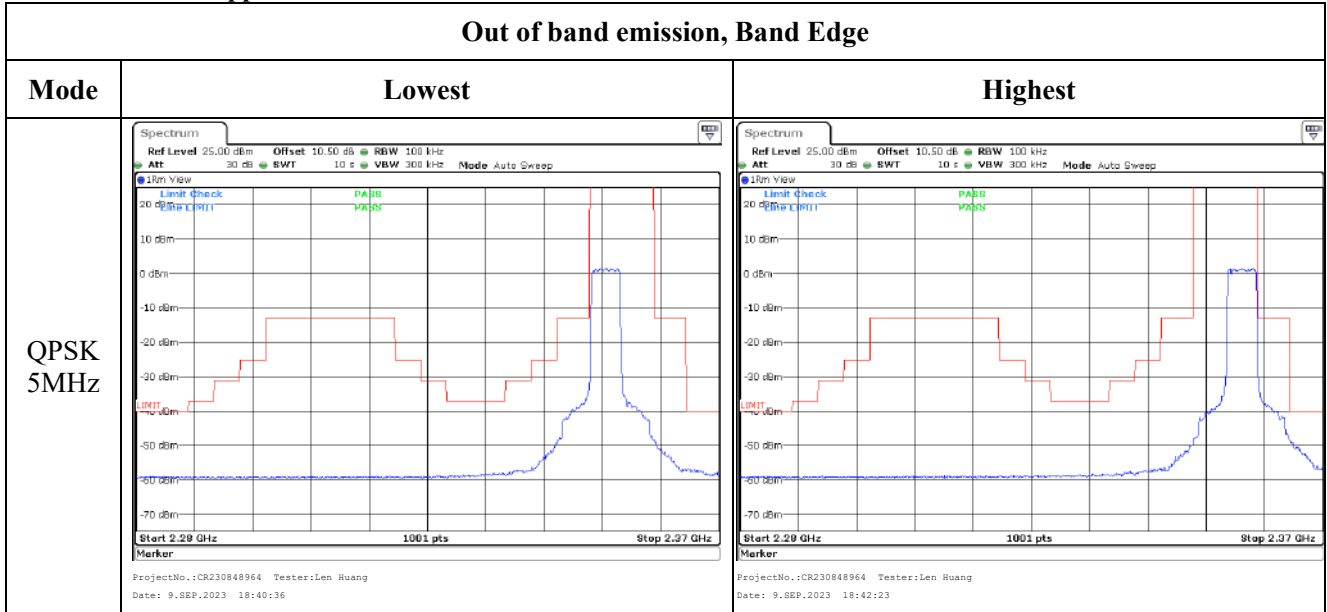


Out of band emission, Band Edge

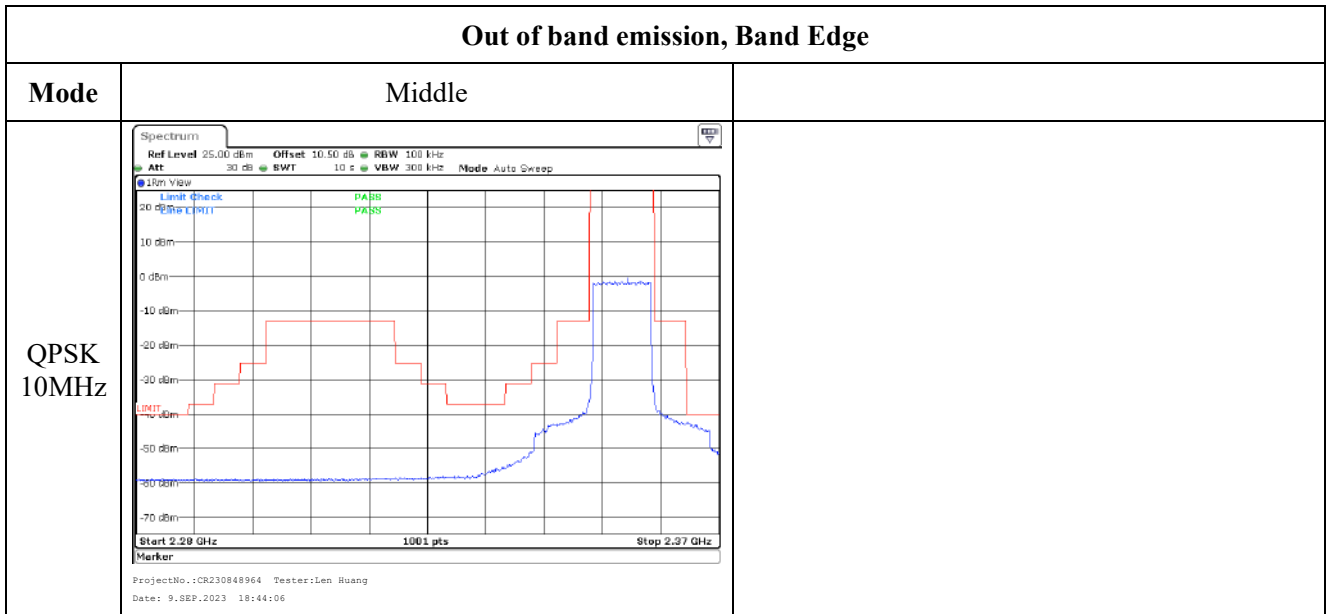


LTE Band 40 Upper:

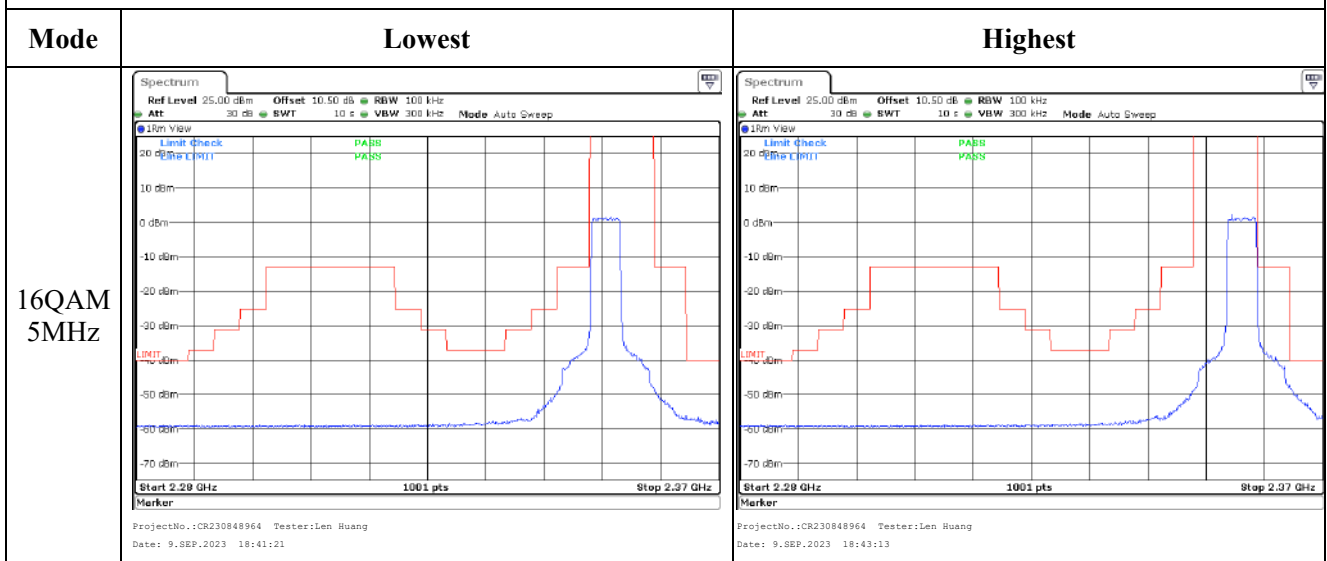
Out of band emission, Band Edge



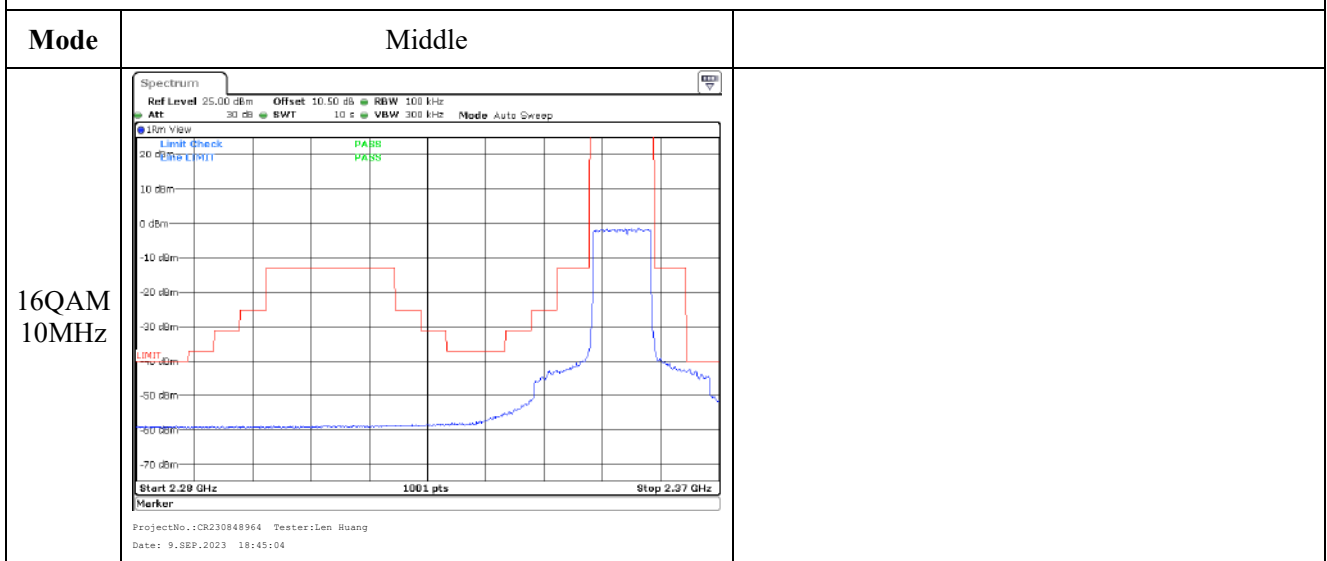
Out of band emission, Band Edge



Out of band emission, Band Edge

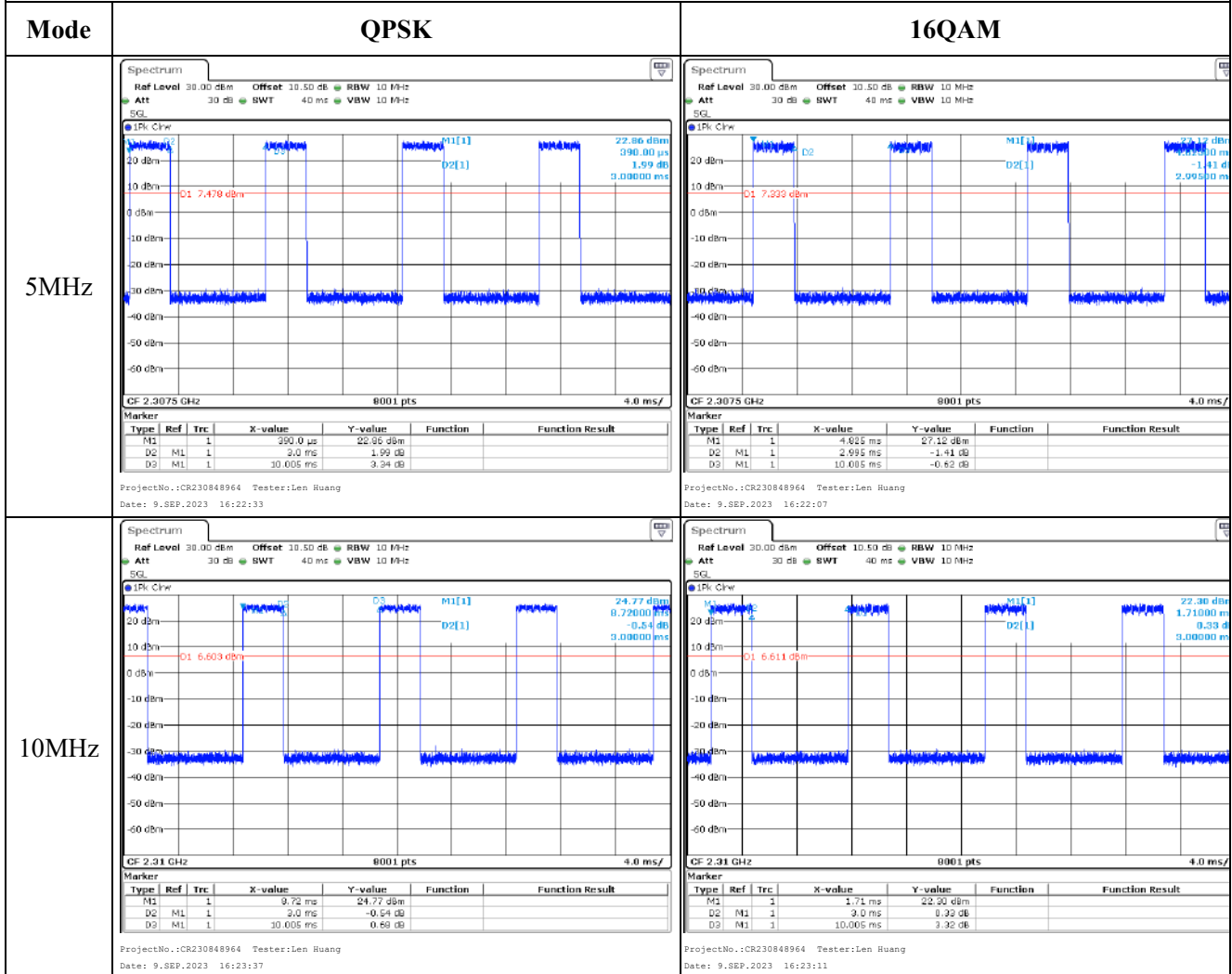


Out of band emission, Band Edge



LTE Band 40 Lower:

Duty Cycle



LTE Band 40 Upper:

Duty Cycle



4.14 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	2A93-1	Test Date:	2023/9/9~2023/9/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.8~29	Relative Humidity: (%)	43-55	ATM Pressure: (kPa)	100.2~101
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40-N	102259	2023/4/18	2024/4/17
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
Weinschel	Power Splitter	1515	RA914	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

Test Frequency for Each Mode:

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

Test Data:

FCC§2.1046;§ 27.50(h)(2)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	22.94	23.35	23.37	23.10	33
	RB1#13	23.08	23.50	23.50		
	RB1#24	22.95	23.34	23.35		
	RB15#0	21.97	22.44	22.42		
	RB15#10	22.02	22.45	22.44		
	RB25#0	21.99	22.41	22.42		
5MHz 16QAM	RB1#0	22.16	22.38	22.37	22.12	33
	RB1#13	22.28	22.49	22.52		
	RB1#24	22.19	22.37	22.35		
	RB15#0	21.01	21.36	21.41		
	RB15#10	21.06	21.35	21.42		
	RB25#0	20.95	21.44	21.45		
10MHz QPSK	RB1#0	23.07	23.45	23.48	23.37	33
	RB1#25	23.42	23.77	23.75		
	RB1#49	23.10	23.44	23.40		
	RB25#0	22.06	22.50	22.50		
	RB25#25	22.11	22.50	22.49		
	RB50#0	22.09	22.49	22.45		
10MHz 16QAM	RB1#0	22.09	22.70	22.35	22.58	33
	RB1#25	22.45	22.98	22.65		
	RB1#49	22.19	22.65	22.29		
	RB25#0	21.05	21.49	21.50		
	RB25#25	21.14	21.47	21.46		
	RB50#0	21.10	21.47	21.43		
15MHz QPSK	RB1#0	22.94	23.42	23.45	23.10	33
	RB1#38	23.05	23.49	23.50		
	RB1#74	23.00	23.40	23.35		
	RB36#0	22.11	22.49	22.56		
	RB36#39	22.15	22.52	22.52		
	RB75#0	22.11	22.51	22.55		
15MHz 16QAM	RB1#0	22.12	22.32	22.64	22.25	33
	RB1#38	22.25	22.42	22.65		
	RB1#74	22.21	22.33	22.54		
	RB36#0	21.03	21.39	21.52		
	RB36#39	21.10	21.42	21.52		
	RB75#0	21.02	21.47	21.46		

20MHz QPSK	RB1#0	22.91	23.24	23.25	23.35	33	
	RB1#50	23.47	23.75	23.65			
	RB1#99	23.00	23.22	23.11			
	RB50#0	21.99	22.41	22.39			
	RB50#50	22.13	22.43	22.41			
	RB100#0	22.09	22.41	22.44			
20MHz 16QAM	RB1#0	22.11	22.29	22.23	22.37	33	
	RB1#50	22.67	22.77	22.62			
	RB1#99	22.24	22.28	22.11			
	RB50#0	21.02	21.36	21.44			
	RB50#50	21.16	21.40	21.45			
	RB100#0	21.08	21.40	21.40			
Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)						Result:	Pass

Peak-to-average Ratio(PAR)					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.29	8.78	8.78	13
	RB100#0	8.84	8.96	8.84	13
20MHz 16QAM	RB1#0	9.01	9.59	9.51	13
	RB100#0	9.71	9.77	9.65	13
Result:					Pass

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.511	4.511	4.511	5.140	5.020	4.940
5MHz 16QAM	4.511	4.511	4.491	4.960	5.080	5.000
10MHz QPSK	8.942	8.942	8.942	9.800	9.560	9.640
10MHz 16QAM	8.942	8.942	8.942	9.760	9.520	9.520
15MHz QPSK	13.473	13.533	13.413	14.880	14.880	14.640
15MHz 16QAM	13.533	13.473	13.473	15.840	14.700	14.460
20MHz QPSK	17.884	17.964	17.884	19.120	19.200	19.280
20MHz 16QAM	17.884	17.884	17.964	19.200	19.200	19.760
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

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

FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2535.151	2535.00	2654.758	2655
	-20	3.85	2535.151	2535.00	2654.830	2655
	-10	3.85	2535.210	2535.00	2654.738	2655
	0	3.85	2535.323	2535.00	2654.763	2655
	10	3.85	2535.240	2535.00	2654.815	2655
	20	3.85	2535.234	2535.00	2654.889	2655
	30	3.85	2535.211	2535.00	2654.722	2655
	40	3.85	2535.205	2535.00	2654.750	2655
	50	3.85	2535.244	2535.00	2654.773	2655
Frequency Stability vs. Voltage	20	3.35	2535.166	2535.00	2654.836	2655
	20	4.4	2535.140	2535.00	2654.743	2655
					Result:	Pass

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2535.268	2535.00	2654.836	2655
	-20	3.85	2535.185	2535.00	2654.723	2655
	-10	3.85	2535.189	2535.00	2654.740	2655
	0	3.85	2535.260	2535.00	2654.782	2655
	10	3.85	2535.165	2535.00	2654.835	2655
	20	3.85	2535.162	2535.00	2654.726	2655
	30	3.85	2535.240	2535.00	2654.806	2655
	40	3.85	2535.125	2535.00	2654.809	2655
	50	3.85	2535.311	2535.00	2654.881	2655
Frequency Stability vs. Voltage	20	3.35	2535.316	2535.00	2654.764	2655
	20	4.4	2535.304	2535.00	2654.777	2655
					Result:	Pass

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

Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:12:34</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:12:36</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:13:18</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:13:42</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:14:05</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:14:26</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:15:38</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:16:06</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:16:29</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:16:51</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:17:13</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:17:35</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:18:30</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:19:20</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:19:49</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:20:20</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:20:52</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:21:16</p>

Occupied Bandwidth

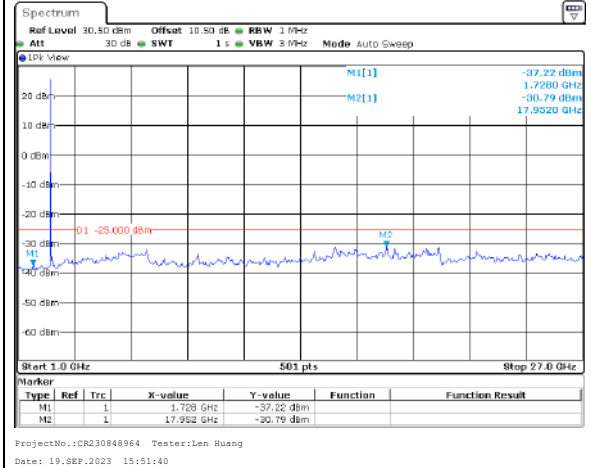
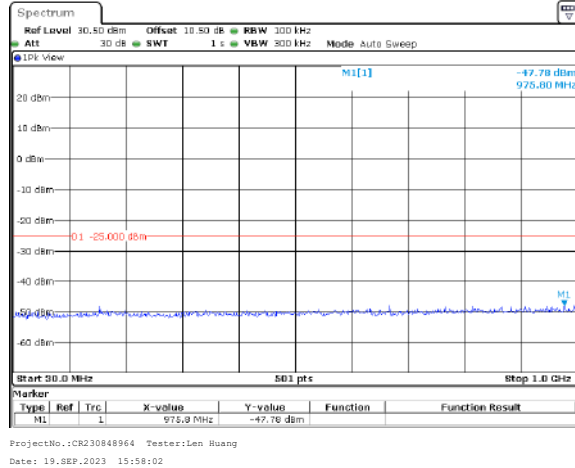
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:22:31</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:23:05</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:23:44</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:24:18</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:24:53</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 15:25:11</p>

Spurious Emissions at Antenna Terminal

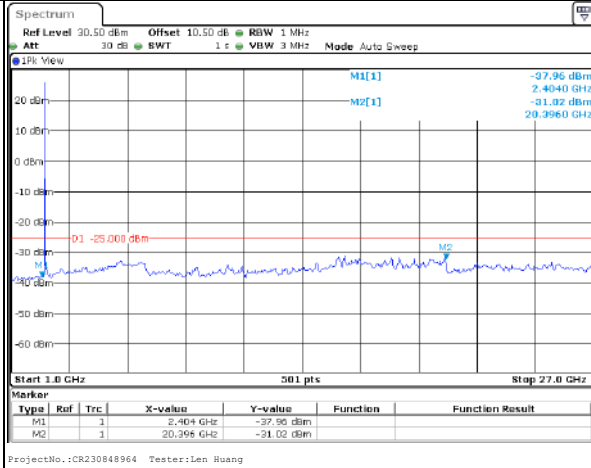
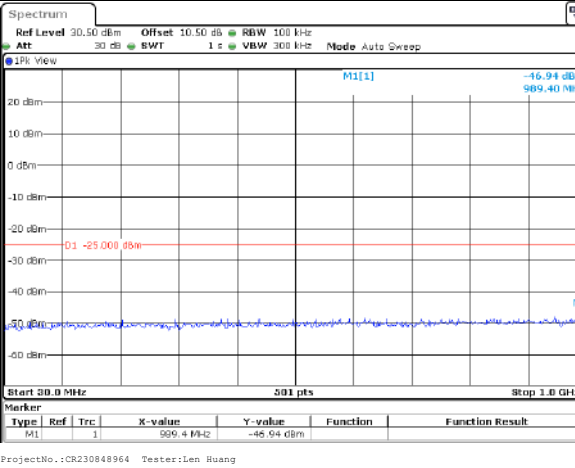
Channel

5MHz Bandwidth QPSK

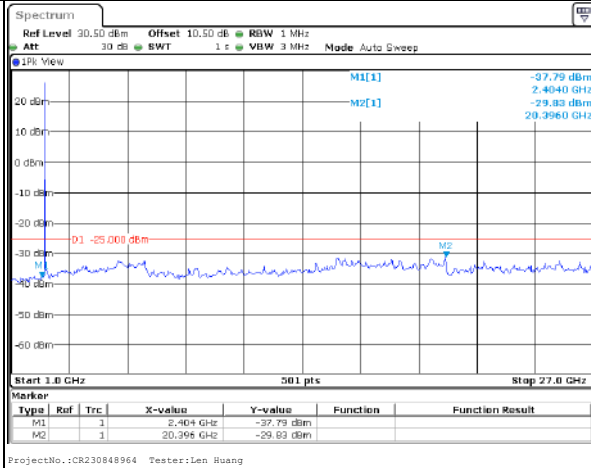
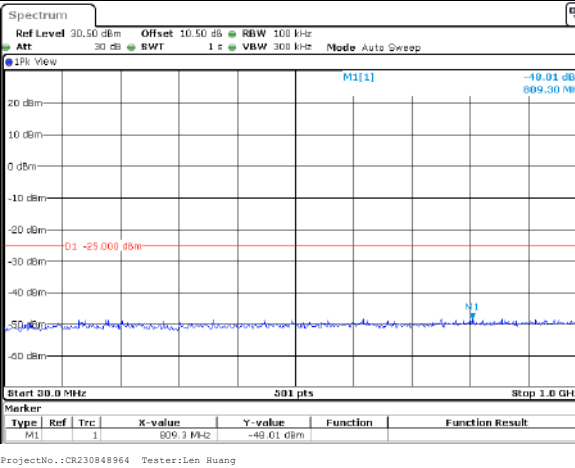
Lowest



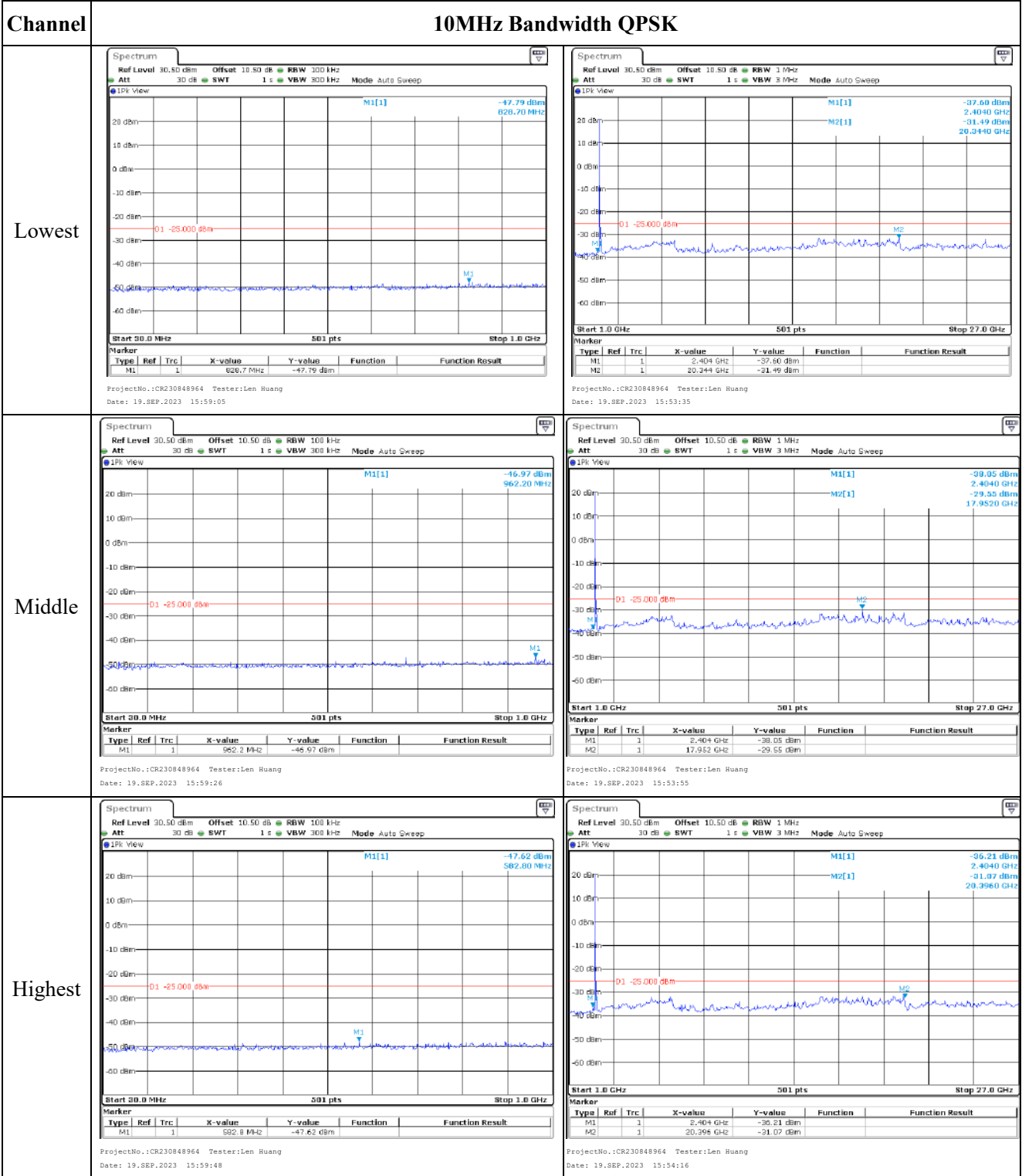
Middle



Highest



Spurious Emissions at Antenna Terminal

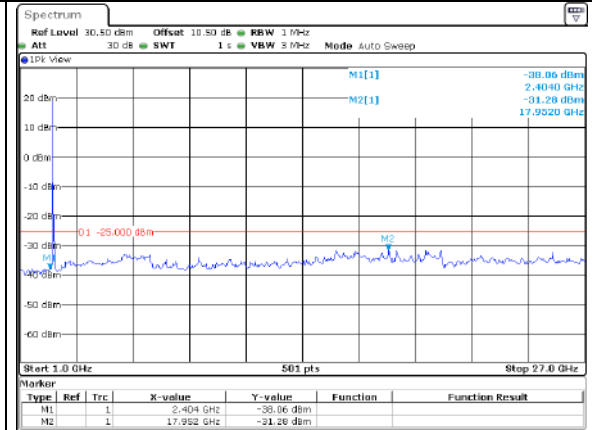
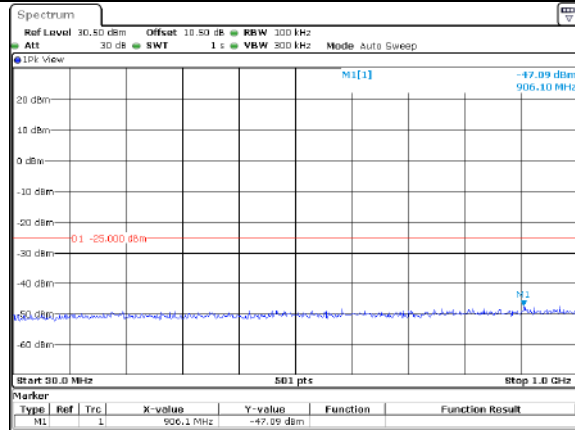


Spurious Emissions at Antenna Terminal

Channel

15MHz Bandwidth QPSK

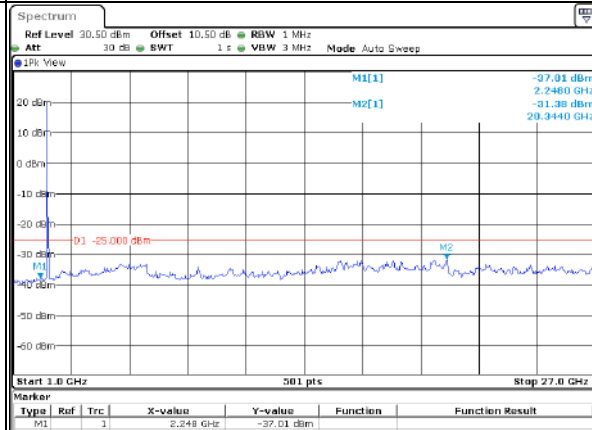
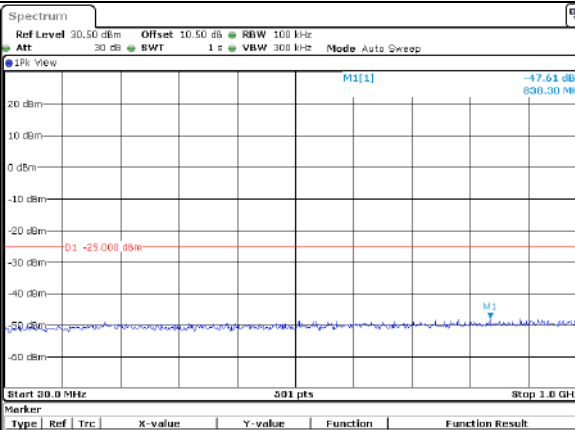
Lowest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 19_SEP.2023 16:00:10

ProjectNo.:CR230848964 Tester:Len Huang
Date: 19_SEP.2023 15:55:08

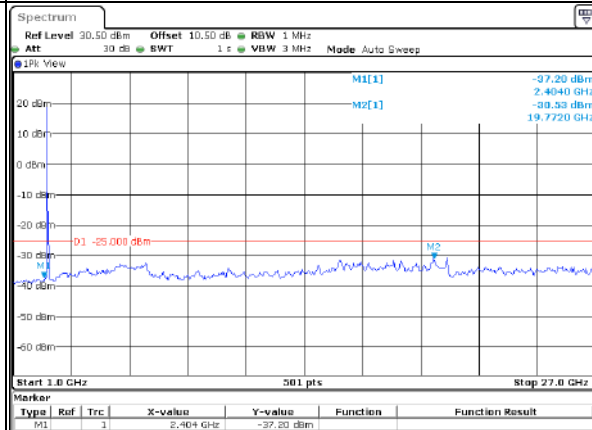
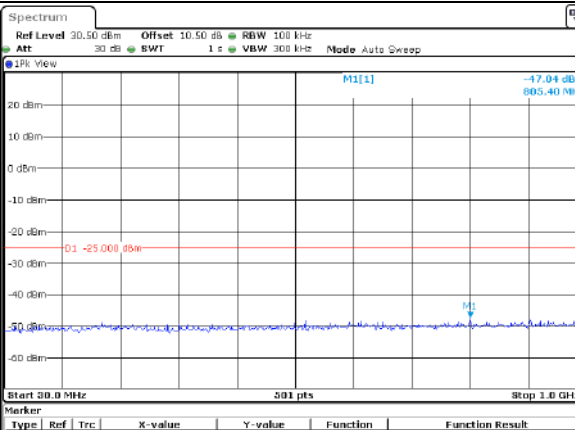
Middle



ProjectNo.:CR230848964 Tester:Len Huang
Date: 19_SEP.2023 16:00:30

ProjectNo.:CR230848964 Tester:Len Huang
Date: 19_SEP.2023 15:55:30

Highest



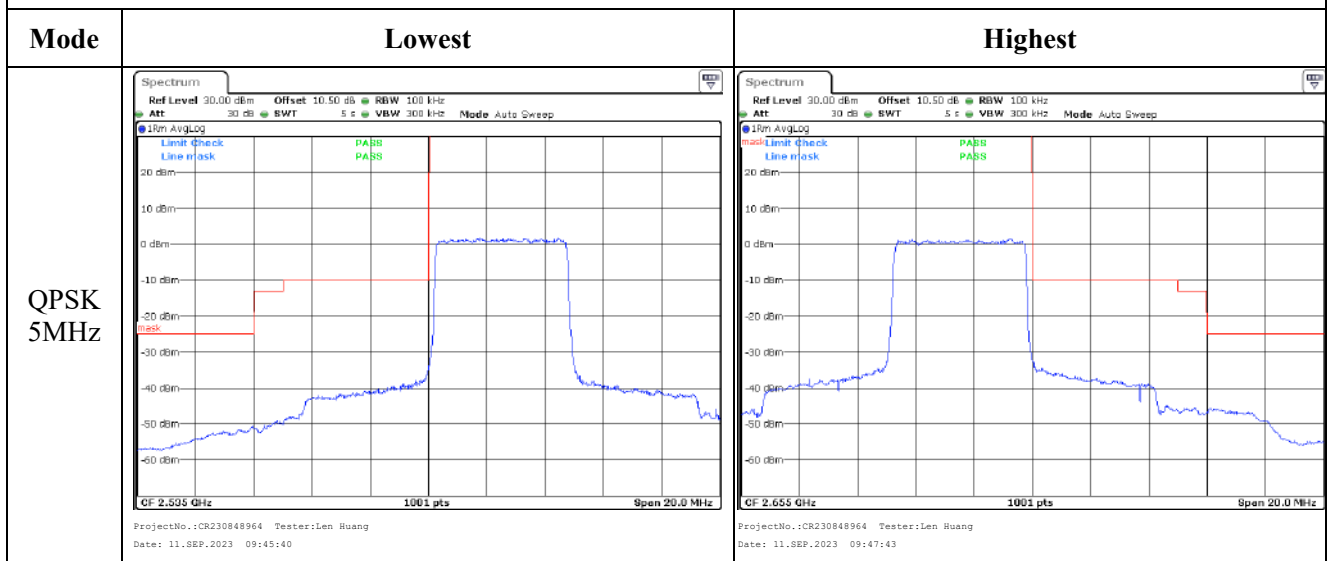
ProjectNo.:CR230848964 Tester:Len Huang
Date: 19_SEP.2023 16:00:52

ProjectNo.:CR230848964 Tester:Len Huang
Date: 19_SEP.2023 15:56:03

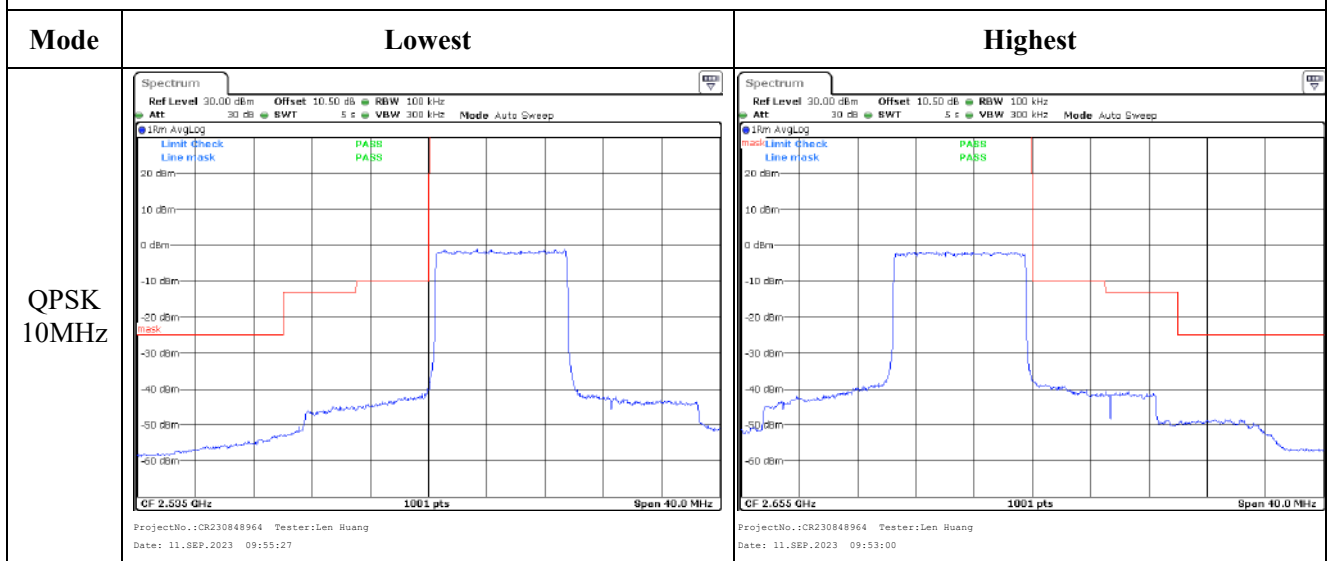
Spurious Emissions at Antenna Terminal

Channel	20MHz Bandwidth QPSK	
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 19_SEP.2023 16:01:14</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 19_SEP.2023 15:56:46</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 19_SEP.2023 16:01:34</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 19_SEP.2023 15:57:07</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 19_SEP.2023 16:01:55</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 19_SEP.2023 15:57:41</p>

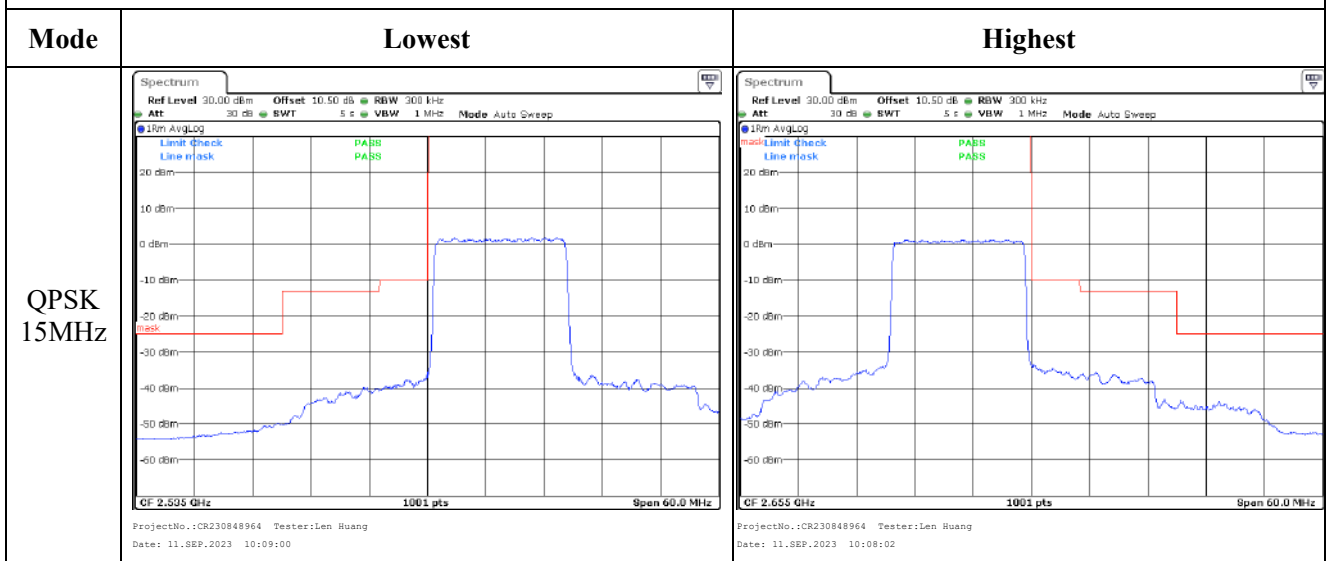
Out of band emission, Band Edge



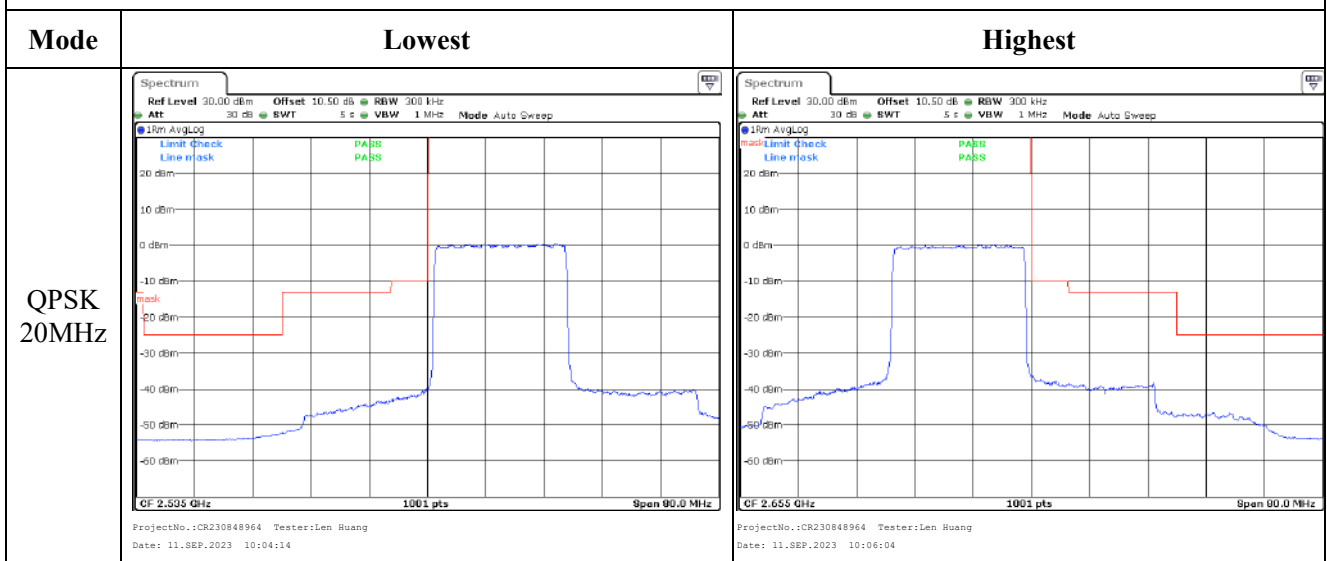
Out of band emission, Band Edge



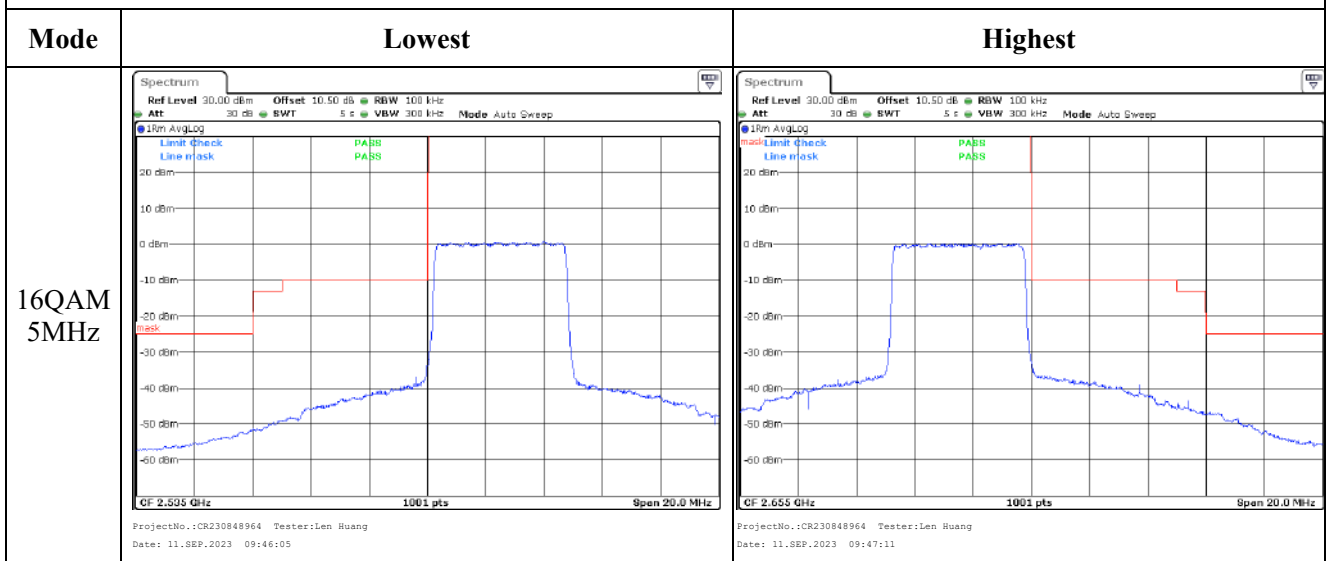
Out of band emission, Band Edge



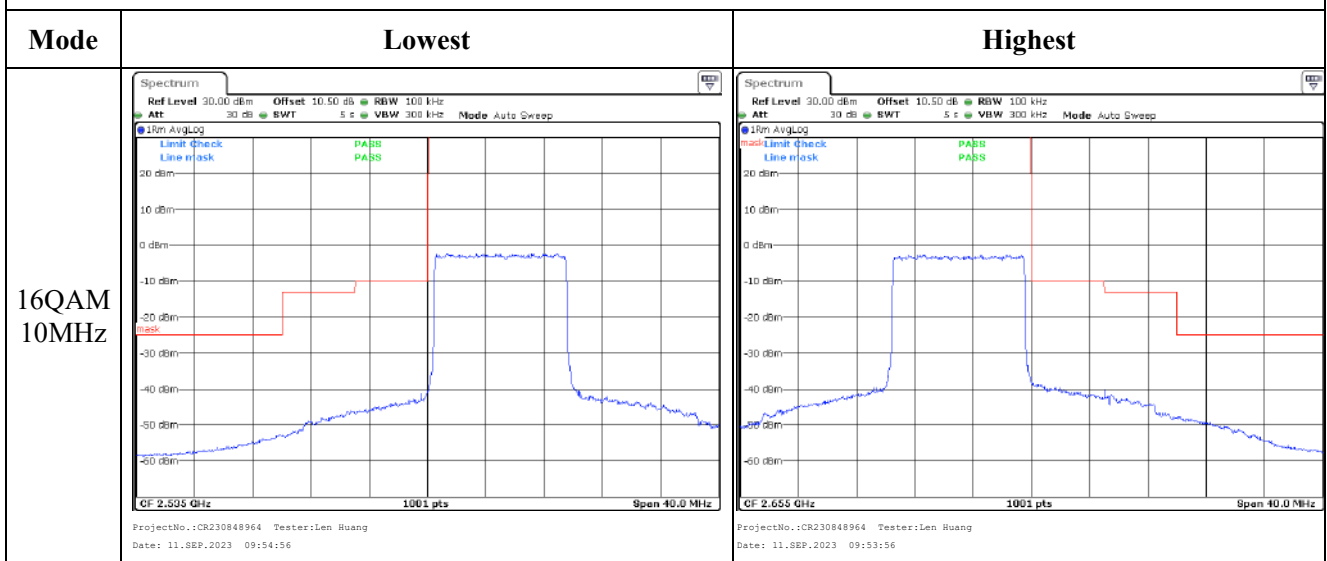
Out of band emission, Band Edge



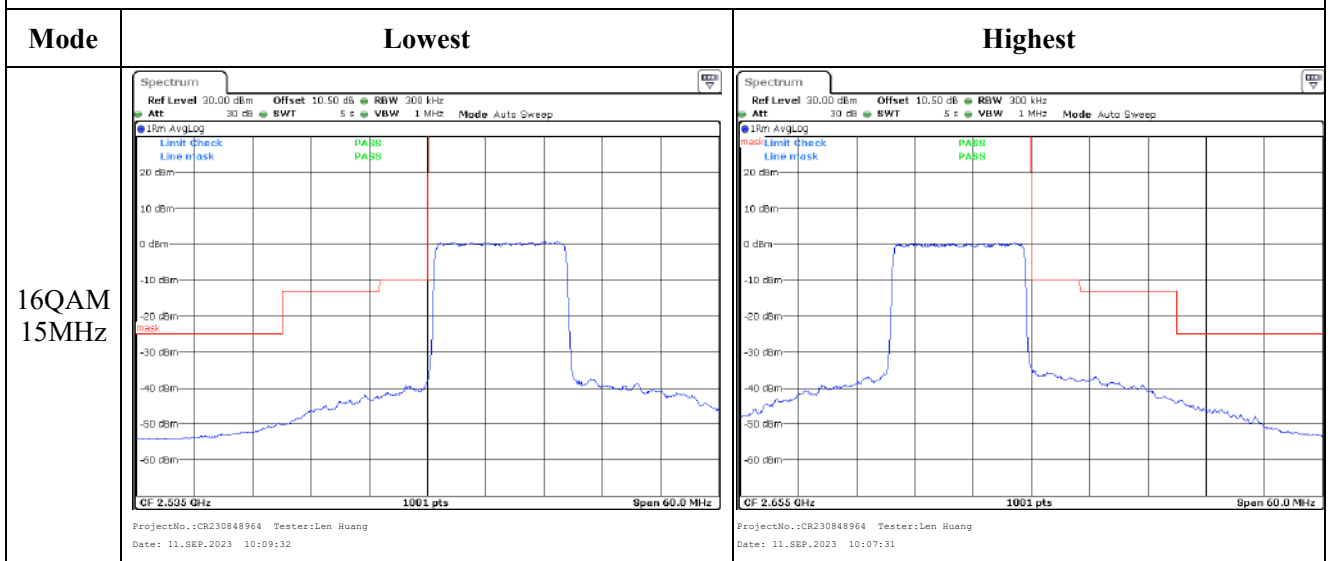
Out of band emission, Band Edge



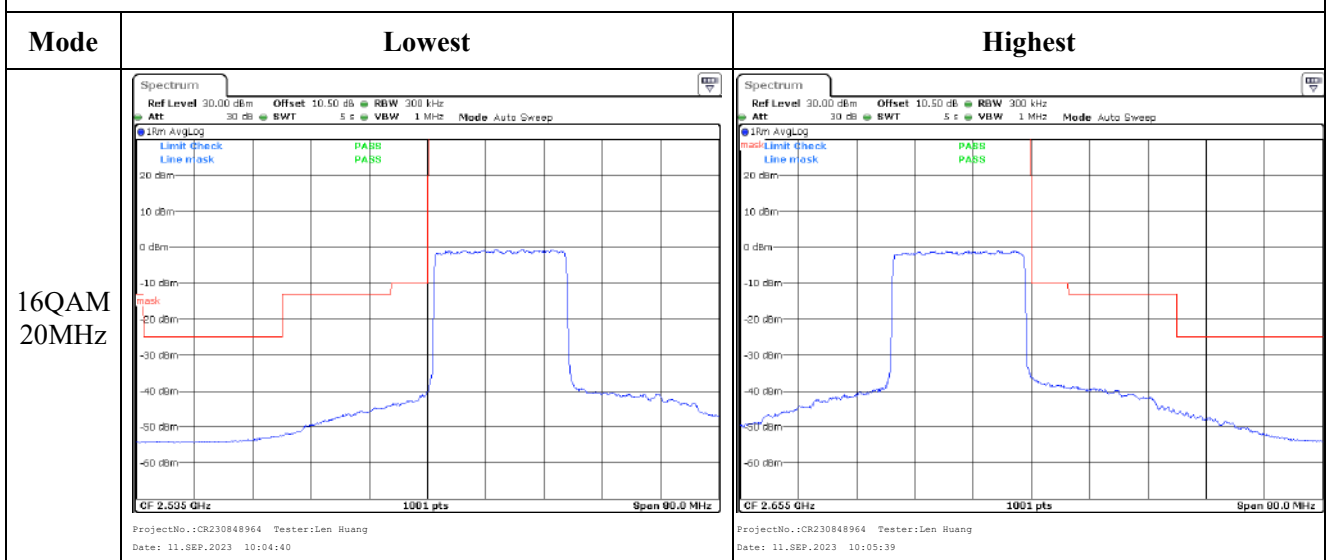
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.15 Antenna Port Test Data and Results for LTE Band 66

Serial Number:	2A93-1	Test Date:	2023/9/9
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	28.3	Relative Humidity: (%)	46	ATM Pressure: (kPa)	100.2
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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
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
Weinschel	Power Splitter	1515	RA914	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

Test Frequency for Each Mode:

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

Test Data:

FCC§2.1046;§ 27.50(d)(4)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	18.79	18.80	18.48	17.82	30
	RB1#3	19.02	18.95	18.66		
	RB1#5	18.81	18.76	18.51		
	RB3#0	18.86	18.85	18.64		
	RB3#3	18.91	18.85	18.56		
	RB6#0	17.90	17.81	17.56		
1.4MHz 16QAM	RB1#0	17.80	17.79	17.59	16.85	30
	RB1#3	18.05	17.94	17.82		
	RB1#5	17.87	17.78	17.60		
	RB3#0	17.98	18.00	17.50		
	RB3#3	17.94	17.99	17.54		
	RB6#0	16.87	16.90	16.64		
3MHz QPSK	RB1#0	18.89	18.88	18.56	17.69	30
	RB1#8	18.88	18.80	18.53		
	RB1#14	18.89	18.85	18.52		
	RB6#0	17.86	17.79	17.50		
	RB6#9	17.83	17.76	17.51		
	RB15#0	17.86	17.81	17.51		
3MHz 16QAM	RB1#0	18.04	17.88	18.15	16.95	30
	RB1#8	18.00	17.82	18.13		
	RB1#14	18.04	17.83	18.08		
	RB6#0	16.96	16.79	16.64		
	RB6#9	16.93	16.80	16.58		
	RB15#0	16.86	16.93	16.58		
5MHz QPSK	RB1#0	18.80	18.78	18.51	17.73	30
	RB1#13	18.93	18.86	18.61		
	RB1#24	18.80	18.74	18.48		
	RB15#0	17.87	17.86	17.55		
	RB15#10	17.86	17.80	17.49		
	RB25#0	17.83	17.78	17.46		
5MHz 16QAM	RB1#0	17.92	17.70	17.81	16.82	30
	RB1#13	18.02	17.78	17.88		
	RB1#24	17.90	17.64	17.77		
	RB15#0	16.90	16.90	16.54		
	RB15#10	16.94	16.86	16.48		
	RB25#0	16.89	16.88	16.51		

10MHz QPSK	RB1#0	18.91	18.88	18.65	17.86	30
	RB1#25	19.06	19.02	18.64		
	RB1#49	19.00	18.80	18.49		
	RB25#0	17.86	17.82	17.61		
	RB25#25	17.92	17.80	17.47		
	RB50#0	17.85	17.80	17.58		
10MHz 16QAM	RB1#0	18.06	17.89	18.24	17.04	30
	RB1#25	18.18	17.96	18.23		
	RB1#49	18.23	17.75	18.08		
	RB25#0	16.93	16.97	16.72		
	RB25#25	16.98	16.91	16.56		
	RB50#0	16.94	16.90	16.64		
15MHz QPSK	RB1#0	18.84	18.81	18.63	17.77	30
	RB1#38	18.97	18.86	18.58		
	RB1#74	18.89	18.68	18.40		
	RB36#0	17.88	17.85	17.67		
	RB36#39	17.95	17.83	17.52		
	RB75#0	17.94	17.89	17.59		
15MHz 16QAM	RB1#0	17.93	18.21	18.20	17.09	30
	RB1#38	18.06	18.29	18.20		
	RB1#74	17.99	18.07	18.01		
	RB36#0	16.94	16.88	16.71		
	RB36#39	17.00	16.82	16.54		
	RB75#0	16.99	16.86	16.63		
20MHz QPSK	RB1#0	18.73	18.66	18.54	17.97	30
	RB1#50	19.17	18.94	18.79		
	RB1#99	18.69	18.46	18.24		
	RB50#0	17.94	17.85	17.73		
	RB50#50	17.90	17.79	17.51		
	RB100#0	17.92	17.84	17.60		
20MHz 16QAM	RB1#0	17.92	18.22	17.84	17.35	30
	RB1#50	18.28	18.55	18.13		
	RB1#99	17.90	18.03	17.50		
	RB50#0	16.95	16.90	16.73		
	RB50#50	16.91	16.80	16.51		
	RB100#0	16.94	16.86	16.64		
Note: EIRP=Conducted Power(dBm) - Lc(dB) + G _T (dBi)						
					Result:	Pass

Peak-to-average Ratio(PAR)					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	6.38	6.09	6.23	13
	RB100#0	5.48	5.42	5.42	13
20MHz 16QAM	RB1#0	7.54	7.83	6.32	13
	RB100#0	6.35	6.23	6.29	13
Result:					Pass

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.102	1.096	1.102	1.290	1.242	1.308
1.4MHz 16QAM	1.096	1.096	1.090	1.290	1.314	1.284
3MHz QPSK	2.683	2.683	2.683	2.880	2.880	2.868
3MHz 16QAM	2.683	2.683	2.683	2.868	2.892	2.880
5MHz QPSK	4.511	4.511	4.551	5.200	5.160	5.180
5MHz 16QAM	4.551	4.551	4.511	5.200	5.220	5.160
10MHz QPSK	8.942	8.982	8.942	9.960	10.040	9.840
10MHz 16QAM	8.942	8.942	8.942	9.800	9.880	9.840
15MHz QPSK	13.473	13.533	13.473	15.000	15.120	14.940
15MHz 16QAM	13.533	13.533	13.413	15.120	15.000	14.940
20MHz QPSK	17.964	18.044	17.884	19.520	19.920	19.520
20MHz 16QAM	17.964	17.964	18.044	19.680	19.840	19.600

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

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

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

FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	1710.303	1710.00	1779.745	1780
	-20	3.85	1710.310	1710.00	1779.723	1780
	-10	3.85	1710.165	1710.00	1779.789	1780
	0	3.85	1710.135	1710.00	1779.849	1780
	10	3.85	1710.232	1710.00	1779.797	1780
	20	3.85	1710.117	1710.00	1779.860	1780
	30	3.85	1710.300	1710.00	1779.782	1780
	40	3.85	1710.311	1710.00	1779.885	1780
	50	3.85	1710.138	1710.00	1779.752	1780
Frequency Stability vs. Voltage	20	3.35	1710.143	1710.00	1779.727	1780
	20	4.4	1710.282	1710.00	1779.736	1780
					Result:	Pass

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	1710.120	1710.00	1779.879	1780
	-20	3.85	1710.248	1710.00	1779.859	1780
	-10	3.85	1710.191	1710.00	1779.861	1780
	0	3.85	1710.203	1710.00	1779.764	1780
	10	3.85	1710.179	1710.00	1779.878	1780
	20	3.85	1710.336	1710.00	1779.749	1780
	30	3.85	1710.158	1710.00	1779.781	1780
	40	3.85	1710.303	1710.00	1779.800	1780
	50	3.85	1710.271	1710.00	1779.855	1780
Frequency Stability vs. Voltage	20	3.35	1710.215	1710.00	1779.849	1780
	20	4.4	1710.111	1710.00	1779.829	1780
					Result:	Pass

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

Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:46:15</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:46:36</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:51:44</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:51:08</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:52:39</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:53:03</p>

Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:53:11</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:54:09</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:54:11</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:54:02</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:55:11</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:55:15</p>

Occupied Bandwidth

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

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 09:59:44</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:00:15</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:00:48</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:01:16</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:01:46</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:02:17</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:03:43</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:04:19</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:04:58</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:05:35</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:06:01</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:06:29</p>

Occupied Bandwidth

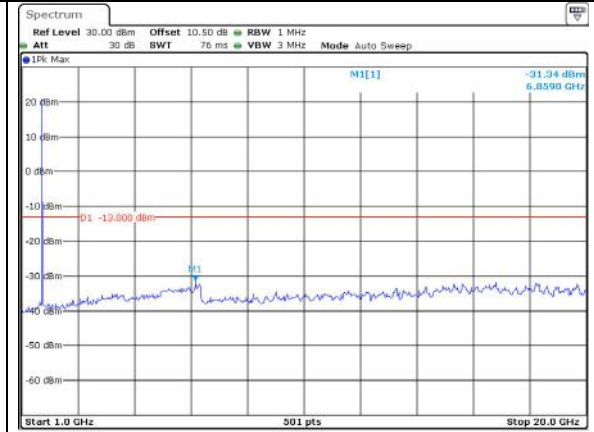
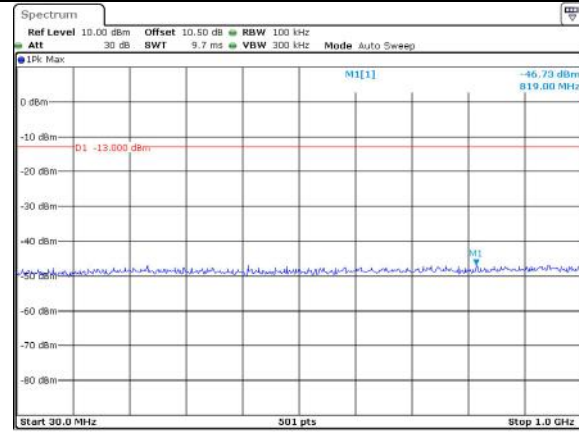
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:07:13</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:08:29</p>
Middle	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:09:07</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:09:45</p>
Highest	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:10:27</p>	<p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9.SEP.2023 10:11:11</p>

Spurious Emissions at Antenna Terminal

Channel

1.4MHz Bandwidth QPSK

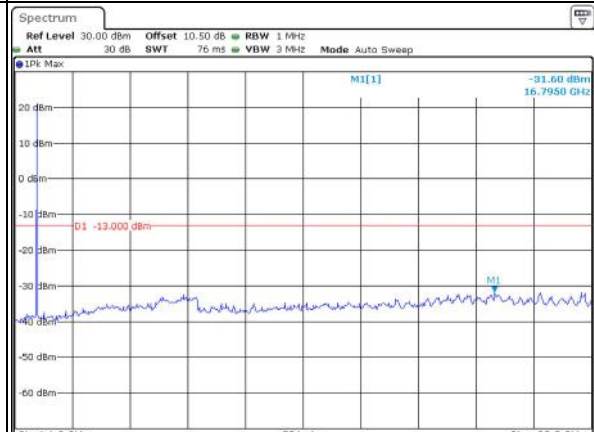
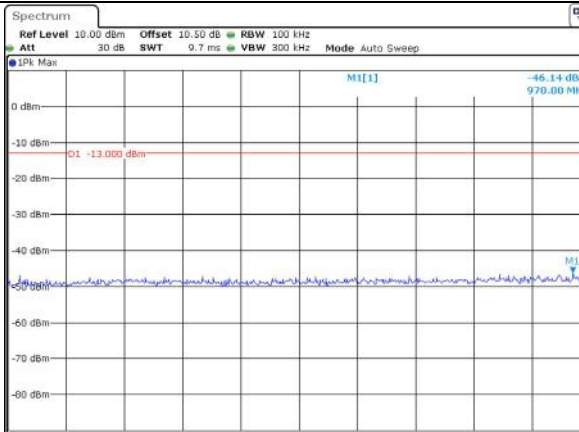
Lowest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:07:04

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:07:23

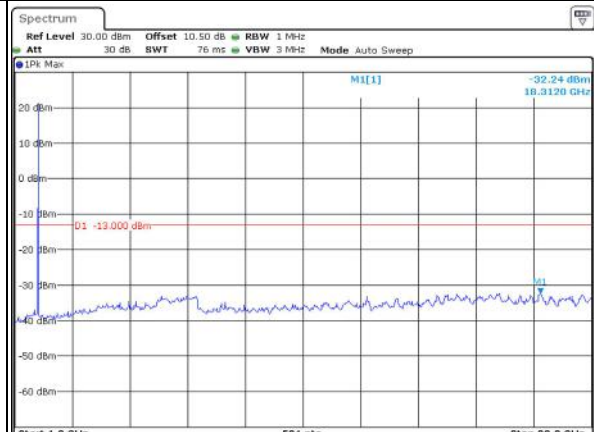
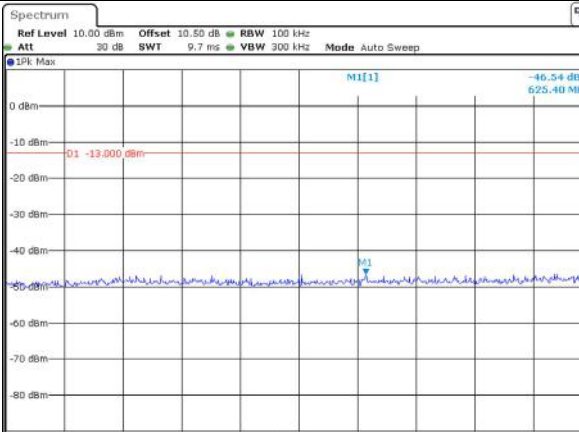
Middle



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:07:53

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:08:16

Highest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:08:43

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:09:03

Spurious Emissions at Antenna Terminal

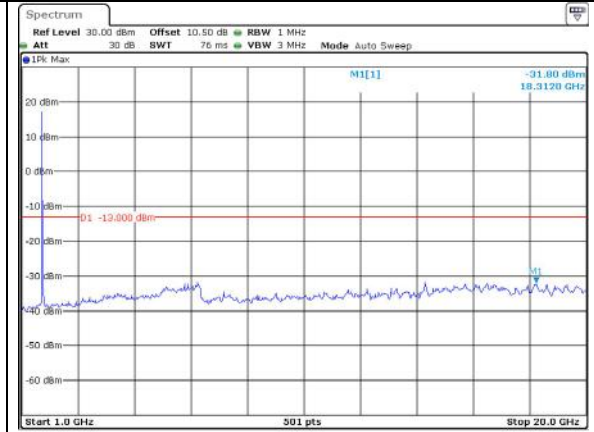
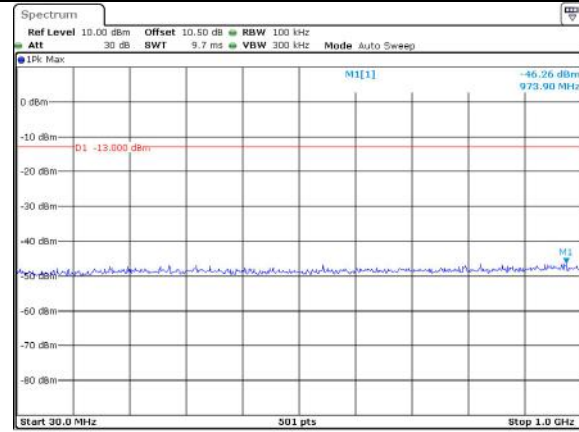
Channel	3MHz Bandwidth QPSK	
Lowest	<p>Ref Level 10.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -46.02 dBm 958.40 MHz</p> <p>D1 -13.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9_SEP.2023 12:11:02</p>	<p>Ref Level 30.00 dBm Offset 10.50 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 18.2740 GHz</p> <p>D1 -13.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9_SEP.2023 12:11:31</p>
Middle	<p>Ref Level 10.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -46.02 dBm 977.70 MHz</p> <p>D1 -13.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9_SEP.2023 12:11:01</p>	<p>Ref Level 30.00 dBm Offset 10.50 dB RBW 1 MHz Att 30 dB SWT 76 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -31.72 dBm 18.2740 GHz</p> <p>D1 -13.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9_SEP.2023 12:11:24</p>
Highest	<p>Ref Level 10.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -46.21 dBm 598.30 MHz</p> <p>D1 -13.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9_SEP.2023 12:11:58</p>	<p>Ref Level 30.00 dBm Offset 10.50 dB RBW 1 MHz Att 30 dB SWT 76 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -31.42 dBm 18.3120 GHz</p> <p>D1 -13.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>ProjectNo.:CR230848964 Tester:Len Huang Date: 9_SEP.2023 12:12:27</p>

Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

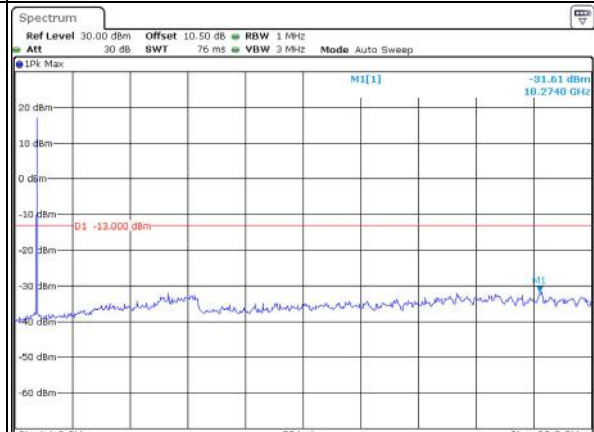
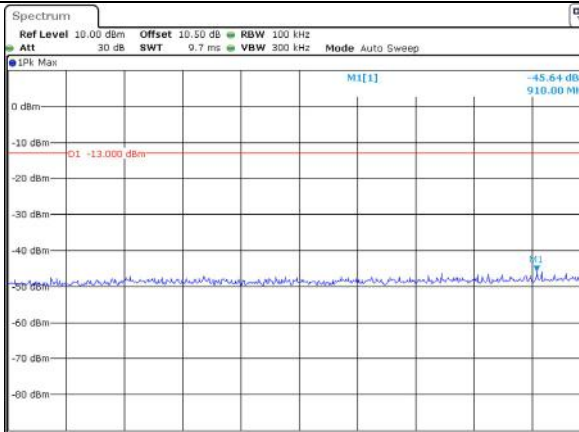
Lowest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:13:35

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:14:01

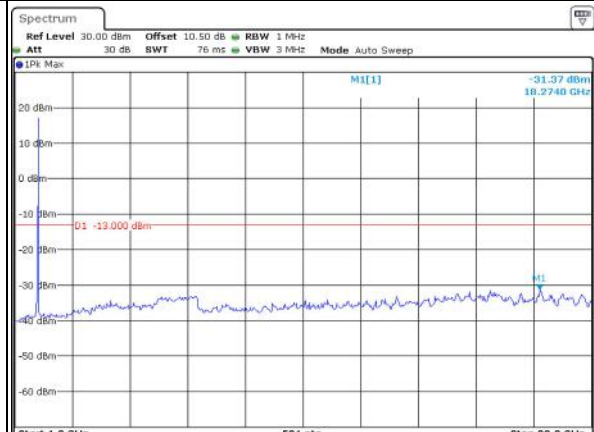
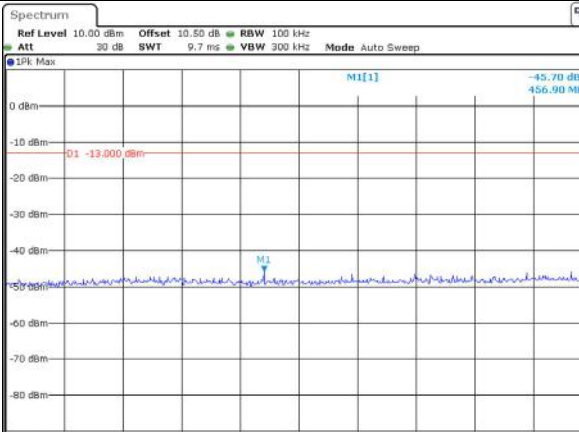
Middle



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:14:32

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:14:55

Highest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:15:28

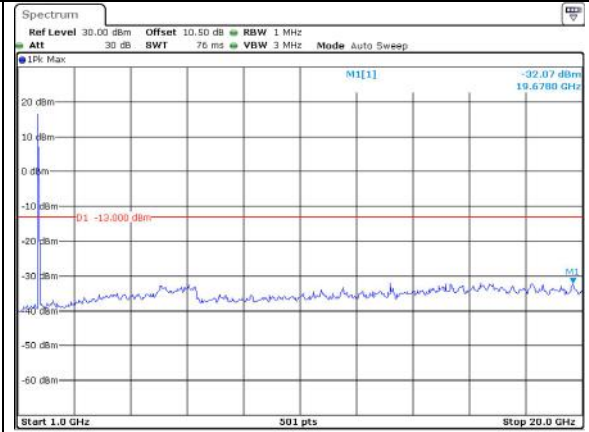
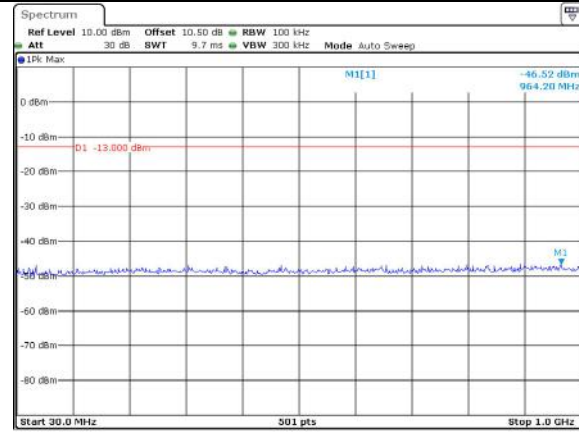
ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:15:54

Spurious Emissions at Antenna Terminal

Channel

10MHz Bandwidth QPSK

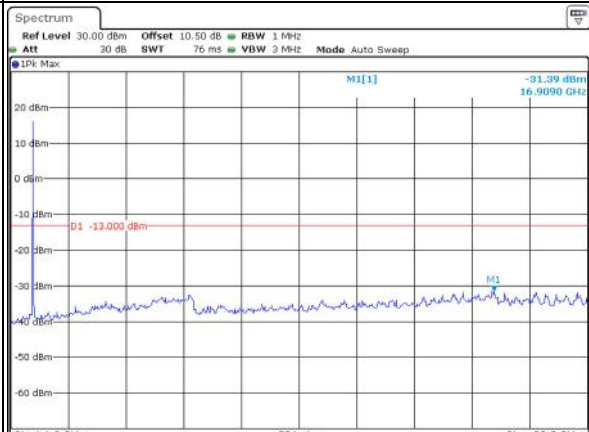
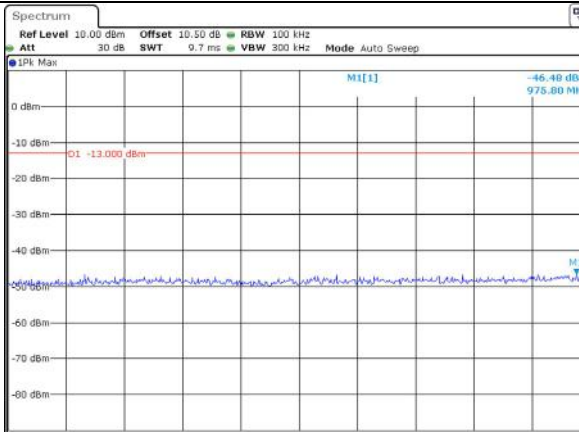
Lowest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:16:16

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:17:22

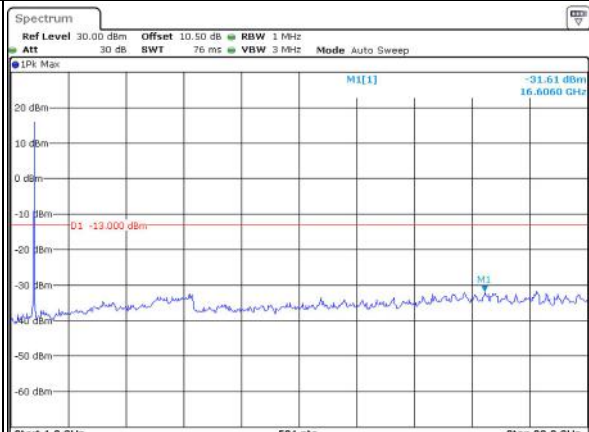
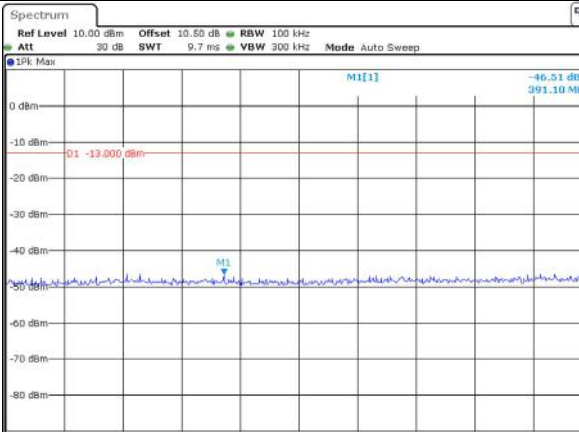
Middle



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:17:56

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:18:20

Highest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:18:54

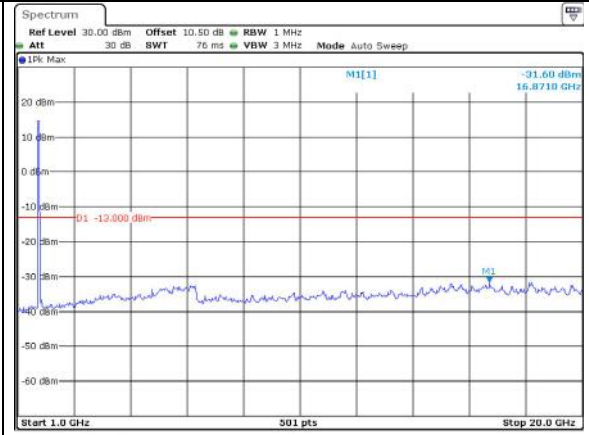
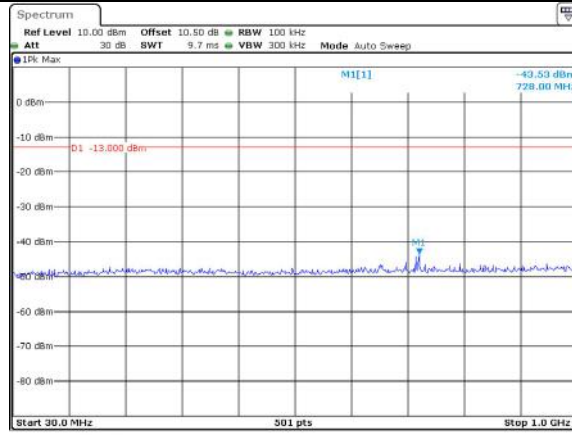
ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:19:17

Spurious Emissions at Antenna Terminal

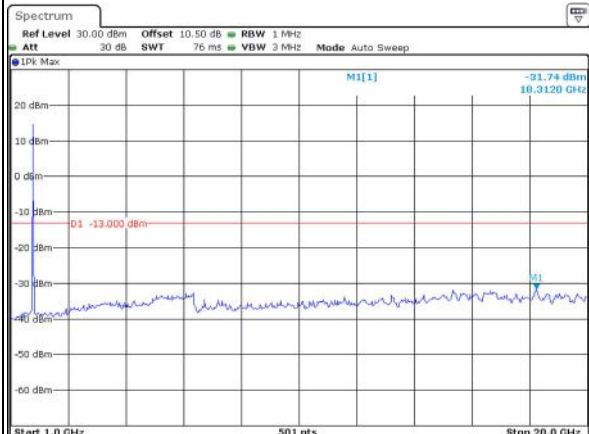
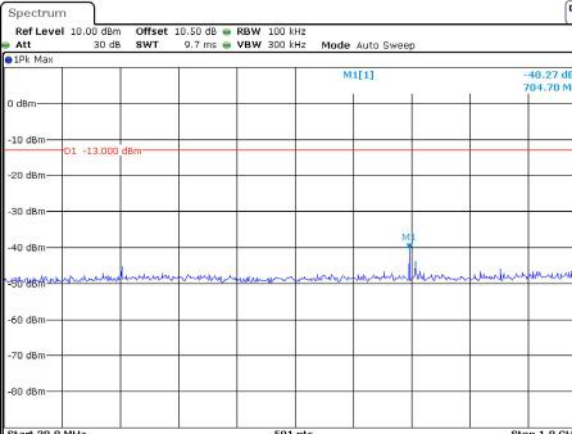
Channel

15MHz Bandwidth QPSK

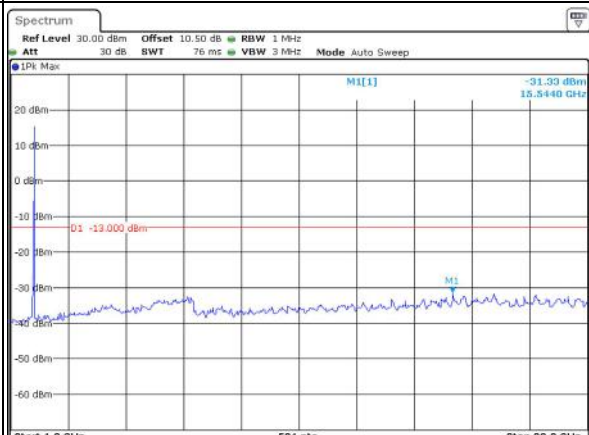
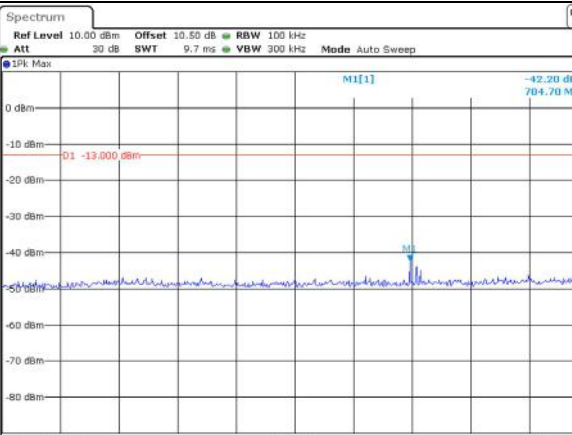
Lowest



Middle



Highest

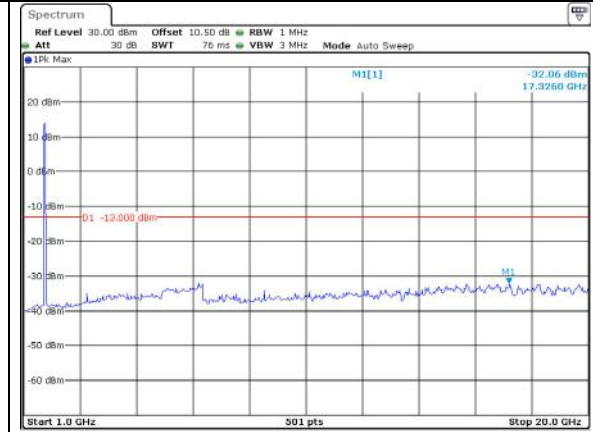
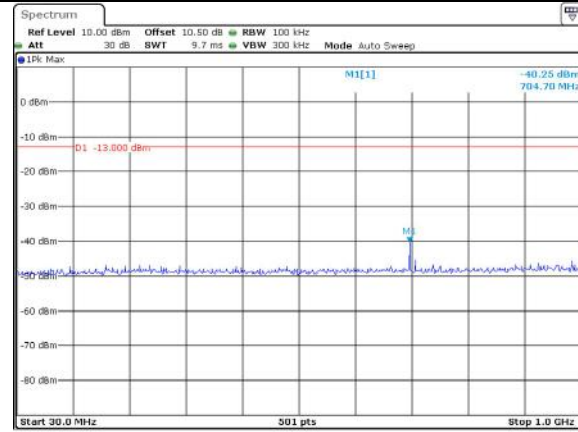


Spurious Emissions at Antenna Terminal

Channel

20MHz Bandwidth QPSK

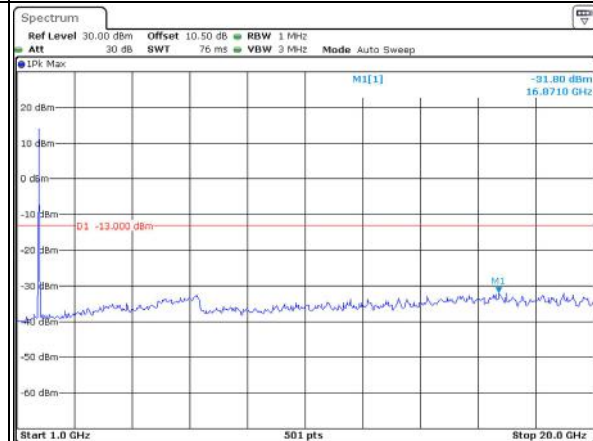
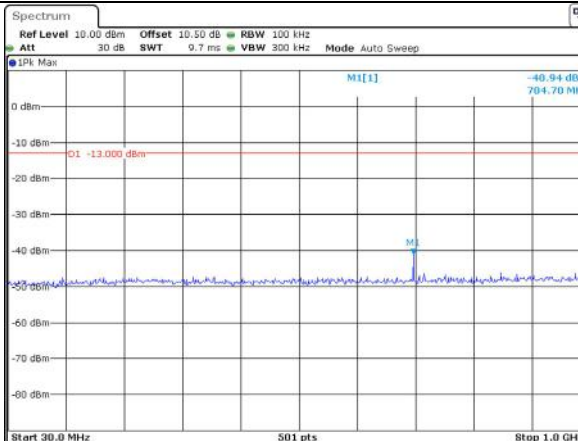
Lowest



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:23:55

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:24:21

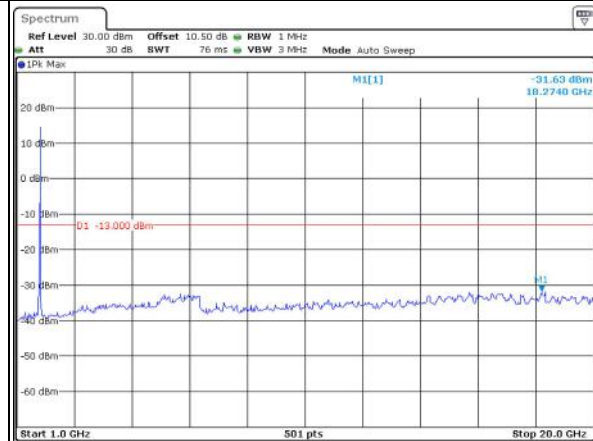
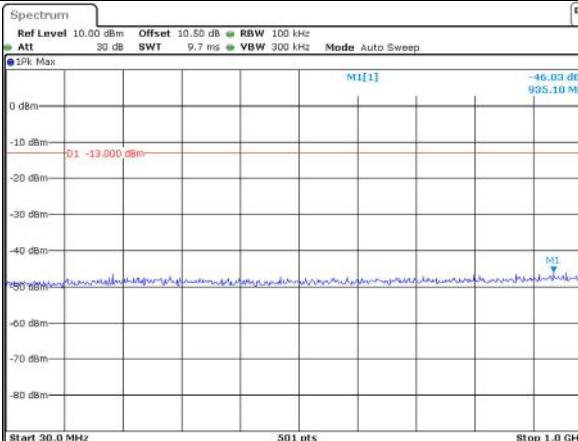
Middle



ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:24:59

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:25:18

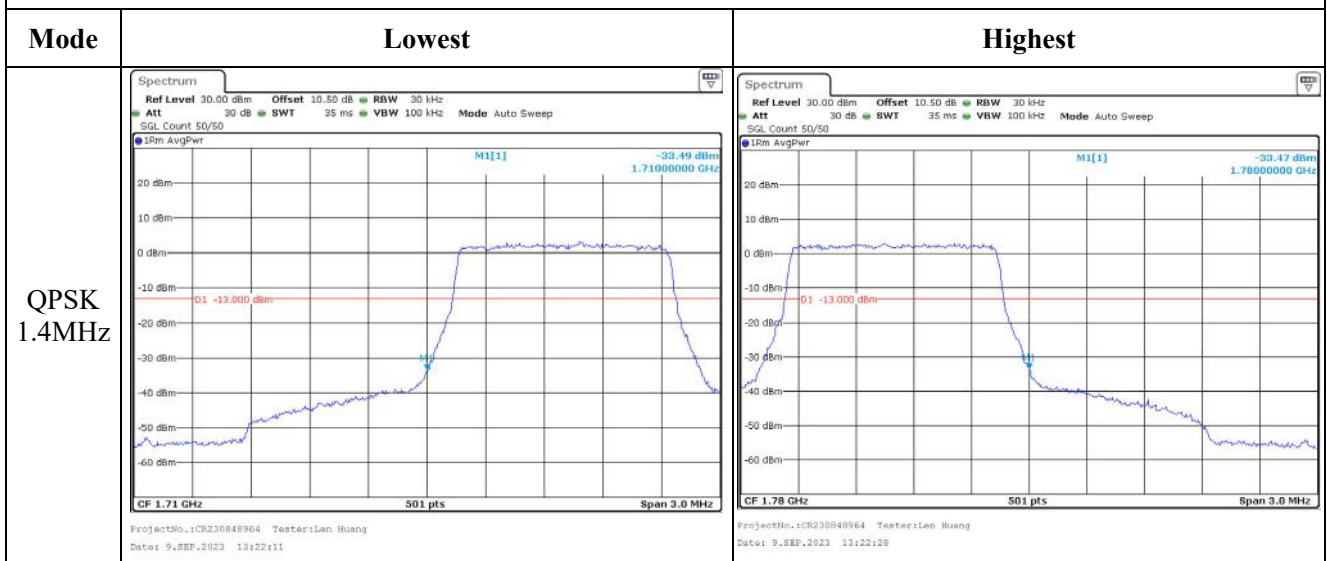
Highest



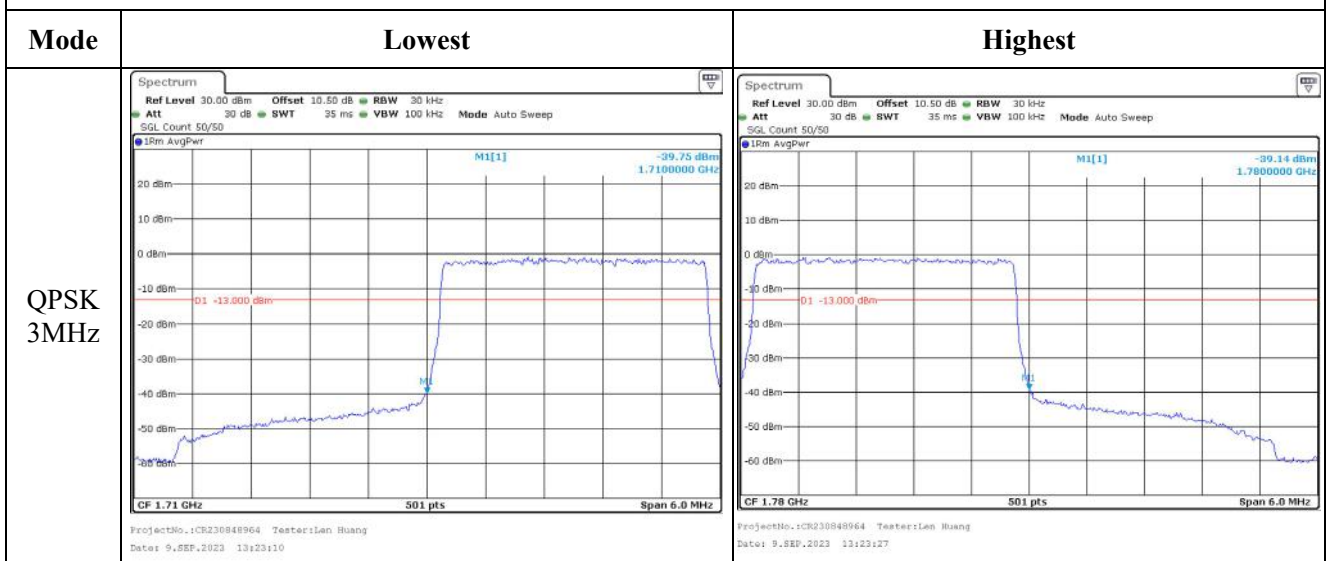
ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:25:53

ProjectNo.:CR230848964 Tester:Len Huang
Date: 9.SEP.2023 12:26:22

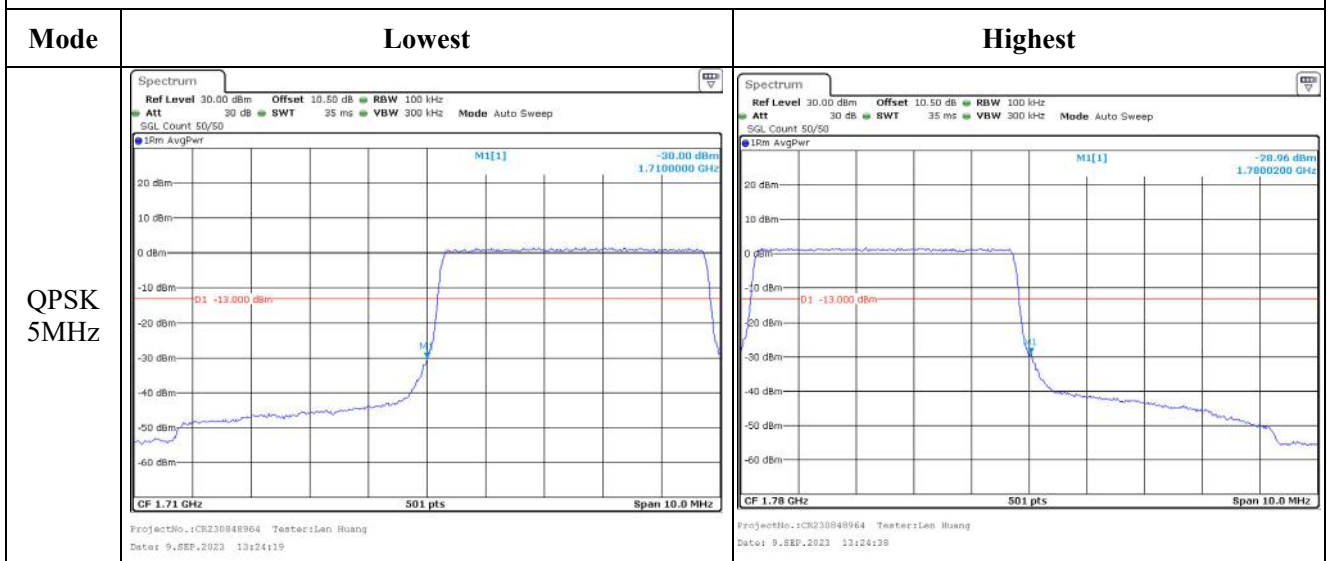
Out of band emission, Band Edge



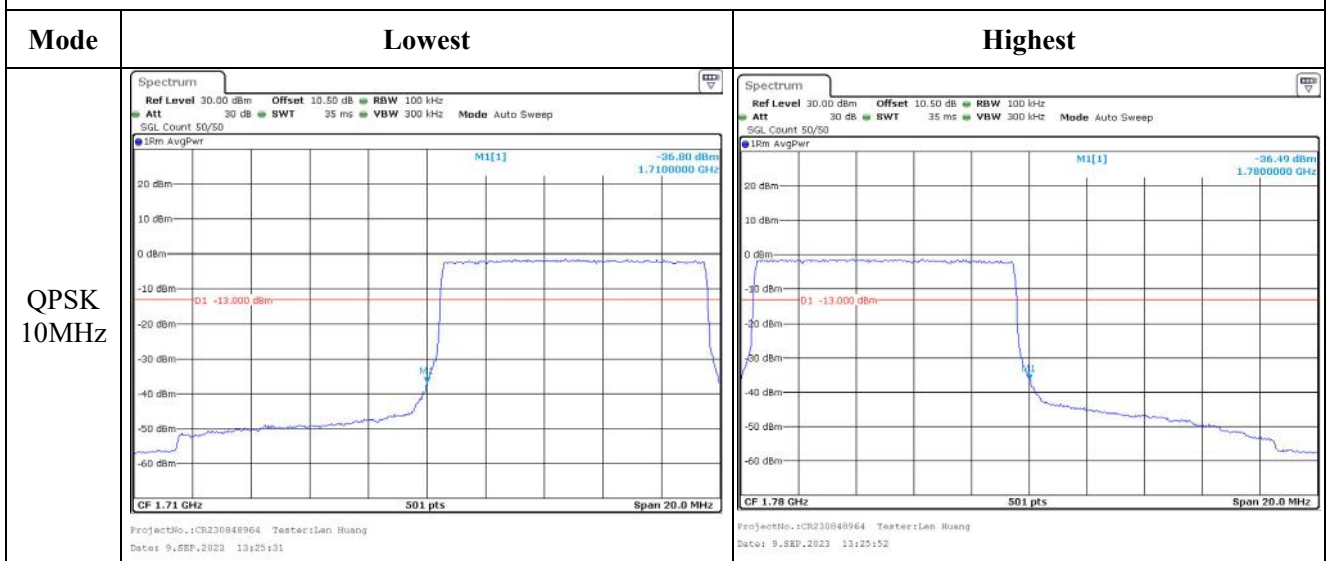
Out of band emission, Band Edge



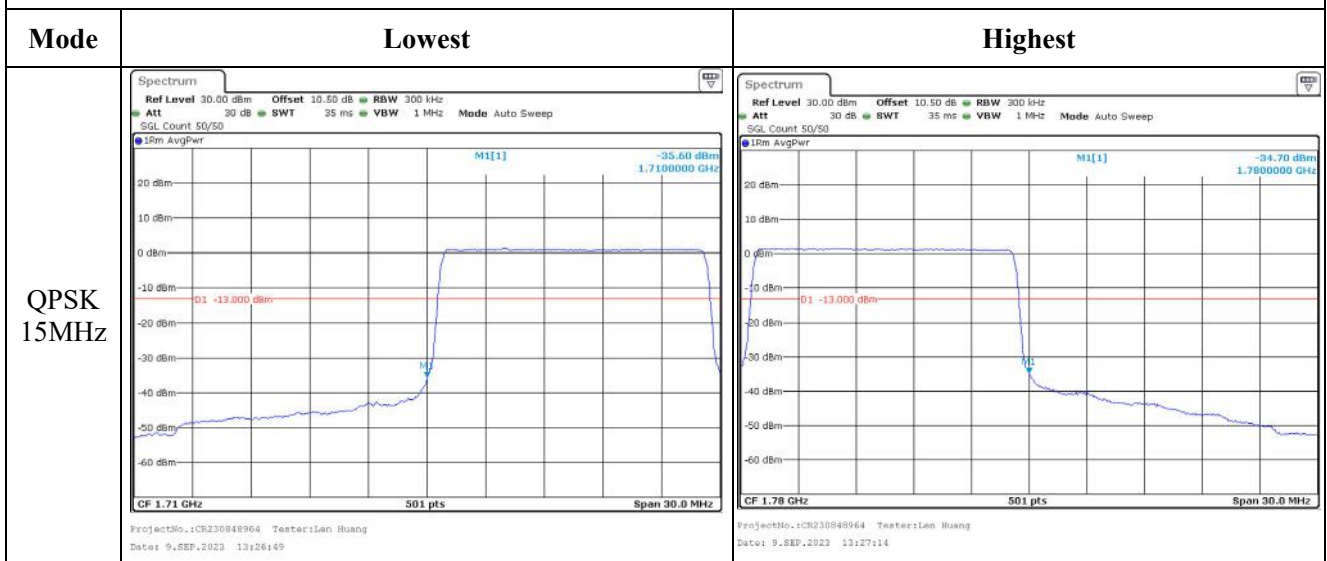
Out of band emission, Band Edge



Out of band emission, Band Edge



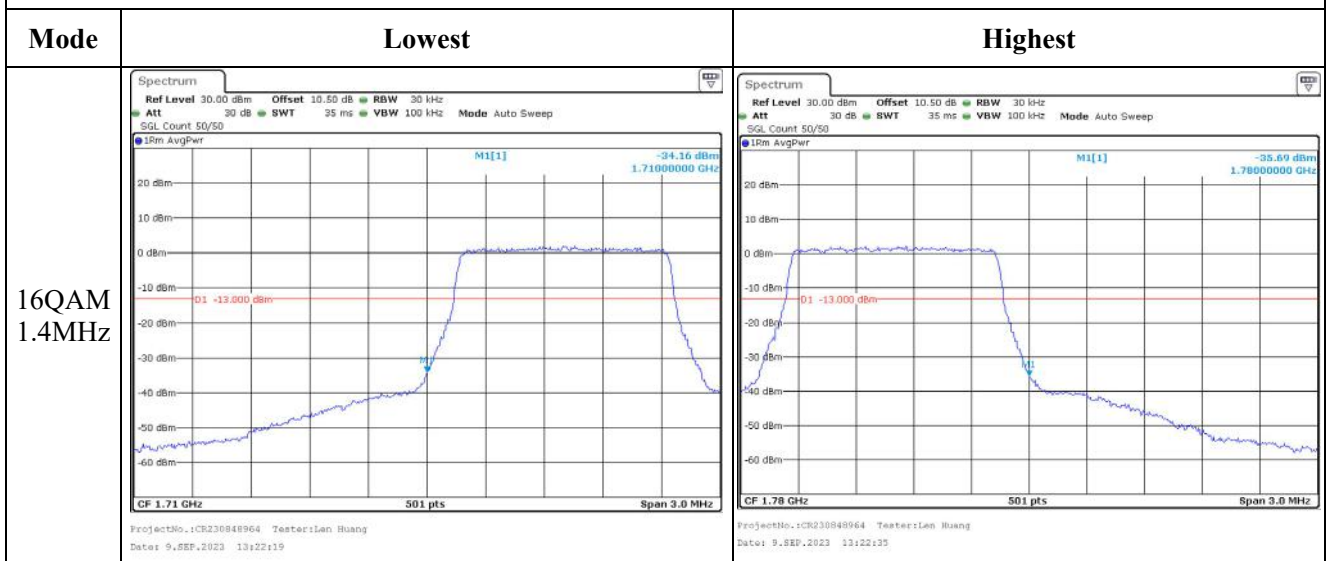
Out of band emission, Band Edge



Out of band emission, Band Edge



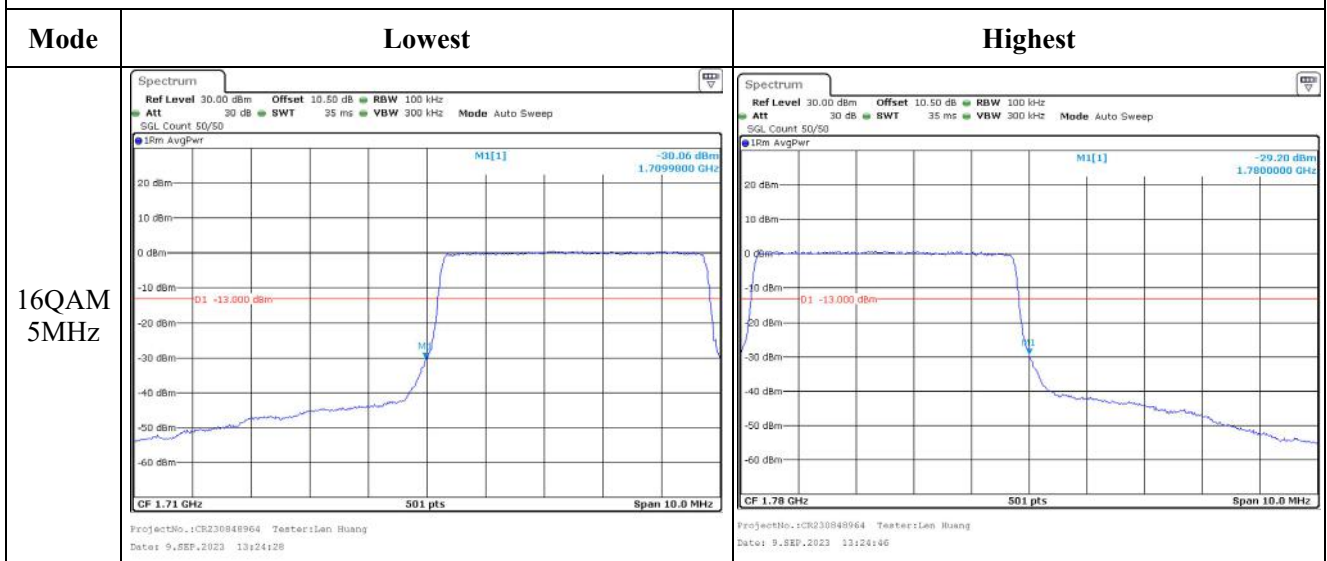
Out of band emission, Band Edge



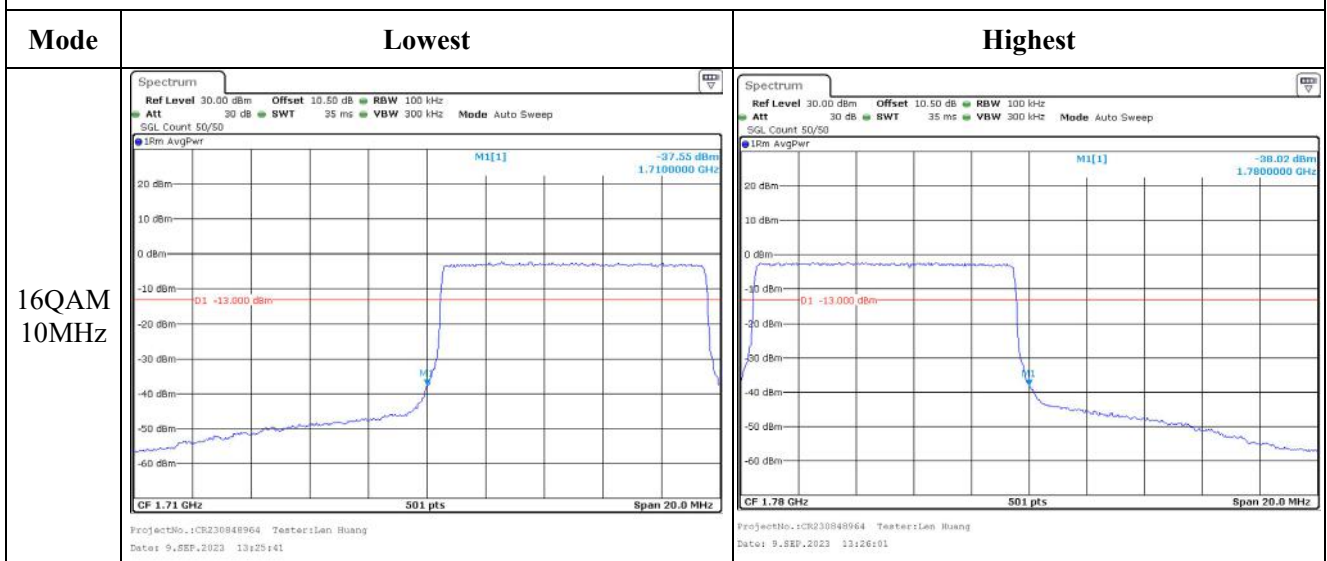
Out of band emission, Band Edge



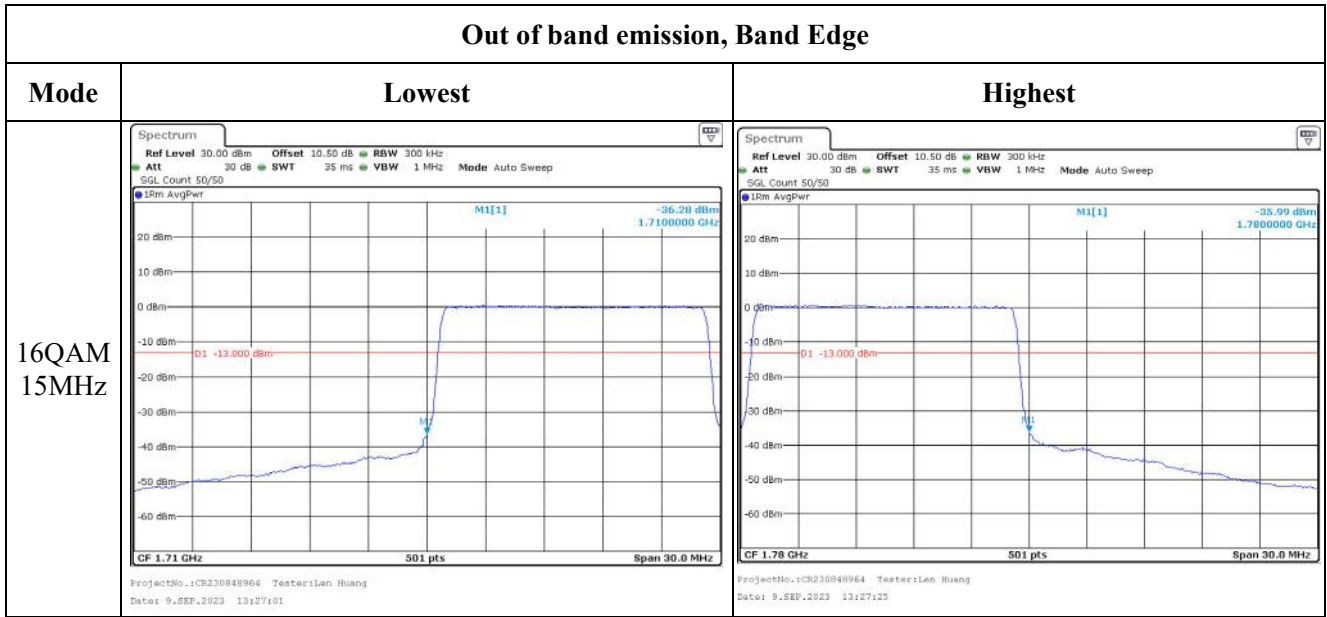
Out of band emission, Band Edge



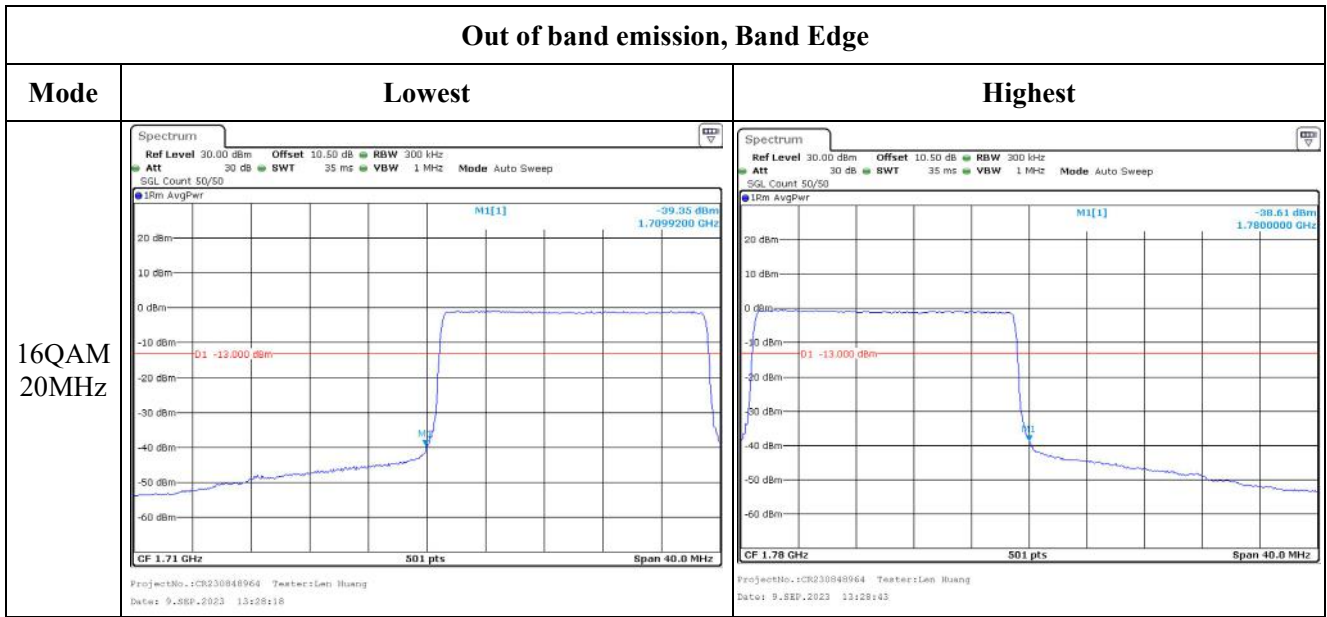
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.16 Radiated Spurious Emissions

Serial Number:	2A93-5	Test Date:	2023/9/10
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Vic Du, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.1	Relative Humidity: (%)	58	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020/10/19	2023/10/18
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2022/11/9	2023/11/8
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/16	2024/9/15
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								
60.84	H	37.42	-66.45	-9.85	0.14	-76.44	-13.00	63.44
212.46	V	42.34	-67.38	0.00	0.26	-67.64	-13.00	54.64
1648.400	H	36.15	-68.18	8.68	0.80	-60.30	-13.00	47.30
1648.400	V	36.45	-67.96	8.68	0.80	-60.08	-13.00	47.08
2472.600	H	35.33	-65.45	9.38	1.00	-57.07	-13.00	44.07
2472.600	V	33.91	-66.82	9.38	1.00	-58.44	-13.00	45.44
3296.800	H	33.52	-63.16	10.32	1.15	-53.99	-13.00	40.99
3296.800	V	31.58	-64.86	10.32	1.15	-55.69	-13.00	42.69
GSM 850 Frequency:836.6MHz								
64.32	H	37.47	-66.37	-8.01	0.14	-74.52	-13.00	61.52
214.72	V	42.75	-67.04	0.00	0.27	-67.31	-13.00	54.31
1673.200	H	39.63	-64.68	8.71	0.85	-56.82	-13.00	43.82
1673.200	V	39.46	-64.95	8.71	0.85	-57.09	-13.00	44.09
2509.800	H	34.02	-66.59	9.42	1.01	-58.18	-13.00	45.18
2509.800	V	34.48	-66.14	9.42	1.01	-57.73	-13.00	44.73
3346.400	H	34.45	-62.72	10.34	1.16	-53.54	-13.00	40.54
3346.400	V	32.97	-64.06	10.34	1.16	-54.88	-13.00	41.88
GSM 850 Frequency:848.8MHz								
64.72	H	37.85	-65.98	-7.80	0.14	-73.92	-13.00	60.92
214.39	V	42.63	-67.15	0.00	0.27	-67.42	-13.00	54.42
1697.600	H	38.48	-65.81	8.74	0.90	-57.97	-13.00	44.97
1697.600	V	37.17	-67.25	8.74	0.90	-59.41	-13.00	46.41
2546.400	H	35.30	-65.03	9.47	1.01	-56.57	-13.00	43.57
2546.400	V	35.22	-65.06	9.47	1.01	-56.60	-13.00	43.60
3395.200	H	35.16	-62.53	10.36	1.19	-53.36	-13.00	40.36
3395.200	V	33.40	-64.26	10.36	1.19	-55.09	-13.00	42.09

PCS Band (30MHz-20GHz)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
63.42	H	37.52	-66.33	-8.49	0.14	-74.96	-13.00	61.96
214.68	V	42.62	-67.17	0.00	0.27	-67.44	-13.00	54.44
3700.400	H	52.24	-45.08	10.60	1.25	-35.73	-13.00	22.73
3700.400	V	44.38	-52.92	10.60	1.25	-43.57	-13.00	30.57
5550.600	H	59.33	-33.93	11.44	1.49	-23.98	-13.00	10.98
5550.600	V	58.61	-34.49	11.44	1.49	-24.54	-13.00	11.54
GSM 1900 Frequency:1880MHz								
63.64	H	37.36	-66.48	-8.37	0.14	-74.99	-13.00	61.99
214.36	V	42.41	-67.37	0.00	0.27	-67.64	-13.00	54.64
3760.000	H	54.16	-42.25	10.66	1.24	-32.83	-13.00	19.83
3760.000	V	51.13	-45.16	10.66	1.24	-35.74	-13.00	22.74
5640.000	H	65.47	-27.98	11.33	1.54	-18.19	-13.00	5.19
5640.000	V	60.75	-32.58	11.33	1.54	-22.79	-13.00	9.79
GSM 1900 Frequency:1909.8MHz								
63.71	H	37.23	-66.61	-8.33	0.14	-75.08	-13.00	62.08
214.53	V	42.24	-67.55	0.00	0.27	-67.82	-13.00	54.82
3819.600	H	54.17	-41.69	10.72	1.29	-32.26	-13.00	19.26
3819.600	V	49.53	-46.19	10.72	1.29	-36.76	-13.00	23.76
5729.400	H	59.76	-33.72	11.22	1.59	-24.09	-13.00	11.09
5729.400	V	57.91	-35.45	11.22	1.59	-25.82	-13.00	12.82

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								
63.72	H	37.52	-66.32	-8.33	0.14	-74.79	-13.00	61.79
214.16	V	42.56	-67.21	0.00	0.27	-67.48	-13.00	54.48
3704.800	H	42.01	-55.25	10.60	1.25	-45.90	-13.00	32.90
3704.800	V	41.41	-55.82	10.60	1.25	-46.47	-13.00	33.47
5557.200	H	32.08	-61.20	11.43	1.49	-51.26	-13.00	38.26
5557.200	V	32.26	-60.87	11.43	1.49	-50.93	-13.00	37.93
WCDMA Band II, Frequency:1880 MHz								
63.78	H	37.59	-66.25	-8.30	0.14	-74.69	-13.00	61.69
214.26	V	42.68	-67.10	0.00	0.27	-67.37	-13.00	54.37
3760.000	H	45.79	-50.62	10.66	1.24	-41.20	-13.00	28.20
3760.000	V	43.02	-53.27	10.66	1.24	-43.85	-13.00	30.85
5640.000	H	32.94	-60.51	11.33	1.54	-50.72	-13.00	37.72
5640.000	V	33.85	-59.48	11.33	1.54	-49.69	-13.00	36.69
WCDMA Band II, Frequency:1907.6MHz								
63.79	H	37.92	-65.92	-8.29	0.14	-74.35	-13.00	61.35
214.86	V	42.85	-66.95	0.00	0.27	-67.22	-13.00	54.22
3815.200	H	45.44	-50.41	10.72	1.29	-40.98	-13.00	27.98
3815.200	V	44.31	-51.38	10.72	1.29	-41.95	-13.00	28.95
5722.800	H	34.25	-59.24	11.23	1.58	-49.59	-13.00	36.59
5722.800	V	34.13	-59.22	11.23	1.58	-49.57	-13.00	36.57

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				
63.52	H	37.25	-66.59	-8.43	0.14	-75.16	-13.00	62.16
214.35	V	42.62	-67.16	0.00	0.27	-67.43	-13.00	54.43
3424.800	H	33.45	-64.32	10.37	1.17	-55.12	-13.00	42.12
3424.800	V	33.67	-64.07	10.37	1.17	-54.87	-13.00	41.87
5137.200	H	32.23	-61.39	11.28	1.46	-51.57	-13.00	38.57
5137.200	V	31.82	-61.68	11.28	1.46	-51.86	-13.00	38.86
Frequency:			1732.6	MHz				
63.47	H	37.33	-66.52	-8.46	0.14	-75.12	-13.00	62.12
214.63	V	42.36	-67.43	0.00	0.27	-67.70	-13.00	54.70
3465.200	H	33.19	-64.62	10.39	1.15	-55.38	-13.00	42.38
3465.200	V	34.28	-63.49	10.39	1.15	-54.25	-13.00	41.25
5197.800	H	30.94	-63.19	11.32	1.44	-53.31	-13.00	40.31
5197.800	V	33.04	-60.94	11.32	1.44	-51.06	-13.00	38.06
Frequency:			1752.6	MHz				
63.56	H	37.78	-66.06	-8.41	0.14	-74.61	-13.00	61.61
214.75	V	42.86	-66.93	0.00	0.27	-67.20	-13.00	54.20
3505.200	H	34.20	-63.63	10.41	1.18	-54.40	-13.00	41.40
3505.200	V	33.80	-63.97	10.41	1.18	-54.74	-13.00	41.74
5257.800	H	32.57	-61.16	11.35	1.47	-51.28	-13.00	38.28
5257.800	V	32.45	-61.06	11.35	1.47	-51.18	-13.00	38.18

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								
63.25	H	37.85	-66.00	-8.58	0.14	-74.72	-13.00	61.72
214.61	V	42.69	-67.10	0.00	0.27	-67.37	-13.00	54.37
1652.800	H	37.07	-67.26	8.68	0.81	-59.39	-13.00	46.39
1652.800	V	36.34	-68.07	8.68	0.81	-60.20	-13.00	47.20
2479.200	H	34.32	-66.44	9.39	1.01	-58.06	-13.00	45.06
2479.200	V	34.32	-66.41	9.39	1.01	-58.03	-13.00	45.03
3305.600	H	30.78	-65.95	10.32	1.15	-56.78	-13.00	43.78
3305.600	V	30.95	-65.55	10.32	1.15	-56.38	-13.00	43.38
WCDMA Band 5 Frequency:836.6MHz								
63.57	H	37.68	-66.16	-8.41	0.14	-74.71	-13.00	61.71
214.85	V	42.71	-67.09	0.00	0.27	-67.36	-13.00	54.36
1673.200	H	36.47	-67.84	8.71	0.85	-59.98	-13.00	46.98
1673.200	V	37.16	-67.25	8.71	0.85	-59.39	-13.00	46.39
2509.800	H	34.14	-66.47	9.42	1.01	-58.06	-13.00	45.06
2509.800	V	35.04	-65.58	9.42	1.01	-57.17	-13.00	44.17
3346.400	H	31.31	-65.86	10.34	1.16	-56.68	-13.00	43.68
3346.400	V	32.18	-64.85	10.34	1.16	-55.67	-13.00	42.67
WCDMA Band 5 Frequency:846.6MHz								
63.55	H	37.21	-66.63	-8.42	0.14	-75.19	-13.00	62.19
214.25	V	42.76	-67.02	0.00	0.27	-67.29	-13.00	54.29
1693.200	H	38.02	-66.28	8.73	0.89	-58.44	-13.00	45.44
1693.200	V	37.71	-66.71	8.73	0.89	-58.87	-13.00	45.87
2539.800	H	34.76	-65.62	9.46	1.01	-57.17	-13.00	44.17
2539.800	V	35.00	-65.34	9.46	1.01	-56.89	-13.00	43.89
3386.400	H	31.84	-65.75	10.35	1.18	-56.58	-13.00	43.58
3386.400	V	33.20	-64.34	10.35	1.18	-55.17	-13.00	42.17

LTE Bands: (The Worst modulation and bandwidth was below)

LTE Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, 1.4MHz, Frequency:1850.7 MHz								
60.77	H	37.32	-66.55	-9.89	0.14	-76.58	-13.00	63.58
212.63	V	42.75	-66.97	0.00	0.27	-67.24	-13.00	54.24
3701.400	H	48.12	-49.19	10.60	1.25	-39.84	-13.00	26.84
3701.400	V	43.55	-53.74	10.60	1.25	-44.39	-13.00	31.39
5552.100	H	37.61	-55.66	11.44	1.49	-45.71	-13.00	32.71
5552.100	V	37.04	-56.06	11.44	1.49	-46.11	-13.00	33.11
QPSK, 1.4MHz, Frequency:1880 MHz								
60.63	H	37.14	-66.73	-9.97	0.14	-76.84	-13.00	63.84
212.58	V	42.33	-67.39	0.00	0.27	-67.66	-13.00	54.66
3760.000	H	48.83	-47.58	10.66	1.24	-38.16	-13.00	25.16
3760.000	V	45.10	-51.19	10.66	1.24	-41.77	-13.00	28.77
5640.000	H	38.10	-55.35	11.33	1.54	-45.56	-13.00	32.56
5640.000	V	35.93	-57.40	11.33	1.54	-47.61	-13.00	34.61
QPSK, 1.4MHz, Frequency:1909.3 MHz								
60.32	H	37.24	-66.64	-10.13	0.14	-76.91	-13.00	63.91
212.64	V	42.16	-67.56	0.00	0.27	-67.83	-13.00	54.83
3818.600	H	49.22	-46.64	10.72	1.29	-37.21	-13.00	24.21
3818.600	V	46.13	-49.58	10.72	1.29	-40.15	-13.00	27.15
5727.900	H	37.47	-56.01	11.23	1.59	-46.37	-13.00	33.37
5727.900	V	35.48	-57.88	11.23	1.59	-48.24	-13.00	35.24

LTE 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)			
1.4MHz QPSK, Frequency:			1710.7 MHz					
60.69	H	37.43	-66.44	-9.93	0.14	-76.51	-13.00	63.51
212.78	V	42.47	-67.26	0.00	0.27	-67.53	-13.00	54.53
3421.400	H	34.41	-63.35	10.37	1.17	-54.15	-13.00	41.15
3421.400	V	34.36	-63.37	10.37	1.17	-54.17	-13.00	41.17
5132.100	H	34.00	-59.57	11.28	1.47	-49.76	-13.00	36.76
5132.100	V	33.44	-60.02	11.28	1.47	-50.21	-13.00	37.21
1.4MHz QPSK, Frequency:			1732.5 MHz					
60.45	H	37.47	-66.41	-10.06	0.14	-76.61	-13.00	63.61
212.57	V	42.84	-66.88	0.00	0.27	-67.15	-13.00	54.15
3465.000	H	34.83	-62.98	10.39	1.15	-53.74	-13.00	40.74
3465.000	V	32.83	-64.94	10.39	1.15	-55.70	-13.00	42.70
5197.500	H	33.65	-60.48	11.32	1.44	-50.60	-13.00	37.60
5197.500	V	32.99	-60.99	11.32	1.44	-51.11	-13.00	38.11
1.4MHz QPSK, Frequency:			1754.3 MHz					
60.30	H	37.77	-66.11	-10.14	0.14	-76.39	-13.00	63.39
212.27	V	42.14	-67.57	0.00	0.26	-67.83	-13.00	54.83
3508.600	H	32.67	-65.15	10.41	1.19	-55.93	-13.00	42.93
3508.600	V	32.35	-65.41	10.41	1.19	-56.19	-13.00	43.19
5262.900	H	32.03	-61.67	11.36	1.47	-51.78	-13.00	38.78
5262.900	V	31.60	-61.87	11.36	1.47	-51.98	-13.00	38.98

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								
60.12	H	37.64	-66.24	-10.24	0.14	-76.62	-13.00	63.62
212.68	V	42.71	-67.01	0.00	0.27	-67.28	-13.00	54.28
1649.400	H	39.92	-64.41	8.68	0.80	-56.53	-13.00	43.53
1649.400	V	38.32	-66.09	8.68	0.80	-58.21	-13.00	45.21
2474.100	H	35.25	-65.53	9.38	1.00	-57.15	-13.00	44.15
2474.100	V	35.85	-64.88	9.38	1.00	-56.50	-13.00	43.50
3298.800	H	30.95	-65.73	10.32	1.15	-56.56	-13.00	43.56
3298.800	V	32.25	-64.19	10.32	1.15	-55.02	-13.00	42.02
QPSK, 1.4MHz, Frequency: 836.5 MHz								
60.65	H	37.52	-66.35	-9.96	0.14	-76.45	-13.00	63.45
212.60	V	42.77	-66.95	0.00	0.27	-67.22	-13.00	54.22
1673.000	H	38.58	-65.73	8.71	0.85	-57.87	-13.00	44.87
1673.000	V	38.64	-65.77	8.71	0.85	-57.91	-13.00	44.91
2509.500	H	34.38	-66.23	9.42	1.01	-57.82	-13.00	44.82
2509.500	V	34.34	-66.28	9.42	1.01	-57.87	-13.00	44.87
3346.000	H	32.25	-64.91	10.34	1.16	-55.73	-13.00	42.73
3346.000	V	32.35	-64.67	10.34	1.16	-55.49	-13.00	42.49
QPSK, 1.4MHz, Frequency: 848.3 MHz								
60.49	H	37.53	-66.35	-10.04	0.14	-76.53	-13.00	63.53
212.11	V	42.20	-67.50	0.00	0.26	-67.76	-13.00	54.76
1696.600	H	37.64	-66.65	8.74	0.89	-58.80	-13.00	45.80
1696.600	V	37.76	-66.66	8.74	0.89	-58.81	-13.00	45.81
2544.900	H	35.73	-64.61	9.47	1.01	-56.15	-13.00	43.15
2544.900	V	34.33	-65.97	9.47	1.01	-57.51	-13.00	44.51
3393.200	H	33.53	-64.14	10.36	1.19	-54.97	-13.00	41.97
3393.200	V	33.08	-64.55	10.36	1.19	-55.38	-13.00	42.38

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								
60.85	H	37.82	-66.05	-9.85	0.14	-76.04	-25.00	51.04
212.71	V	42.16	-67.56	0.00	0.27	-67.83	-25.00	42.83
5005.000	H	31.49	-61.47	11.20	1.47	-51.74	-25.00	26.74
5005.000	V	31.54	-61.28	11.20	1.47	-51.55	-25.00	26.55
7507.500	H	35.35	-54.44	10.90	1.95	-45.49	-25.00	20.49
7507.500	V	35.16	-55.13	10.90	1.95	-46.18	-25.00	21.18
5MHz QPSK, Frequency: 2535 MHz								
60.52	H	37.87	-66.00	-10.02	0.14	-76.16	-25.00	51.16
212.22	V	42.26	-67.45	0.00	0.26	-67.71	-25.00	42.71
5070.000	H	31.52	-61.67	11.24	1.47	-51.90	-25.00	26.90
5070.000	V	31.44	-61.65	11.24	1.47	-51.88	-25.00	26.88
7605.000	H	35.16	-54.31	10.88	2.01	-45.44	-25.00	20.44
7605.000	V	34.55	-55.64	10.88	2.01	-46.77	-25.00	21.77
5MHz QPSK, Frequency: 2567.5 MHz								
60.44	H	37.85	-66.03	-10.07	0.14	-76.24	-25.00	51.24
212.50	V	42.78	-66.94	0.00	0.27	-67.21	-25.00	42.21
5135.000	H	33.39	-60.21	11.28	1.47	-50.40	-25.00	25.40
5135.000	V	33.10	-60.39	11.28	1.47	-50.58	-25.00	25.58
7702.500	H	34.87	-54.65	10.86	1.97	-45.76	-25.00	20.76
7702.500	V	34.75	-55.43	10.86	1.97	-46.54	-25.00	21.54

LTE Band 12(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)			
5MHz QPSK, Frequency: 699.7 MHz								
60.47	H	37.18	-66.70	-10.05	0.14	-76.89	-13.00	63.89
212.32	V	42.85	-66.86	0.00	0.26	-67.12	-13.00	54.12
1399.400	H	38.11	-65.59	8.22	0.71	-58.08	-13.00	45.08
1399.400	V	37.32	-66.43	8.22	0.71	-58.92	-13.00	45.92
2099.100	H	33.52	-68.36	9.16	0.91	-60.11	-13.00	47.11
2099.100	V	32.77	-69.06	9.16	0.91	-60.81	-13.00	47.81
2798.800	H	35.93	-64.00	9.88	1.04	-55.16	-13.00	42.16
2798.800	V	34.96	-64.84	9.88	1.04	-56.00	-13.00	43.00
5MHz QPSK, Frequency: 707.5 MHz								
60.41	H	37.35	-66.53	-10.08	0.14	-76.75	-13.00	63.75
212.76	V	42.32	-67.41	0.00	0.27	-67.68	-13.00	54.68
1415.000	H	36.11	-67.56	8.26	0.72	-60.02	-13.00	47.02
1415.000	V	35.97	-67.75	8.26	0.72	-60.21	-13.00	47.21
2122.500	H	33.98	-68.01	9.17	0.92	-59.76	-13.00	46.76
2122.500	V	33.48	-68.49	9.17	0.92	-60.24	-13.00	47.24
2830.000	H	34.09	-65.71	9.93	1.06	-56.84	-13.00	43.84
2830.000	V	34.91	-64.82	9.93	1.06	-55.95	-13.00	42.95
5MHz QPSK, Frequency: 715.3 MHz								
60.57	H	37.80	-66.07	-10.00	0.14	-76.21	-13.00	63.21
212.66	V	42.25	-67.47	0.00	0.27	-67.74	-13.00	54.74
1430.600	H	36.88	-66.75	8.31	0.73	-59.17	-13.00	46.17
1430.600	V	34.68	-69.01	8.31	0.73	-61.43	-13.00	48.43
2145.900	H	38.45	-63.65	9.19	0.93	-55.39	-13.00	42.39
2145.900	V	37.66	-64.45	9.19	0.93	-56.19	-13.00	43.19
2861.200	H	33.00	-66.65	9.98	1.07	-57.74	-13.00	44.74
2861.200	V	33.42	-66.25	9.98	1.07	-57.34	-13.00	44.34

LTE Band 17(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	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				
60.75	H	37.46	-66.41	-9.90	0.14	-76.45	-13.00	63.45
212.27	V	42.31	-67.40	0.00	0.26	-67.66	-13.00	54.66
1413.000	H	37.24	-66.43	8.26	0.72	-58.89	-13.00	45.89
1413.000	V	35.82	-67.90	8.26	0.72	-60.36	-13.00	47.36
2119.500	H	34.21	-67.76	9.17	0.92	-59.51	-13.00	46.51
2119.500	V	33.69	-68.26	9.17	0.92	-60.01	-13.00	47.01
2826.000	H	34.50	-65.31	9.92	1.06	-56.45	-13.00	43.45
2826.000	V	35.06	-64.68	9.92	1.06	-55.82	-13.00	42.82
5MHz QPSK, Frequency:			710	MHz				
60.64	H	37.88	-65.99	-9.96	0.14	-76.09	-13.00	63.09
212.70	V	42.48	-67.24	0.00	0.27	-67.51	-13.00	54.51
1420.000	H	36.99	-66.67	8.28	0.73	-59.12	-13.00	46.12
1420.000	V	35.83	-67.88	8.28	0.73	-60.33	-13.00	47.33
2130.000	H	35.22	-66.80	9.18	0.92	-58.54	-13.00	45.54
2130.000	V	35.28	-66.73	9.18	0.92	-58.47	-13.00	45.47
2840.000	H	33.21	-66.54	9.94	1.06	-57.66	-13.00	44.66
2840.000	V	34.39	-65.32	9.94	1.06	-56.44	-13.00	43.44
5MHz QPSK, Frequency:			713.5	MHz				
60.50	H	37.43	-66.45	-10.04	0.14	-76.63	-13.00	63.63
212.62	V	42.38	-67.34	0.00	0.27	-67.61	-13.00	54.61
1427.000	H	36.11	-67.53	8.30	0.73	-59.96	-13.00	46.96
1427.000	V	34.77	-68.92	8.30	0.73	-61.35	-13.00	48.35
2140.500	H	36.69	-65.38	9.18	0.93	-57.13	-13.00	44.13
2140.500	V	37.19	-64.89	9.18	0.93	-56.64	-13.00	43.64
2854.000	H	31.94	-67.75	9.97	1.07	-58.85	-13.00	45.85
2854.000	V	33.41	-66.27	9.97	1.07	-57.37	-13.00	44.37

LTE Band 38(30MHz-26.5GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	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				
60.44	H	37.64	-66.24	-10.07	0.14	-76.45	-25.00	51.45
212.58	V	42.85	-66.87	0.00	0.27	-67.14	-25.00	42.14
5145.000	H	31.96	-61.72	11.29	1.44	-51.87	-25.00	26.87
5145.000	V	32.03	-61.54	11.29	1.44	-51.69	-25.00	26.69
7717.500	H	33.60	-55.91	10.86	1.99	-47.04	-25.00	22.04
7717.500	V	35.99	-54.14	10.86	1.99	-45.27	-25.00	20.27
5MHz QPSK, Frequency:			2595	MHz				
60.44	H	37.82	-66.06	-10.07	0.14	-76.27	-25.00	51.27
212.76	V	42.30	-67.43	0.00	0.27	-67.70	-25.00	42.70
5190.000	H	32.19	-61.88	11.31	1.44	-52.01	-25.00	27.01
5190.000	V	32.41	-61.51	11.31	1.44	-51.64	-25.00	26.64
7785.000	H	35.68	-53.81	10.84	1.99	-44.96	-25.00	19.96
7785.000	V	34.12	-55.80	10.84	1.99	-46.95	-25.00	21.95
5MHz QPSK, Frequency:			2617.5	MHz				
60.65	H	37.40	-66.47	-9.96	0.14	-76.57	-25.00	51.57
212.29	V	42.81	-66.90	0.00	0.26	-67.16	-25.00	42.16
5235.000	H	32.98	-60.92	11.34	1.46	-51.04	-25.00	26.04
5235.000	V	32.89	-60.82	11.34	1.46	-50.94	-25.00	25.94
7852.500	H	35.17	-54.02	10.83	2.03	-45.22	-25.00	20.22
7852.500	V	35.48	-54.10	10.83	2.03	-45.30	-25.00	20.30

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								
60.14	H	37.22	-66.66	-10.23	0.14	-77.03	-40.00	37.03
212.88	V	42.35	-67.38	0.00	0.27	-67.65	-40.00	27.65
4615.000	H	25.51	-69.85	10.74	1.41	-60.52	-40.00	20.52
4615.000	V	25.88	-69.34	10.74	1.41	-60.01	-40.00	20.01
6922.500	H	25.68	-65.34	11.22	1.88	-56.00	-40.00	16.00
6922.500	V	25.80	-65.09	11.22	1.88	-55.75	-40.00	15.75
5MHz QPSK, Frequency: 2312.5 MHz								
60.48	H	37.57	-66.31	-10.05	0.14	-76.50	-40.00	36.50
212.18	V	42.83	-66.88	0.00	0.26	-67.14	-40.00	27.14
4625.000	H	25.40	-69.89	10.75	1.41	-60.55	-40.00	20.55
4625.000	V	25.71	-69.46	10.75	1.41	-60.12	-40.00	20.12
6937.500	H	26.30	-64.68	11.21	1.90	-55.37	-40.00	15.37
6937.500	V	26.41	-64.43	11.21	1.90	-55.12	-40.00	15.12

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

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 2352.5 MHz								
60.13	H	37.25	-66.63	-10.23	0.14	-77.00	-40.00	37.00
212.77	V	42.87	-66.86	0.00	0.27	-67.13	-40.00	27.13
4705.000	H	25.45	-69.33	10.85	1.41	-59.89	-40.00	19.89
4705.000	V	25.47	-69.33	10.85	1.41	-59.89	-40.00	19.89
7057.500	H	25.64	-64.37	11.17	1.92	-55.12	-40.00	15.12
7057.500	V	24.98	-64.92	11.17	1.92	-55.67	-40.00	15.67
5MHz QPSK, Frequency: 2357.5 MHz								
60.26	H	37.19	-66.69	-10.16	0.14	-76.99	-40.00	36.99
212.87	V	42.18	-67.55	0.00	0.27	-67.82	-40.00	27.82
4715.000	H	26.25	-68.46	10.86	1.41	-59.01	-40.00	19.01
4715.000	V	23.74	-70.97	10.86	1.41	-61.52	-40.00	21.52
7072.500	H	26.92	-62.88	11.16	1.91	-53.63	-40.00	13.63
7072.500	V	23.45	-66.26	11.16	1.91	-57.01	-40.00	17.01

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: 2537.5 MHz								
60.71	H	37.26	-66.61	-9.92	0.14	-76.67	-25.00	51.67
212.48	V	42.21	-67.51	0.00	0.26	-67.77	-25.00	42.77
5075.000	H	31.24	-61.97	11.25	1.48	-52.20	-25.00	27.20
5075.000	V	31.16	-61.95	11.25	1.48	-52.18	-25.00	27.18
7612.500	H	34.51	-54.97	10.88	2.02	-46.11	-25.00	21.11
7612.500	V	34.57	-55.62	10.88	2.02	-46.76	-25.00	21.76
QPSK, 5MHz, Frequency:2595 MHz								
60.87	H	37.20	-66.67	-9.84	0.14	-76.65	-25.00	51.65
212.87	V	42.27	-67.46	0.00	0.27	-67.73	-25.00	42.73
5190.000	H	33.31	-60.76	11.31	1.44	-50.89	-25.00	25.89
5190.000	V	32.79	-61.13	11.31	1.44	-51.26	-25.00	26.26
7785.000	H	34.79	-54.70	10.84	1.99	-45.85	-25.00	20.85
7785.000	V	35.32	-54.60	10.84	1.99	-45.75	-25.00	20.75
QPSK, 5MHz, Frequency: 2652.5 MHz								
60.73	H	37.70	-66.17	-9.91	0.14	-76.22	-25.00	51.22
212.71	V	42.62	-35.89	0.00	0.27	-36.16	-25.00	11.16
5305.000	H	32.81	-60.63	11.38	1.46	-50.71	-25.00	25.71
5305.000	V	33.16	-60.02	11.38	1.46	-50.10	-25.00	25.10
7957.500	H	35.07	-53.35	10.81	2.09	-44.63	-25.00	19.63
7957.500	V	34.11	-54.76	10.81	2.09	-46.04	-25.00	21.04

LTE Band 66(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: 1710.7 MHz								
60.15	H	37.52	-66.36	-10.22	0.14	-76.72	-13.00	63.72
212.20	V	42.28	-67.43	0.00	0.26	-67.69	-13.00	54.69
3421.400	H	33.10	-64.66	10.37	1.17	-55.46	-13.00	42.46
3421.400	V	34.06	-63.67	10.37	1.17	-54.47	-13.00	41.47
5132.100	H	33.00	-60.57	11.28	1.47	-50.76	-13.00	37.76
5132.100	V	32.30	-61.16	11.28	1.47	-51.35	-13.00	38.35
QPSK, 1.4MHz, Frequency: 1745 MHz								
60.39	H	37.12	-66.76	-10.09	0.14	-76.99	-13.00	63.99
212.88	V	42.18	-67.55	0.00	0.27	-67.82	-13.00	54.82
3490.000	H	32.96	-64.88	10.40	1.17	-55.65	-13.00	42.65
3490.000	V	34.64	-63.14	10.40	1.17	-53.91	-13.00	40.91
5235.000	H	31.68	-62.22	11.34	1.46	-52.34	-13.00	39.34
5235.000	V	31.55	-62.16	11.34	1.46	-52.28	-13.00	39.28
QPSK, 1.4MHz, Frequency: 1779.3 MHz								
60.27	H	37.77	-66.11	-10.16	0.14	-76.41	-13.00	63.41
212.39	V	42.39	-67.32	0.00	0.26	-67.58	-13.00	54.58
3558.600	H	37.15	-60.52	10.46	1.22	-51.28	-13.00	38.28
3558.600	V	35.86	-61.71	10.46	1.22	-52.47	-13.00	39.47
5337.900	H	31.78	-61.69	11.40	1.47	-51.76	-13.00	38.76
5337.900	V	31.62	-61.71	11.40	1.47	-51.78	-13.00	38.78

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

Please refer to the attachment CR230848964-EXP EUT EXTERNAL PHOTOGRAPHS and CR230848964-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR230848964-00E-TSP TEST SETUP PHOTOGRAPHS.

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