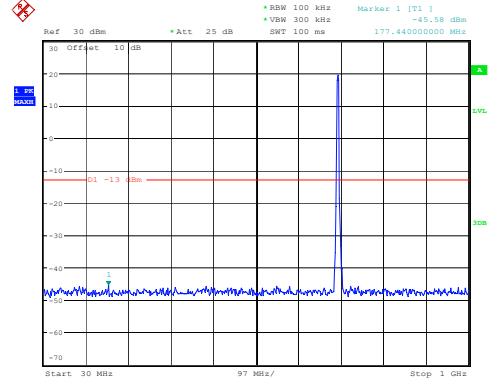
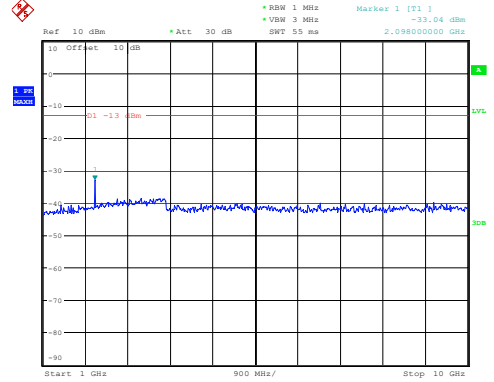
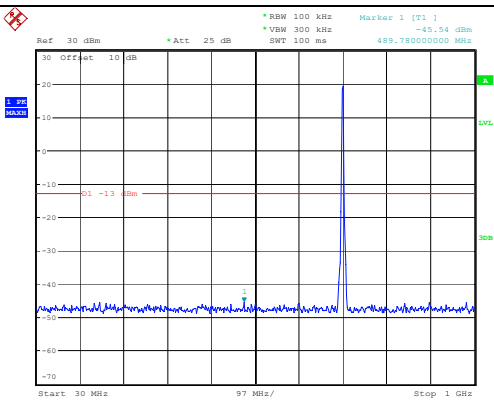
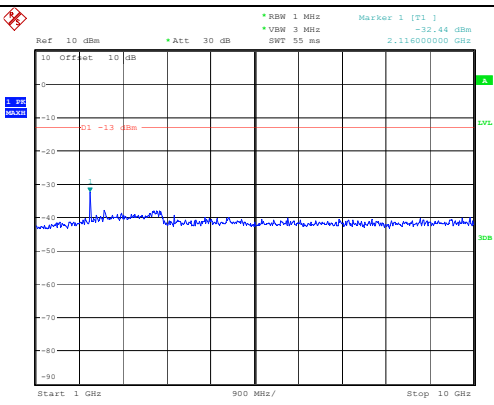
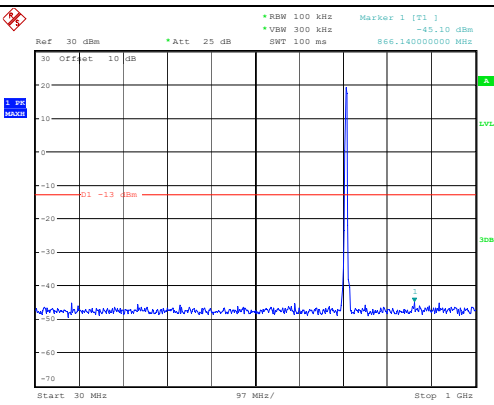
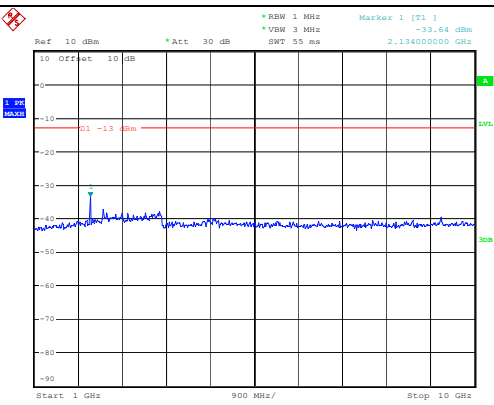


Spurious Emissions at Antenna Terminal

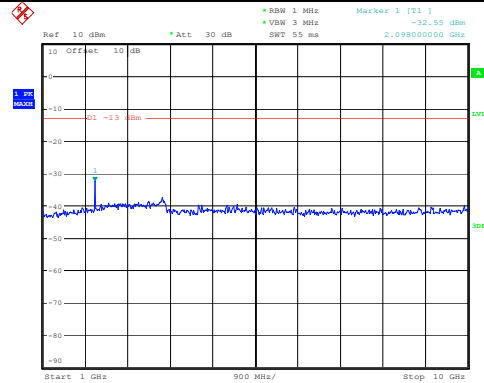
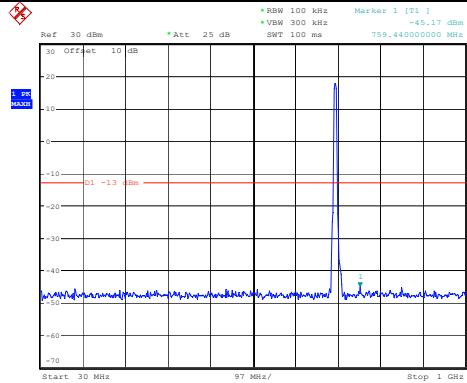
Channel	3MHz Bandwidth QPSK	
Lowest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:45:43	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:45:53
	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:46:07	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:46:17
Highest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:46:31	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:46:41

Spurious Emissions at Antenna Terminal

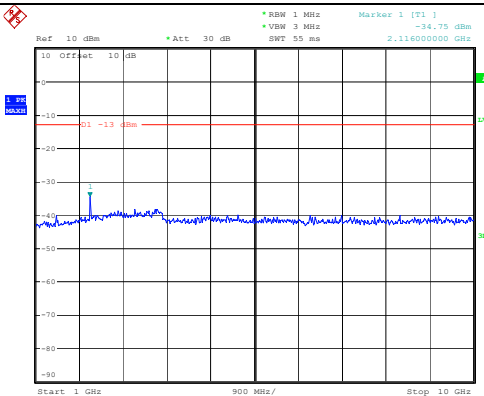
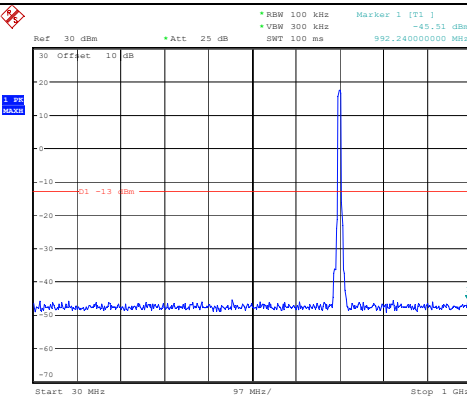
Channel

5MHz Bandwidth QPSK

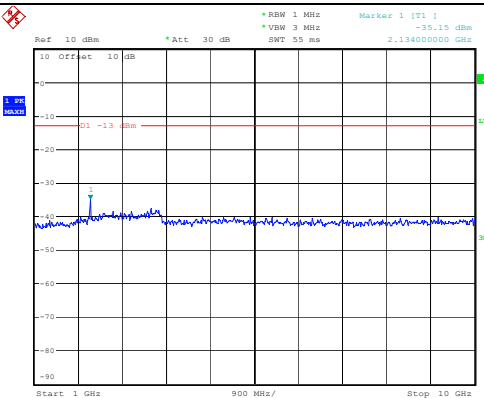
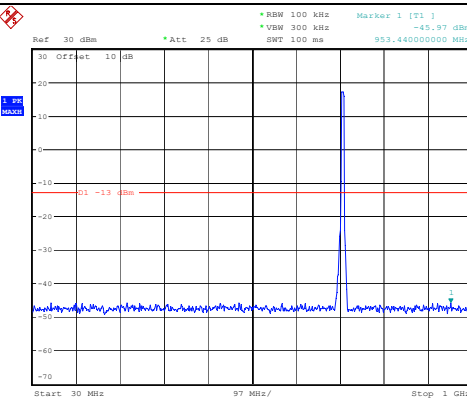
Lowest



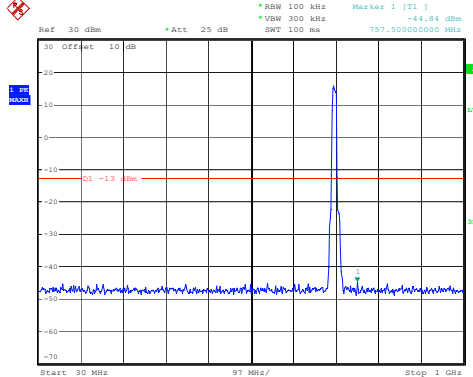
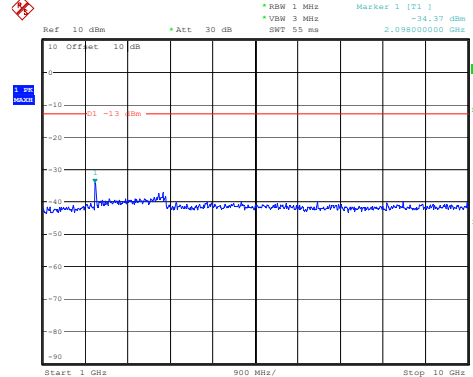
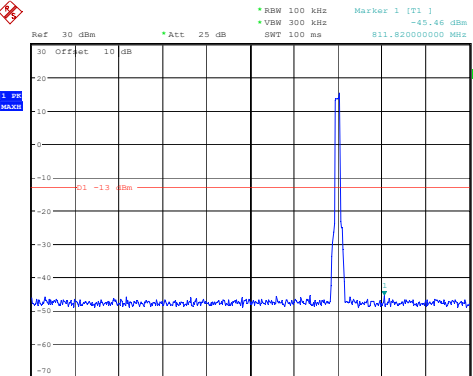
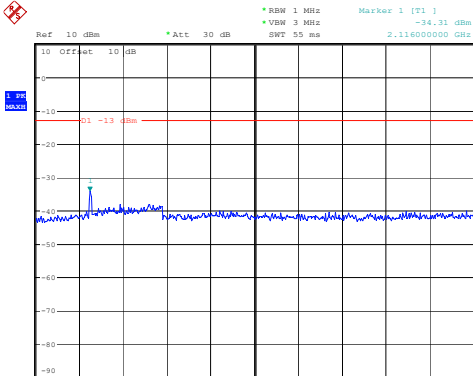
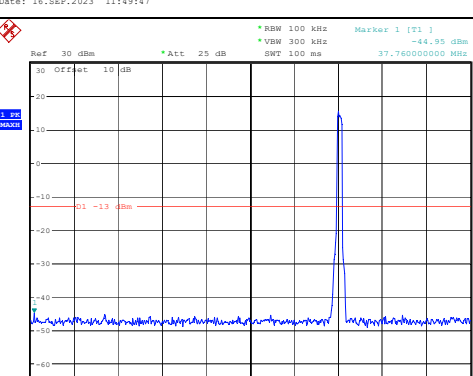
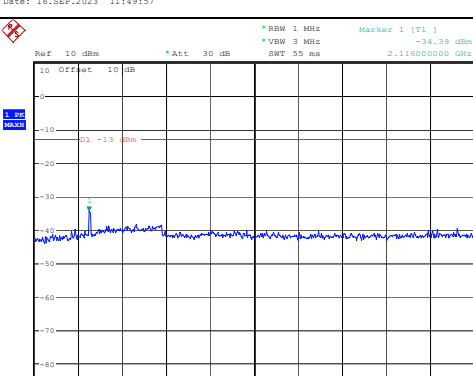
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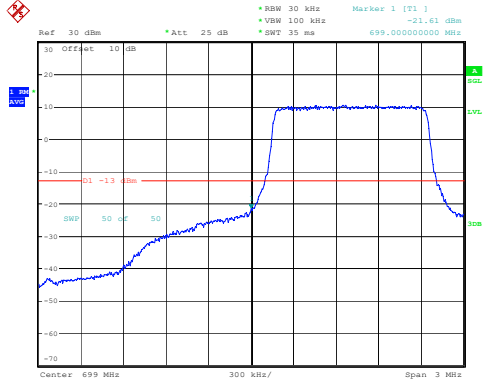
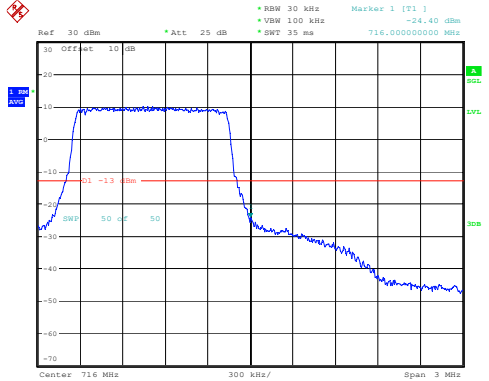
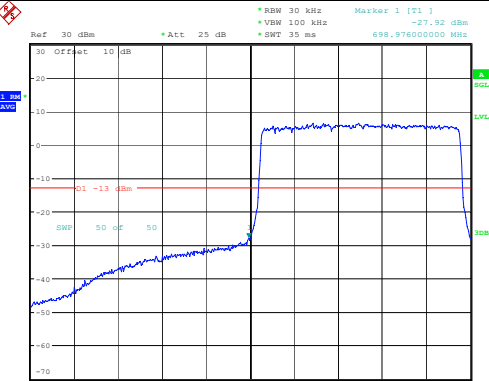
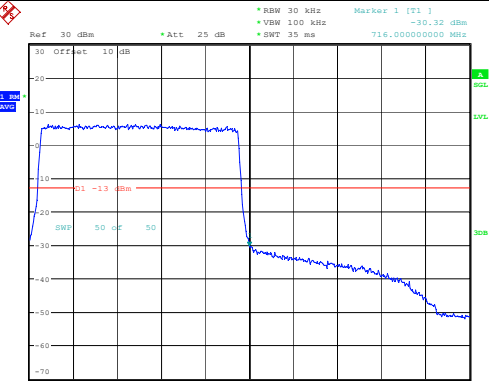
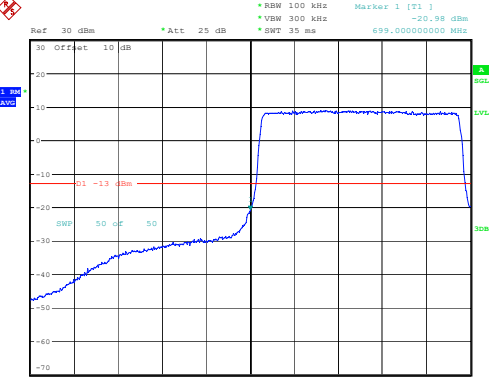
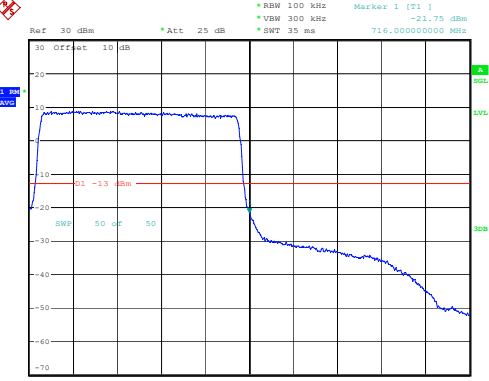
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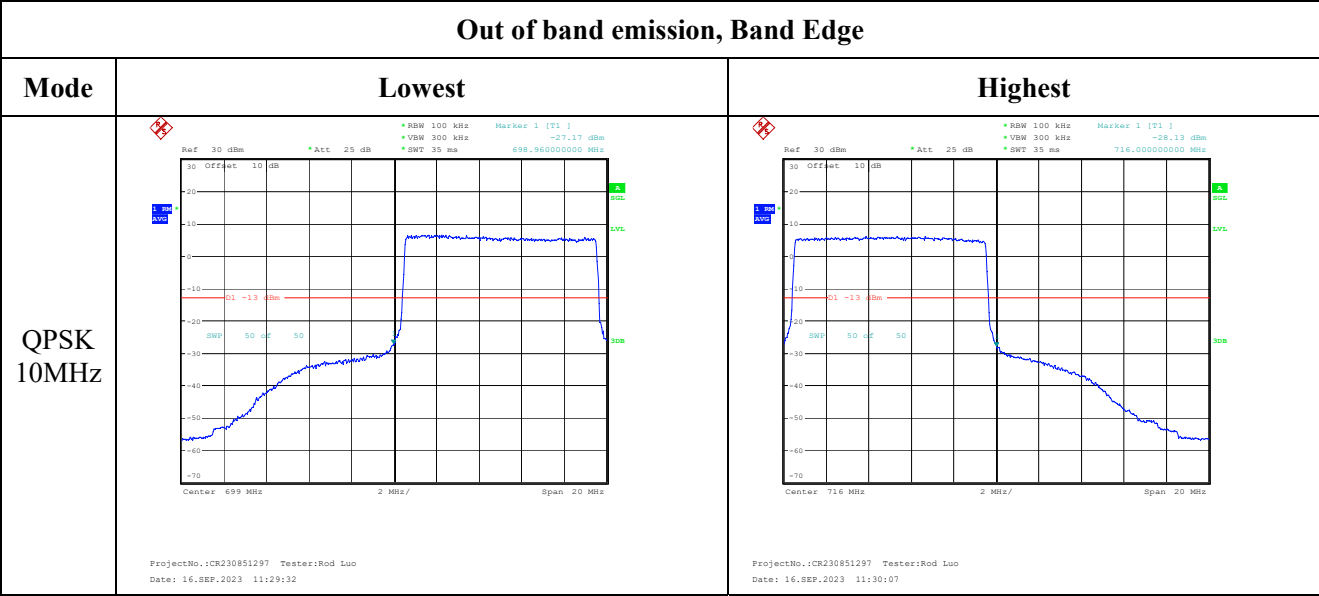


Spurious Emissions at Antenna Terminal

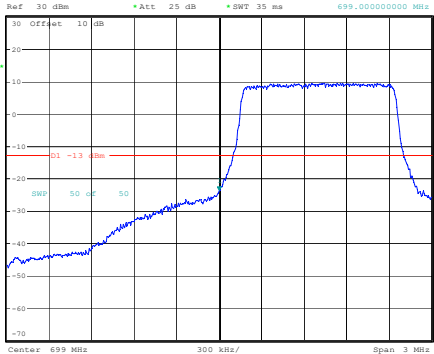
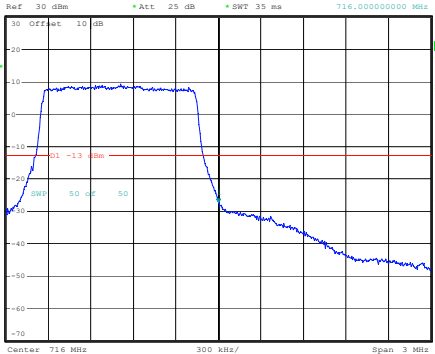
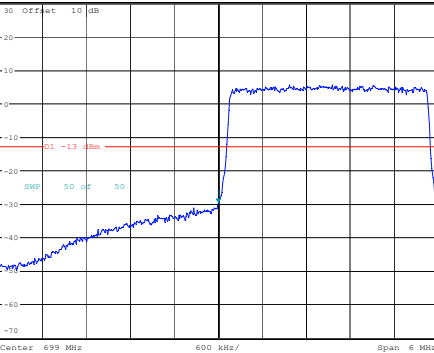
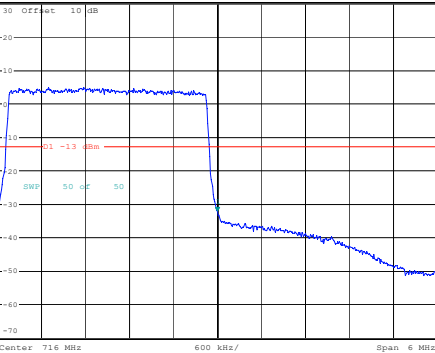
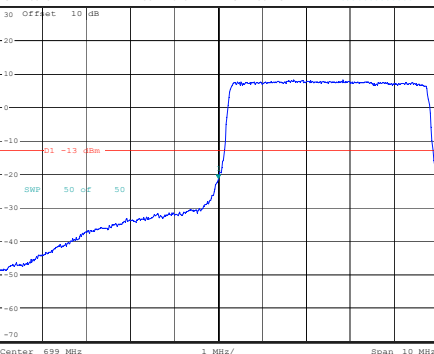
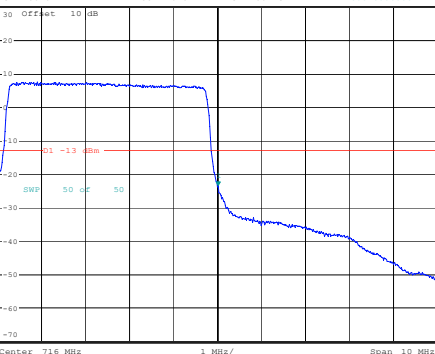
Channel	10MHz Bandwidth QPSK	
Lowest	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -44.84 dBm *VSW 300 kHz 757.500000000 MHz SWT 100 ms Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:49:22	 Ref 10 dBm *Att 30 dB *RBW 1 MHz Marker 1 [T1] -34.37 dBm *VSW 3 MHz 2.098000000 GHz SWT 55 ms Start 1 GHz 900 MHz/ Stop 10 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:49:32
	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -45.46 dBm *VSW 300 kHz 811.820000000 MHz SWT 100 ms Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:49:47	 Ref 10 dBm *Att 30 dB *RBW 1 MHz Marker 1 [T1] -34.31 dBm *VSW 3 MHz 2.116000000 GHz SWT 55 ms Start 1 GHz 900 MHz/ Stop 10 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:49:57
Highest	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -44.95 dBm *VSW 300 kHz 37.760000000 MHz SWT 100 ms Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:50:15	 Ref 10 dBm *Att 30 dB *RBW 1 MHz Marker 1 [T1] -34.39 dBm *VSW 3 MHz 2.116000000 GHz SWT 55 ms Start 1 GHz 900 MHz/ Stop 10 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:50:26

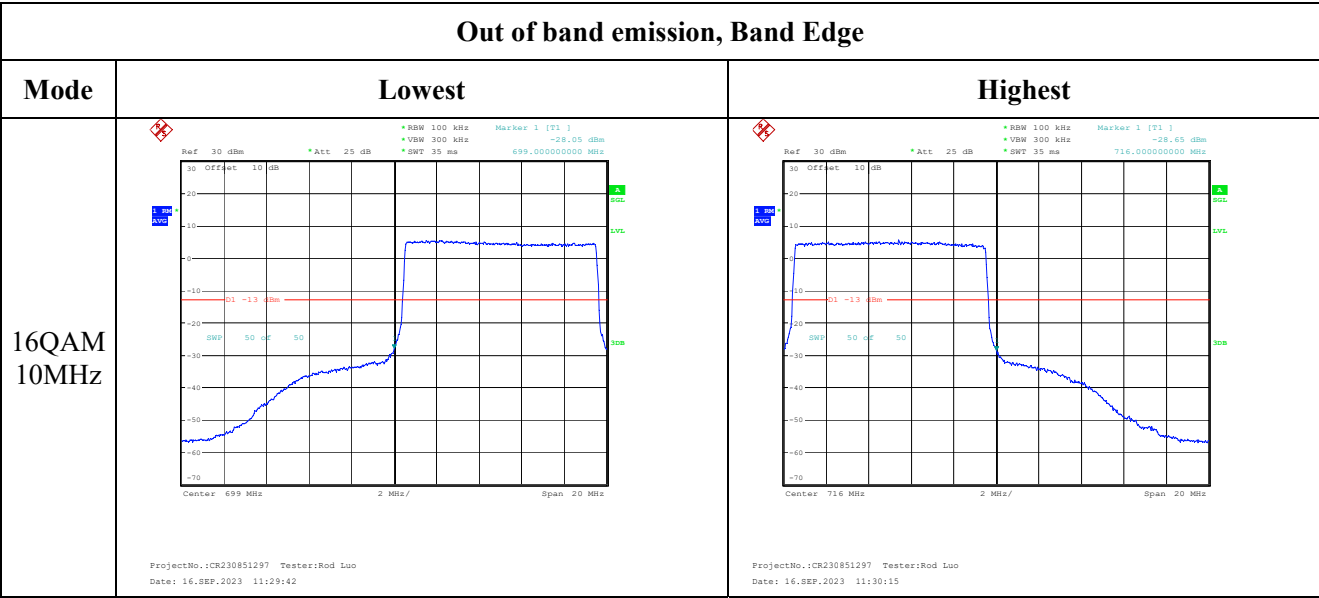
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz	 Ref 30 dBm *Att 25 dB *RBW 30 kHz Marker 1 [T1] -21.61 dBm *VBW 100 kHz *SWT 35 ms 699.00000000 MHz Center 699 MHz 300 kHz/ Span 3 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:26:31	 Ref 30 dBm *Att 25 dB *RBW 30 kHz Marker 1 [T1] -24.40 dBm *VBW 100 kHz *SWT 35 ms 716.00000000 MHz Center 716 MHz 300 kHz/ Span 3 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:26:46
QPSK 3MHz	 Ref 30 dBm *Att 25 dB *RBW 30 kHz Marker 1 [T1] -27.92 dBm *VBW 100 kHz *SWT 35 ms 699.976000000 MHz Center 699 MHz 600 kHz/ Span 6 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:27:28	 Ref 30 dBm *Att 25 dB *RBW 30 kHz Marker 1 [T1] -30.32 dBm *VBW 100 kHz *SWT 35 ms 716.00000000 MHz Center 716 MHz 600 kHz/ Span 6 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:27:44
QPSK 5MHz	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -20.98 dBm *VBW 300 kHz *SWT 35 ms 699.000000000 MHz Center 699 MHz 1 MHz/ Span 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:28:28	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -21.75 dBm *VBW 300 kHz *SWT 35 ms 716.000000000 MHz Center 716 MHz 1 MHz/ Span 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:28:45



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	 Ref: 30 dBm *Att: 25 dB *RBW 30 kHz *VSW 100 kHz *SWT 35 ns Marker 1 [T1] -23.83 dBm 699.00000000 MHz Center: 699 MHz 300 kHz/ Span: 3 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:26:38	 Ref: 30 dBm *Att: 25 dB *RBW 30 kHz *VSW 100 kHz *SWT 35 ns Marker 1 [T1] -27.64 dBm 716.00000000 MHz Center: 716 MHz 300 kHz/ Span: 3 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:26:53
16QAM 3MHz	 Ref: 30 dBm *Att: 25 dB *RBW 30 kHz *VSW 100 kHz *SWT 35 ns Marker 1 [T1] -29.78 dBm 699.00000000 MHz Center: 699 MHz 600 kHz/ Span: 6 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:27:36	 Ref: 30 dBm *Att: 25 dB *RBW 30 kHz *VSW 100 kHz *SWT 35 ns Marker 1 [T1] -32.27 dBm 716.00000000 MHz Center: 716 MHz 600 kHz/ Span: 6 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:27:51
16QAM 5MHz	 Ref: 30 dBm *Att: 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 35 ns Marker 1 [T1] -21.60 dBm 699.00000000 MHz Center: 699 MHz 1 MHz/ Span: 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:28:36	 Ref: 30 dBm *Att: 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 35 ns Marker 1 [T1] -23.60 dBm 716.00000000 MHz Center: 716 MHz 1 MHz/ Span: 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:28:53



4.11 Antenna Port Test Data and Results for LTE Band 17

Serial Number:	2AS5-5	Test Date:	2023/9/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	28	Relative Humidity: (%)	55	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
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

** 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	706.5	710	713.5
10MHz	709	710	711

Test Data:**FCC§2.1046;§ 27.50(c) (10)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	22.83	22.69	22.61	14.72	34.77
	RB1#13	22.87	22.77	22.7		
	RB1#24	22.71	22.61	22.62		
	RB15#0	21.9	21.72	21.79		
	RB15#10	21.8	21.76	21.6		
	RB25#0	21.82	21.71	21.64		
5MHz 16QAM	RB1#0	22.07	21.74	21.53	13.98	34.77
	RB1#13	22.13	21.81	21.62		
	RB1#24	21.96	21.7	21.5		
	RB15#0	20.87	20.74	20.8		
	RB15#10	20.79	20.76	20.61		
	RB25#0	20.81	20.74	20.68		
10MHz QPSK	RB1#0	23.31	22.82	22.83	15.21	34.77
	RB1#25	23.36	22.89	22.89		
	RB1#49	22.8	22.7	22.73		
	RB25#0	21.79	21.74	21.7		
	RB25#25	21.79	21.65	21.59		
	RB50#0	21.79	21.69	21.65		
10MHz 16QAM	RB1#0	22.39	21.93	21.79	14.24	34.77
	RB1#25	22.35	21.96	21.85		
	RB1#49	22.23	21.78	21.69		
	RB25#0	20.84	20.75	20.78		
	RB25#25	20.81	20.67	20.68		
	RB50#0	20.8	20.71	20.67		

Note: ERP= Conducted Power(dBm) - Lc(dB) + G_T(dBd)G_T(dBd)=G_T(dBi)-2.15**Result:****Pass****Peak-to-average Ratio(PAR)**

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	5	4.55	4.97	13
	RB50#0	5.42	5.42	5.42	13
10MHz 16QAM	RB1#0	6.06	5.19	5.87	13
	RB50#0	6.28	6.25	6.25	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	4.520	4.520	4.560	5.220	5.180	5.220
5MHz 16QAM	4.560	4.540	4.520	5.200	5.240	5.140
10MHz QPSK	8.960	8.960	8.960	9.920	10.000	9.760
10MHz 16QAM	8.960	8.960	8.960	9.800	9.680	9.920

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.
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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.
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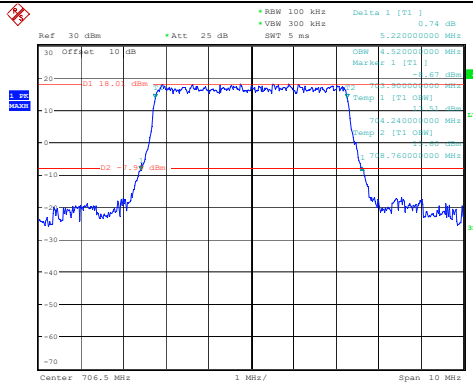
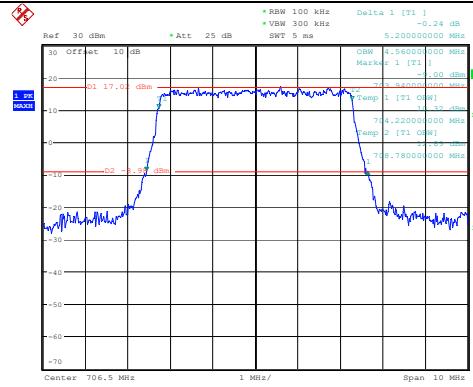
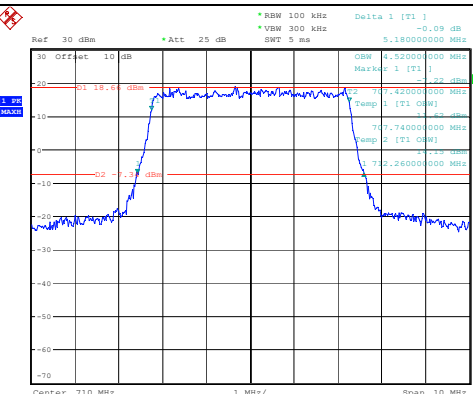
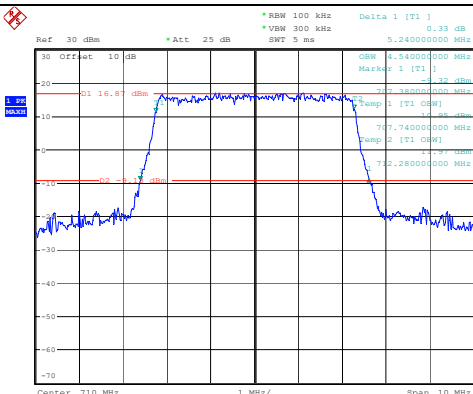
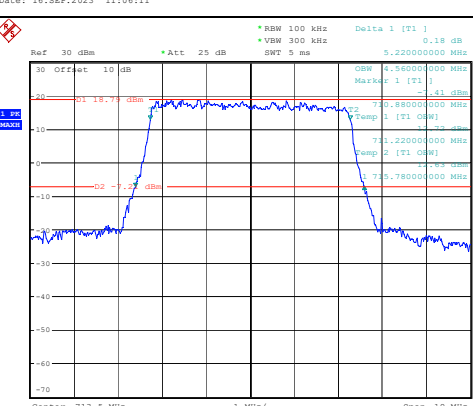
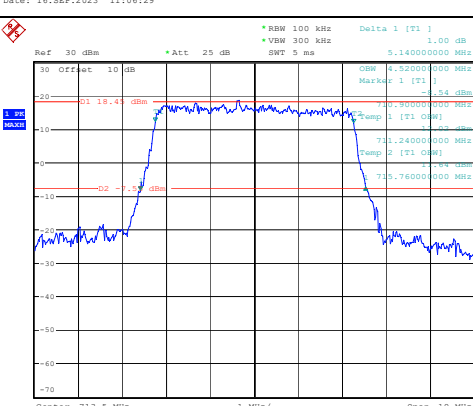
FCC §2.1055, §27.54: Frequency Stability

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	704.161	704.00	715.713	716.00
	-20	3.85	704.278	704.00	715.842	716.00
	-10	3.85	704.215	704.00	715.886	716.00
	0	3.85	704.246	704.00	715.722	716.00
	10	3.85	704.109	704.00	715.738	716.00
	20	3.85	704.166	704.00	715.859	716.00
	30	3.85	704.204	704.00	715.708	716.00
	40	3.85	704.293	704.00	715.709	716.00
Frequency Stability vs. Voltage	20	3.45	704.261	704.00	715.808	716.00
	20	4.4	704.106	704.00	715.780	716.00
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	704.211	704.00	715.858	716.00
	-20	3.85	704.282	704.00	715.711	716.00
	-10	3.85	704.254	704.00	715.795	716.00
	0	3.85	704.218	704.00	715.795	716.00
	10	3.85	704.162	704.00	715.843	716.00
	20	3.85	704.191	704.00	715.843	716.00
	30	3.85	704.168	704.00	715.724	716.00
	40	3.85	704.119	704.00	715.802	716.00
	50	3.85	704.221	704.00	715.709	716.00
Frequency Stability vs. Voltage	20	3.45	704.189	704.00	715.824	716.00
	20	4.4	704.179	704.00	715.843	716.00
					Result:	Pass

Test Plots (Note: The 10 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	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:05:27	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:05:49
Middle	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:06:11	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:06:29
Highest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:06:54	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:07:12

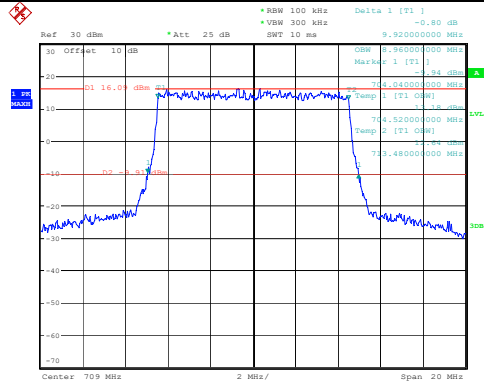
Occupied Bandwidth

Channel

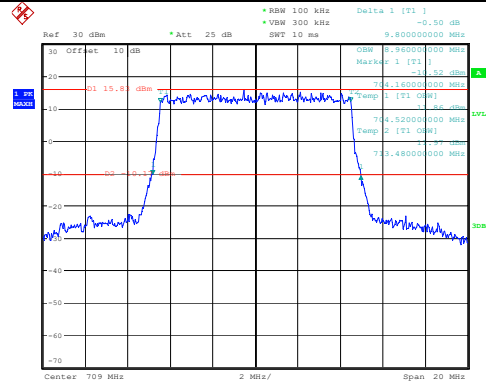
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

Lowest

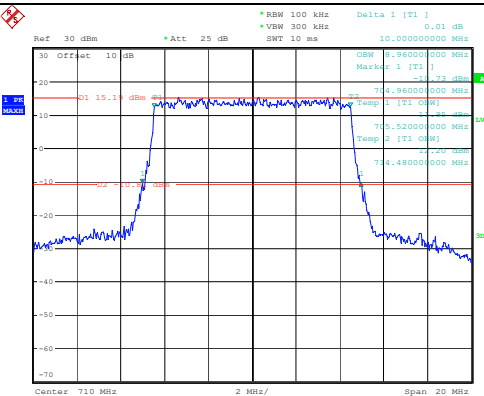


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:08:14

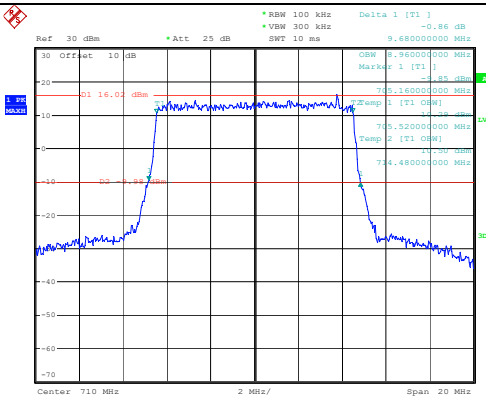


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:08:33

Middle

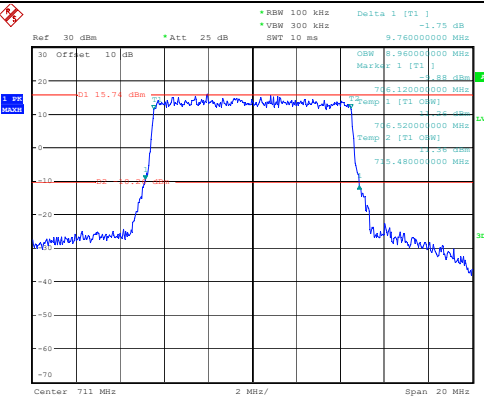


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:08:53

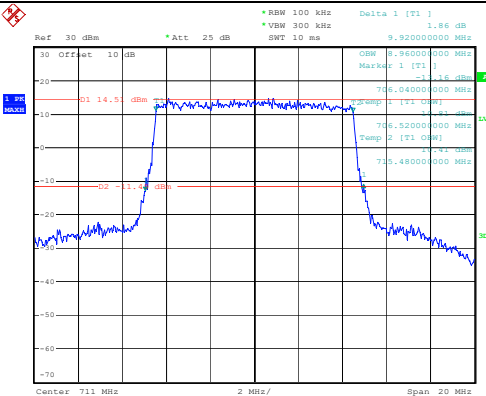


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:09:11

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:09:28



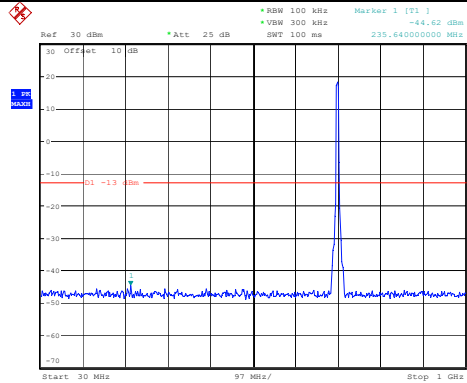
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:09:47

Spurious Emissions at Antenna Terminal

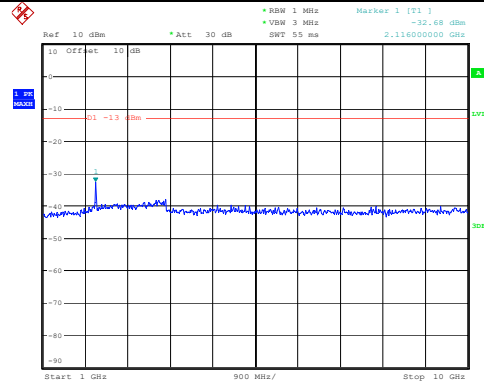
Channel

5MHz Bandwidth QPSK

Lowest

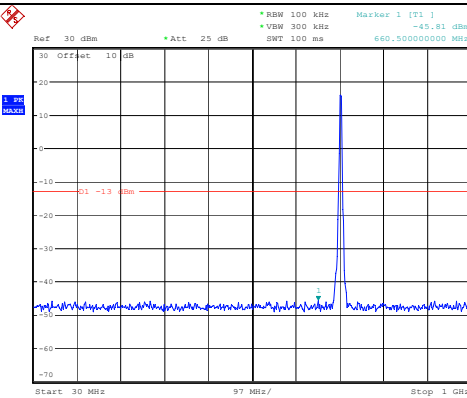


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:51:20

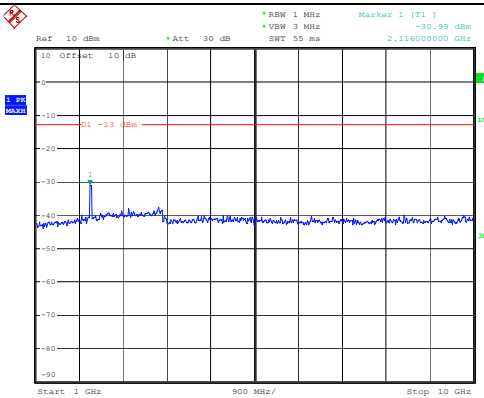


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:51:30

Middle

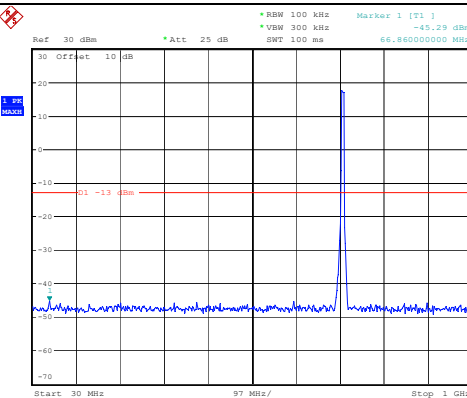


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Date: 16.SEP.2023 11:51:44

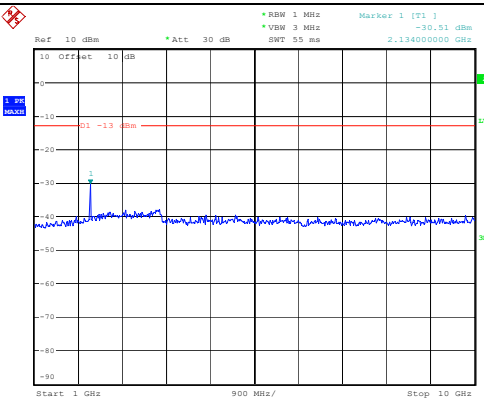


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:51:54

Highest

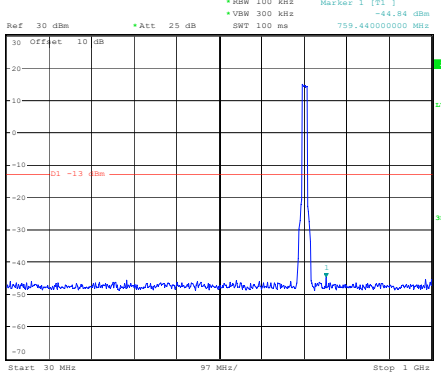
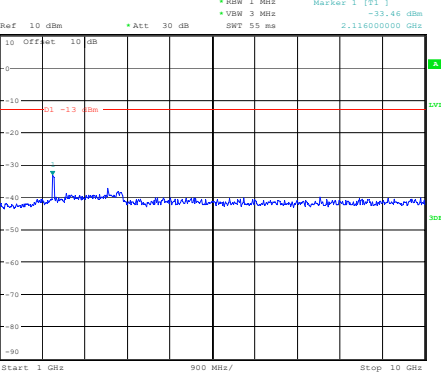
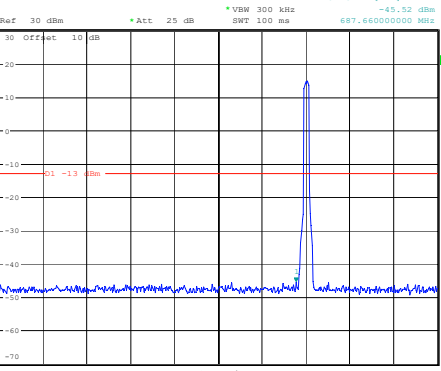
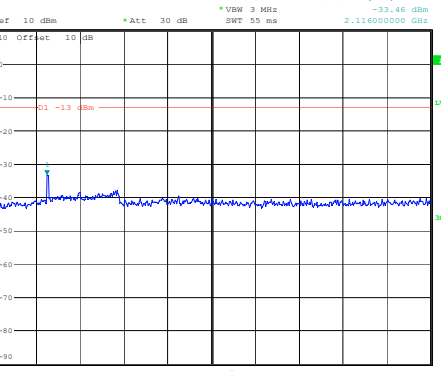
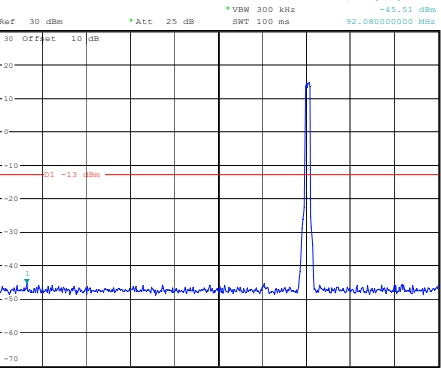
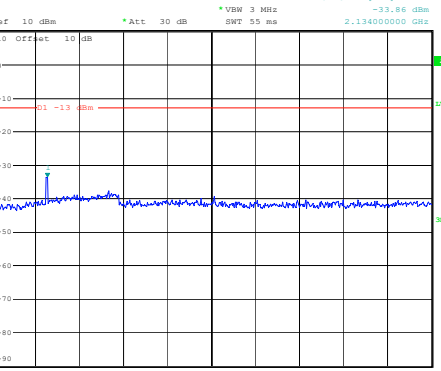


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:52:09

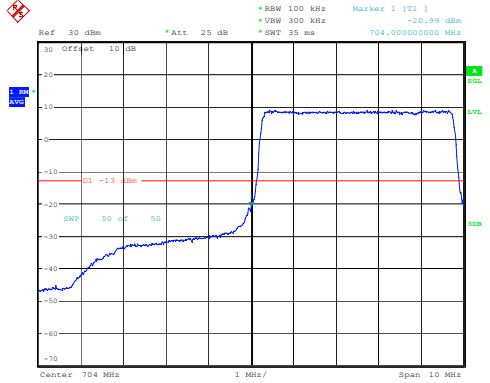
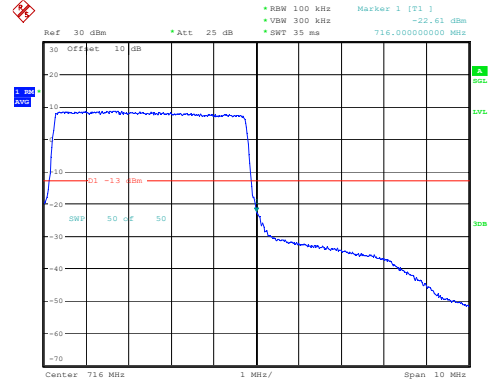
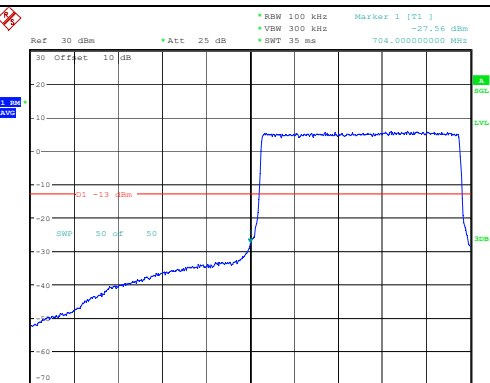
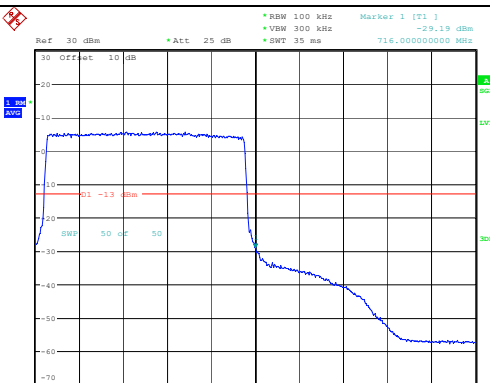
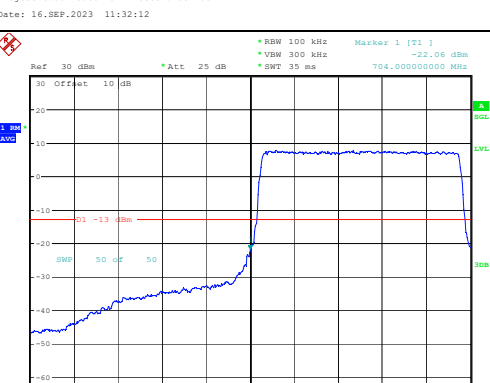
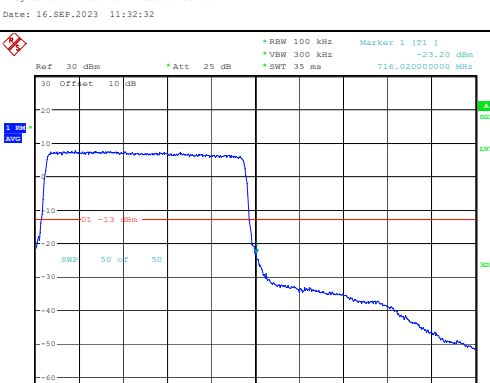


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 11:52:22

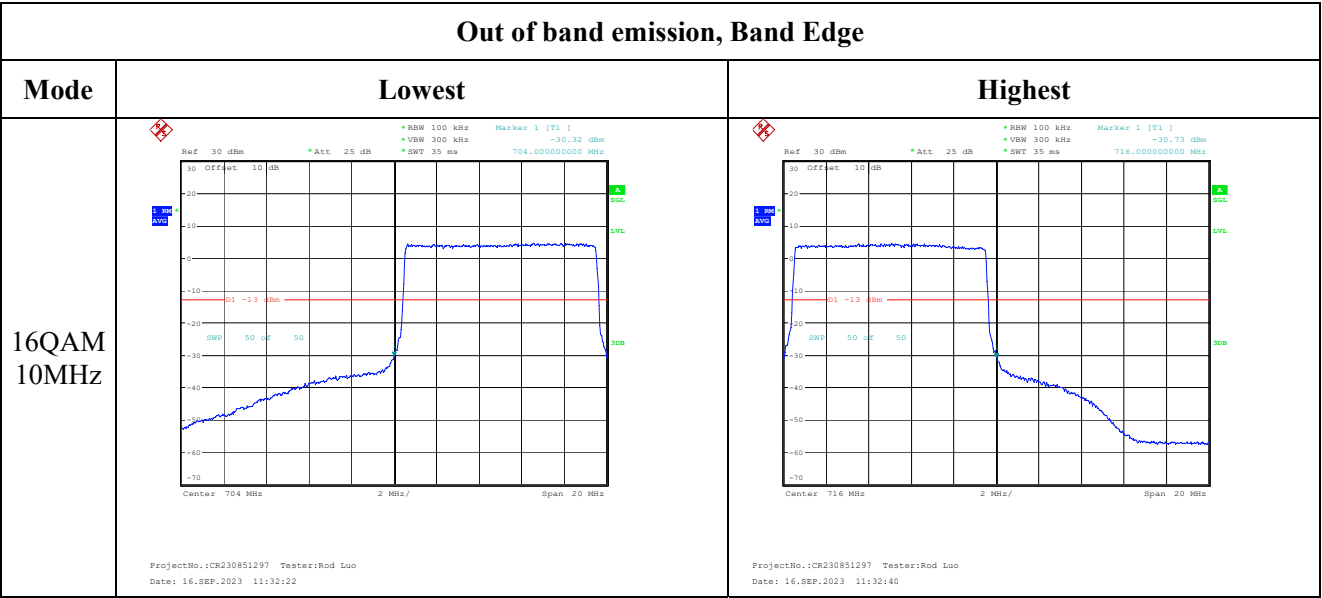
Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK	
Lowest	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [F1] -44.84 dBm 759.44000000 MHz Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:53:04	 Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [F1] -33.46 dBm 2.116000000 GHz Start 1 GHz 900 MHz/ Stop 10 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:53:14
Middle	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [F1] -45.52 dBm 687.66000000 MHz Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:53:29	 Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [F1] -33.46 dBm 2.116000000 GHz Start 1 GHz 900 MHz/ Stop 10 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:53:40
Highest	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [F1] -45.51 dBm 92.080000000 MHz Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:53:58	 Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [F1] -33.86 dBm 2.134000000 GHz Start 1 GHz 900 MHz/ Stop 10 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:54:08

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -20.59 dBm 704.00000000 MHz Center 704 MHz 1 MHz/ Span 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:31:02	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -22.61 dBm 716.00000000 MHz Center 716 MHz 1 MHz/ Span 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:31:19
QPSK 10MHz	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -27.56 dBm 704.00000000 MHz Center 704 MHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:32:12	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -29.19 dBm 716.00000000 MHz Center 716 MHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:32:32
16QAM 5MHz	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -22.06 dBm 704.00000000 MHz Center 704 MHz 1 MHz/ Span 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:31:10	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -23.20 dBm 716.020000000 MHz Center 716 MHz 1 MHz/ Span 10 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 11:31:27

Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 38

Serial Number:	2AS5-5	Test Date:	2023/9/16~2023/9/18
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.9-28	Relative Humidity: (%)	55-60	ATM Pressure: (kPa)	100.1~100.2
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
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

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

Test Frequency For Each Mode:

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

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

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	22.14	21.6	22.27	19.76	33
	RB1#13	22.21	21.74	22.46		
	RB1#24	22.05	21.62	22.41		
	RB15#0	21.1	20.65	21.3		
	RB15#10	21.04	20.66	21.42		
	RB25#0	21.03	20.62	21.34		
5MHz 16QAM	RB1#0	21.19	20.53	21.25	18.76	33
	RB1#13	21.24	20.63	21.46		
	RB1#24	21.12	20.52	21.4		
	RB15#0	20.03	19.56	20.31		
	RB15#10	19.99	19.52	20.38		
	RB25#0	19.93	19.58	20.36		
10MHz QPSK	RB1#0	22.2	21.85	22.13	19.91	33
	RB1#25	22.32	22.04	22.61		
	RB1#49	21.98	21.83	22.49		
	RB25#0	21.1	20.73	21.29		
	RB25#25	20.98	20.71	21.49		
	RB50#0	20.99	20.71	21.33		
10MHz 16QAM	RB1#0	20.97	20.74	21.28	19.03	33
	RB1#25	21.16	21	21.73		
	RB1#49	20.8	20.84	21.64		
	RB25#0	20.06	19.68	20.21		
	RB25#25	19.94	19.68	20.42		
	RB50#0	19.91	19.66	20.28		
15MHz QPSK	RB1#0	22.14	21.74	21.88	19.70	33
	RB1#38	22.09	21.71	22.28		
	RB1#74	21.84	21.69	22.4		
	RB36#0	21.22	20.82	21.12		
	RB36#39	21.01	20.83	21.44		
	RB75#0	21.13	20.88	21.27		
15MHz 16QAM	RB1#0	21.21	20.8	20.78	18.59	33
	RB1#38	21.1	20.81	21.16		
	RB1#74	20.93	20.83	21.29		
	RB36#0	20.08	19.71	20		
	RB36#39	19.94	19.68	20.34		
	RB75#0	20.03	19.68	20.22		

20MHz QPSK	RB1#0	21.98	21.65	21.53	19.64	33
	RB1#50	22.23	21.96	22.34		
	RB1#99	21.62	21.67	22.24		
	RB50#0	20.93	20.68	20.93		
	RB50#50	20.74	20.67	21.31		
	RB100#0	20.84	20.72	21.13		
20MHz 16QAM	RB1#0	21.06	20.56	20.46	18.62	33
	RB1#50	21.32	20.91	21.29		
	RB1#99	20.73	20.67	21.16		
	RB50#0	19.87	19.61	19.87		
	RB50#50	19.66	19.59	20.31		
	RB100#0	19.78	19.63	20.06		

Note: EIRP=Conducted Power(dBm) - L_c(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	7.91	7.94	8.41	13
	RB100#0	8.55	8.67	8.78	13
20MHz 16QAM	RB1#0	8.87	8.7	9.22	13
	RB100#0	9.42	9.54	9.62	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	4.500	4.540	4.500	4.960	5.000	5.000
5MHz 16QAM	4.500	4.500	4.500	5.100	4.920	4.960
10MHz QPSK	8.960	8.960	8.920	9.720	9.560	9.640
10MHz 16QAM	8.960	9.000	8.960	9.480	10.160	9.600
15MHz QPSK	13.500	13.500	13.560	15.120	14.940	15.300
15MHz 16QAM	13.560	13.620	13.500	15.300	16.260	16.200
20MHz QPSK	18.000	18.000	18.000	20.000	19.520	19.440
20MHz 16QAM	18.000	18.000	18.000	19.440	19.520	19.840

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

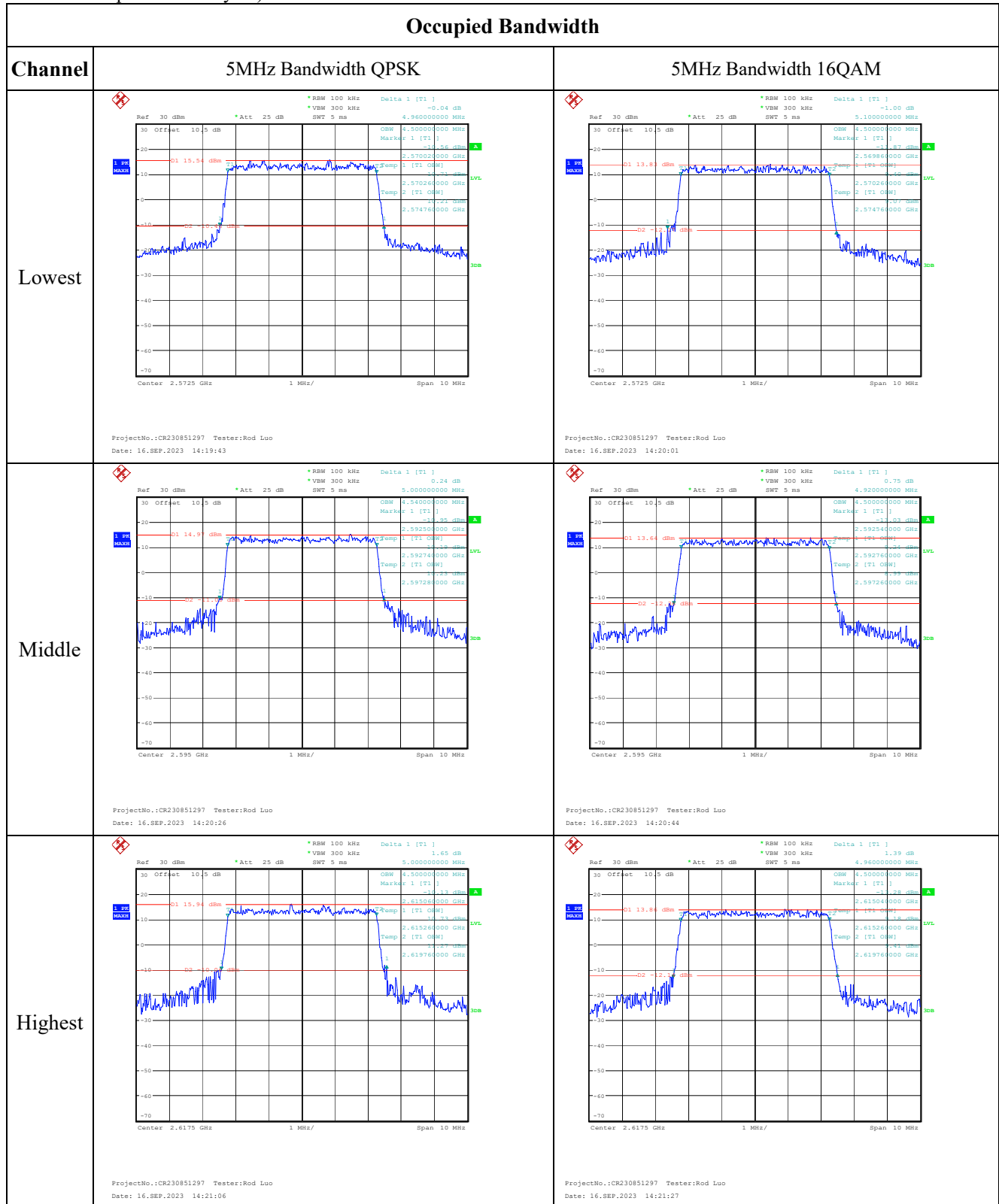
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
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FCC §2.1055, §27.54: Frequency Stability

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	2570.268	2570.00	2619.841	2620
	-20	3.85	2570.291	2570.00	2619.804	2620
	-10	3.85	2570.274	2570.00	2619.893	2620
	0	3.85	2570.275	2570.00	2619.779	2620
	10	3.85	2570.134	2570.00	2619.823	2620
	20	3.85	2570.155	2570.00	2619.749	2620
	30	3.85	2570.232	2570.00	2619.707	2620
	40	3.85	2570.112	2570.00	2619.838	2620
Frequency Stability vs. Voltage	50	3.85	2570.158	2570.00	2619.890	2620
	20	3.45	2570.228	2570.00	2619.765	2620
	20	4.4	2570.157	2570.00	2619.892	2620
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	2570.251	2570.00	2619.846	2620
	-20	3.85	2570.134	2570.00	2619.900	2620
	-10	3.85	2570.225	2570.00	2619.875	2620
	0	3.85	2570.296	2570.00	2619.737	2620
	10	3.85	2570.145	2570.00	2619.745	2620
	20	3.85	2570.280	2570.00	2619.796	2620
	30	3.85	2570.240	2570.00	2619.748	2620
	40	3.85	2570.186	2570.00	2619.730	2620
Frequency Stability vs. Voltage	50	3.85	2570.163	2570.00	2619.752	2620
	20	3.45	2570.256	2570.00	2619.749	2620
	20	4.4	2570.161	2570.00	2619.800	2620
Result:					Pass	

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



Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 0.17 dB *VBW 300 kHz SWT 10 ms 9.720000000 MHz 30 Offset 10.5 dB -20 -10 0 -10 -20 -30 -40 -50 -60 -70 Center 2.575 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:22:34	Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 0.08 dB *VBW 300 kHz SWT 10 ms 9.480000000 MHz 30 Offset 10.5 dB -20 -10 0 -10 -20 -30 -40 -50 -60 -70 Center 2.575 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:22:53
Middle	Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] -2.04 dB *VBW 300 kHz SWT 10 ms 9.560000000 MHz 30 Offset 10.5 dB -20 -10 0 -10 -20 -30 -40 -50 -60 -70 Center 2.595 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:23:12	Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 0.54 dB *VBW 300 kHz SWT 10 ms 10.160000000 MHz 30 Offset 10.5 dB -20 -10 0 -10 -20 -30 -40 -50 -60 -70 Center 2.595 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:23:37
Highest	Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 1.72 dB *VBW 300 kHz SWT 10 ms 9.640000000 MHz 30 Offset 10.5 dB -20 -10 0 -10 -20 -30 -40 -50 -60 -70 Center 2.615 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:23:57	Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] -0.23 dB *VBW 300 kHz SWT 10 ms 9.600000000 MHz 30 Offset 10.5 dB -20 -10 0 -10 -20 -30 -40 -50 -60 -70 Center 2.615 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:24:19

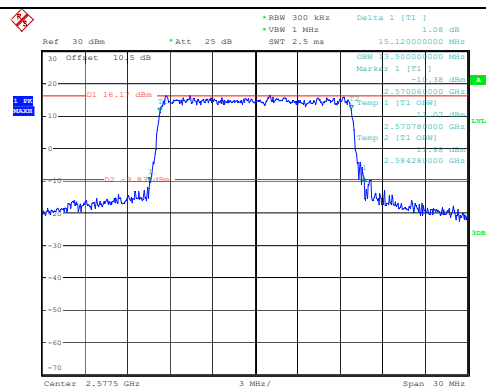
Occupied Bandwidth

Channel

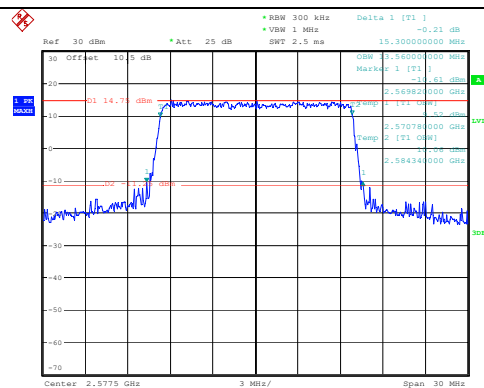
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

Lowest

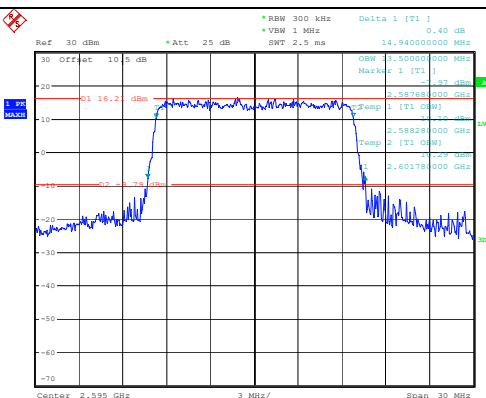


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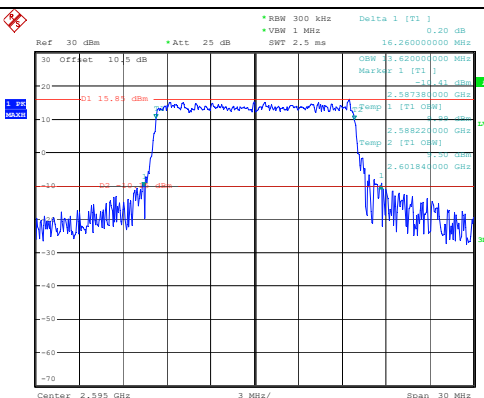


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:25:59

Middle

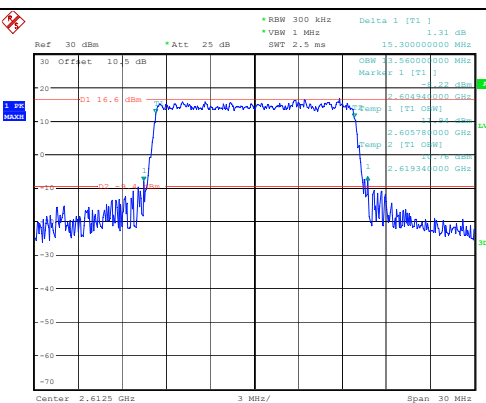


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Date: 16.SEP.2023 14:26:21

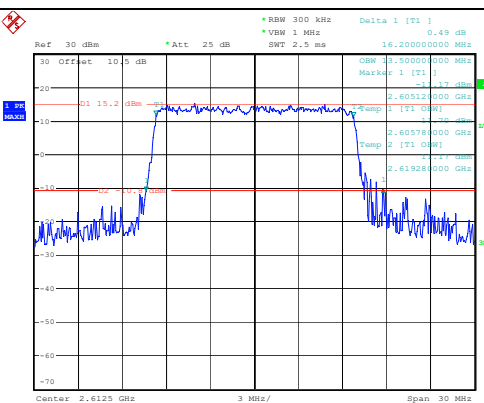


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:26:52

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:27:23



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:27:48

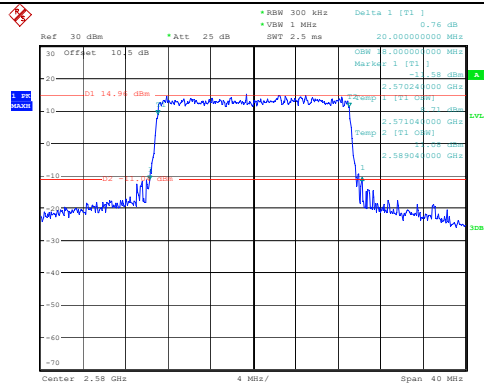
Occupied Bandwidth

Channel

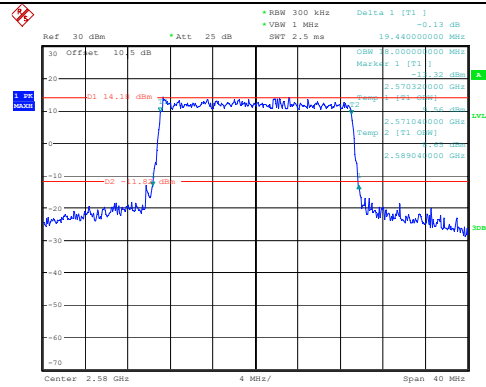
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

Lowest

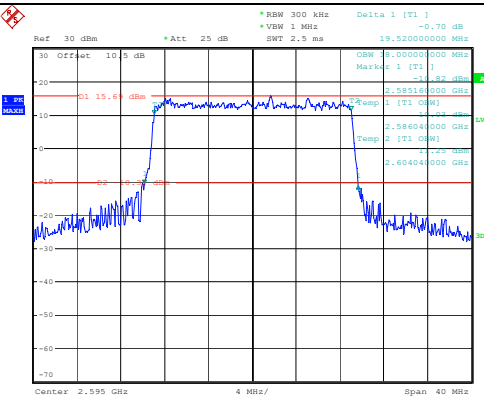


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:28:36

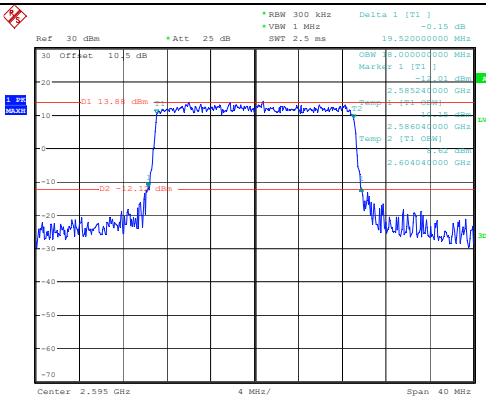


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:28:58

Middle

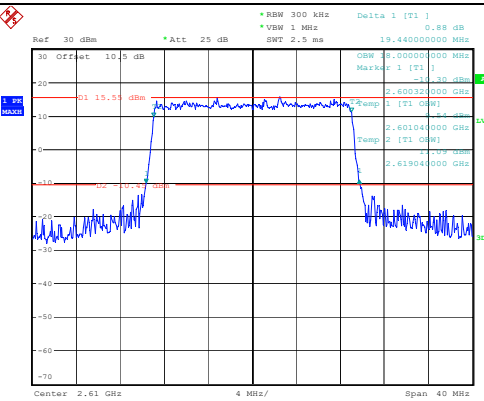


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:29:24

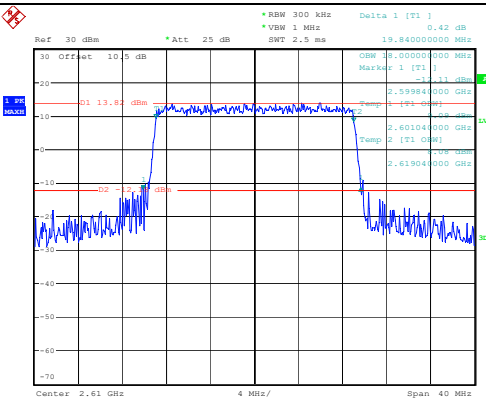


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:29:49

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:30:17



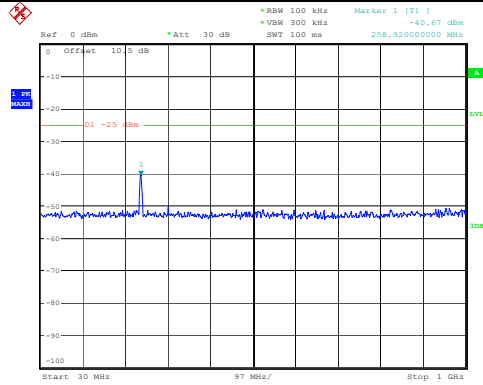
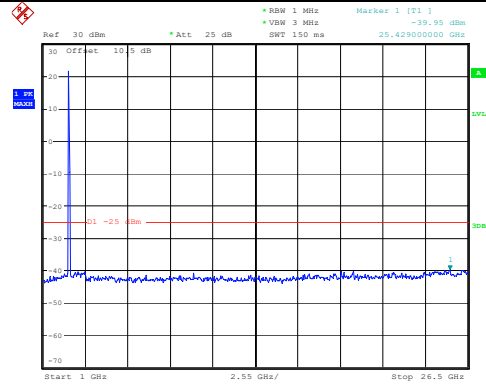
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Date: 16.SEP.2023 14:30:39

Spurious Emissions at Antenna Terminal

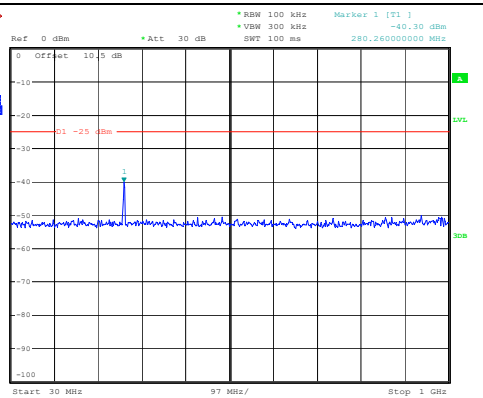
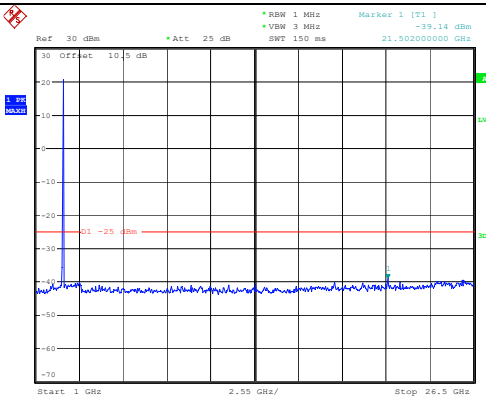
Channel

5MHz Bandwidth QPSK

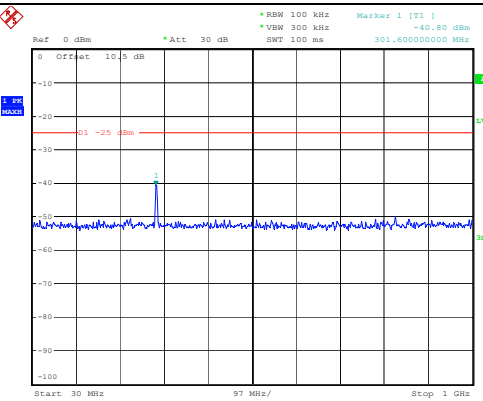
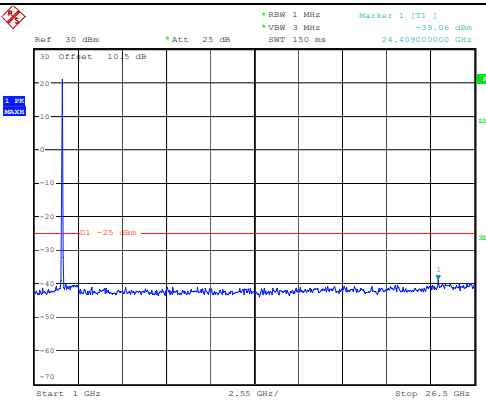
Lowest

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:19:26ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:19:37

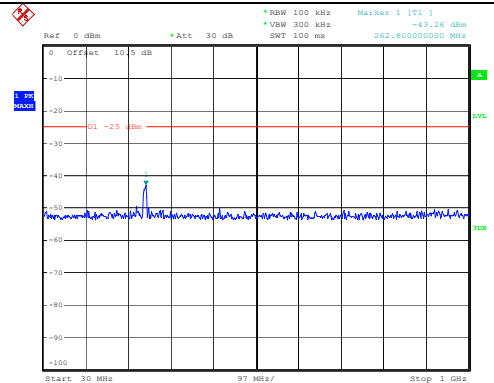
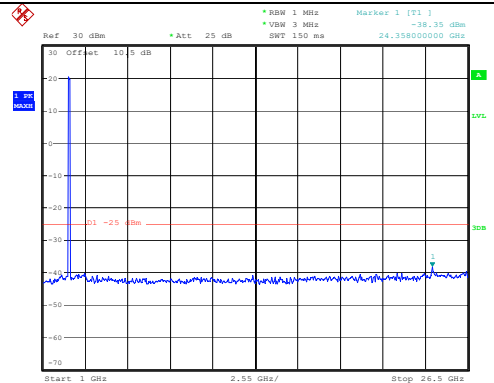
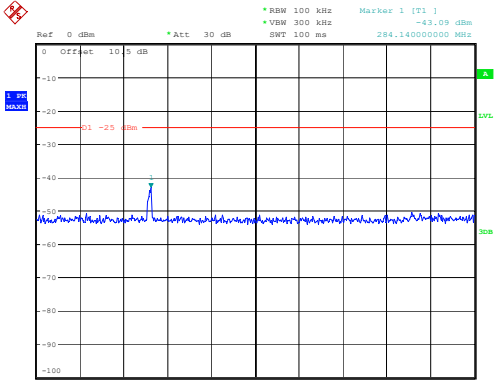
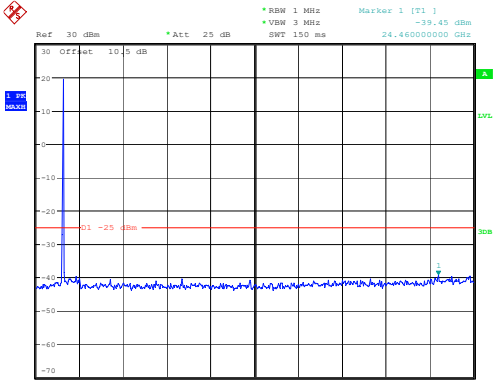
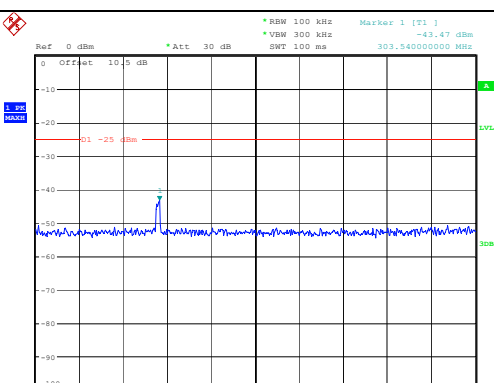
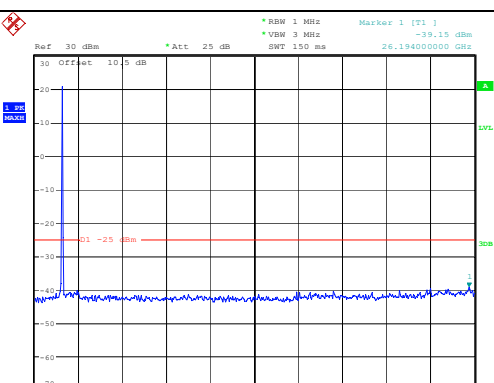
Middle

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Date: 16.SEP.2023 15:19:54ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:20:04

Highest

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:20:19ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:20:29

Spurious Emissions at Antenna Terminal

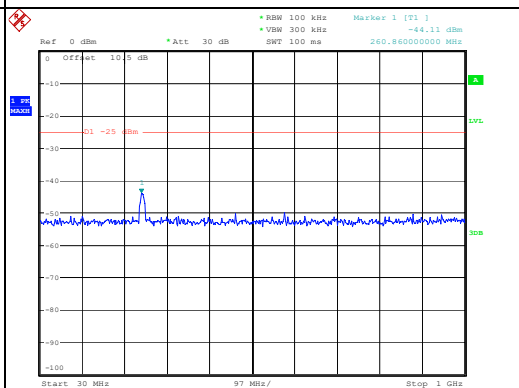
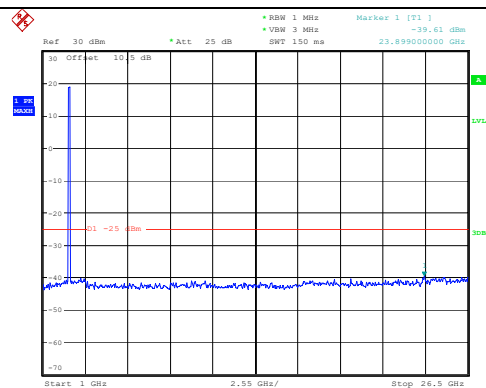
Channel	10MHz Bandwidth QPSK	
Lowest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:21:29	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:21:40
	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:21:54	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:22:05
Highest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:22:10	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:22:30

Spurious Emissions at Antenna Terminal

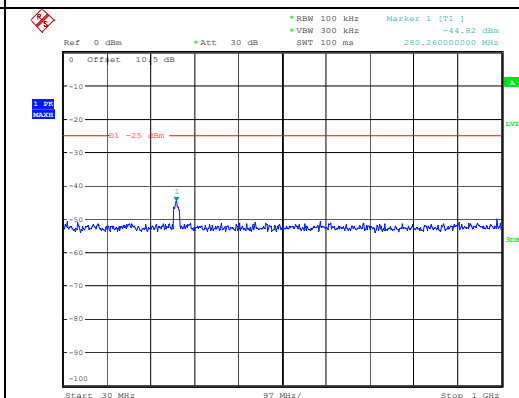
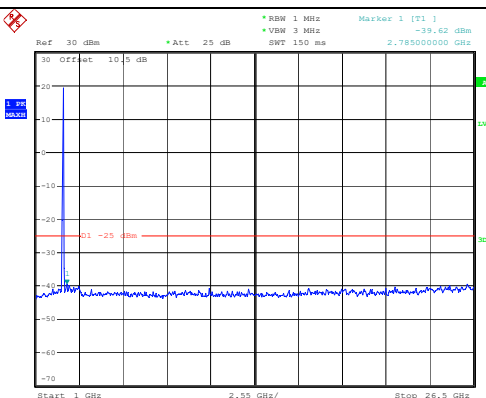
Channel

15MHz Bandwidth QPSK

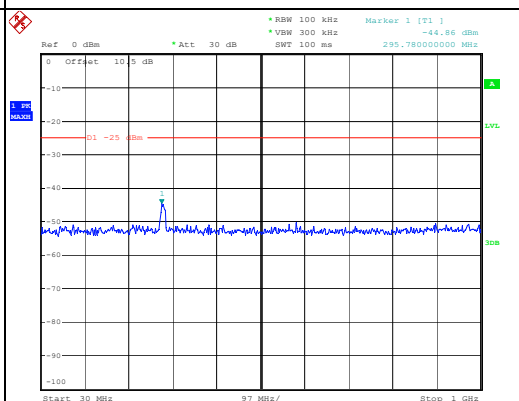
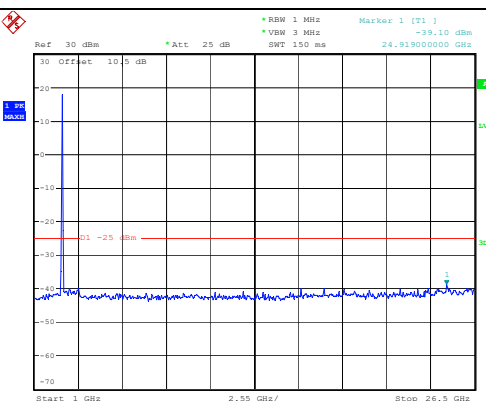
Lowest

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:23:38ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:23:48

Middle

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:24:09ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:24:19

Highest

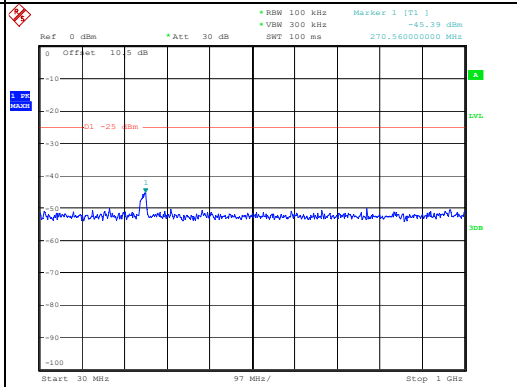
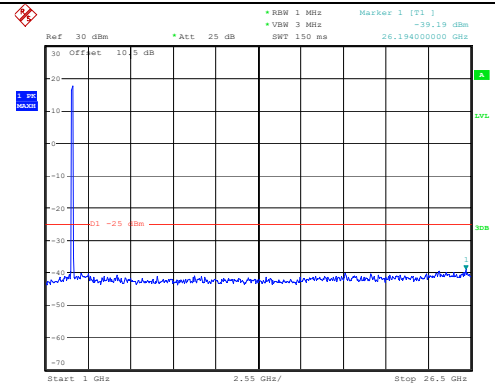
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Date: 16.SEP.2023 15:24:37ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:24:47

Spurious Emissions at Antenna Terminal

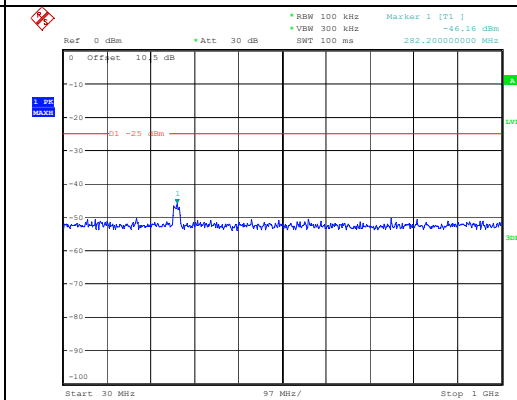
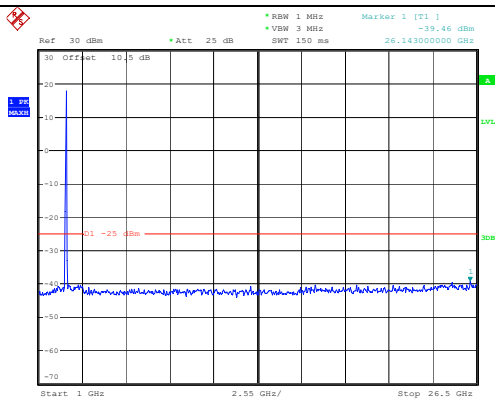
Channel

20MHz Bandwidth QPSK

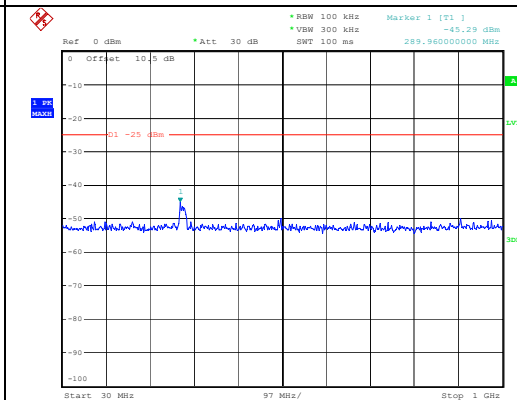
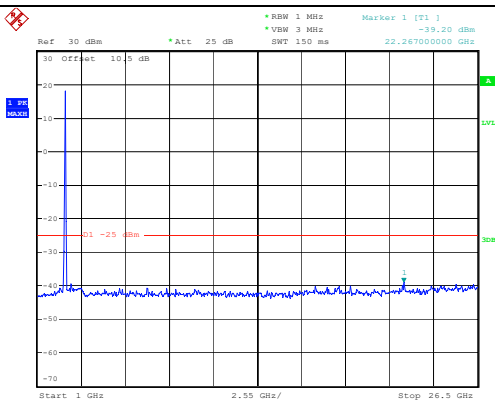
Lowest

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:25:34ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:25:44

Middle

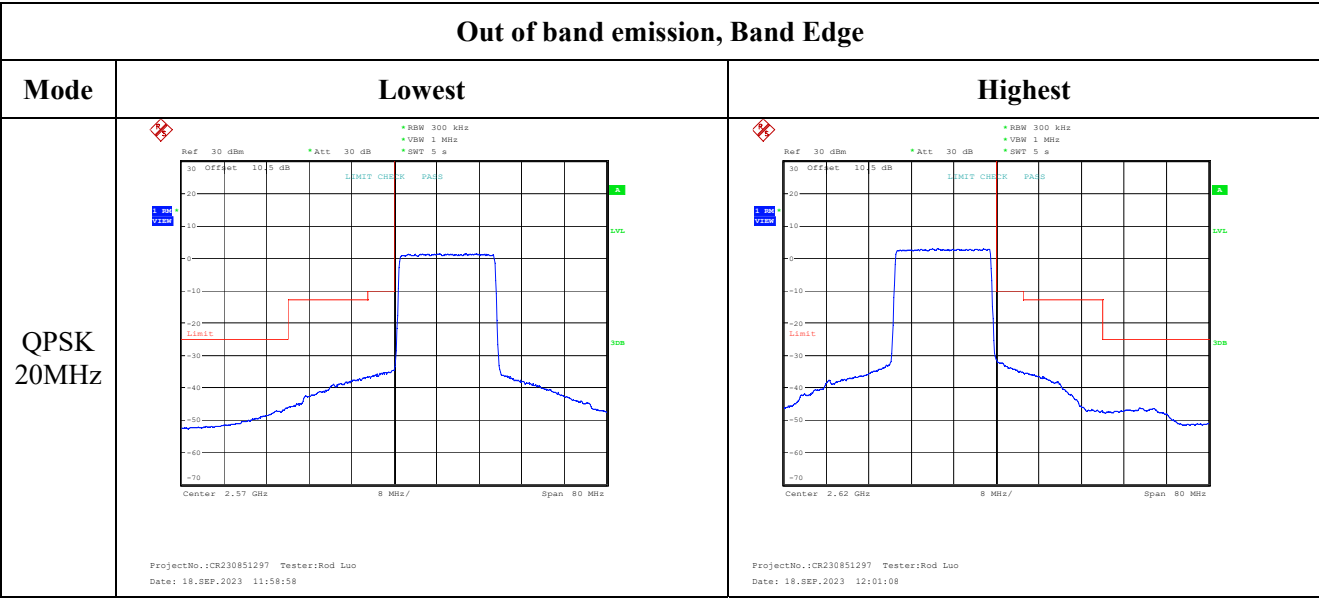
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Date: 16.SEP.2023 15:26:15

Highest

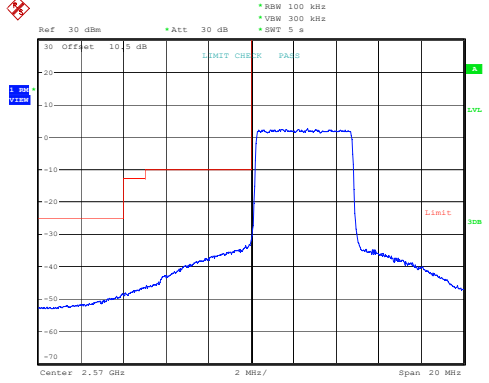
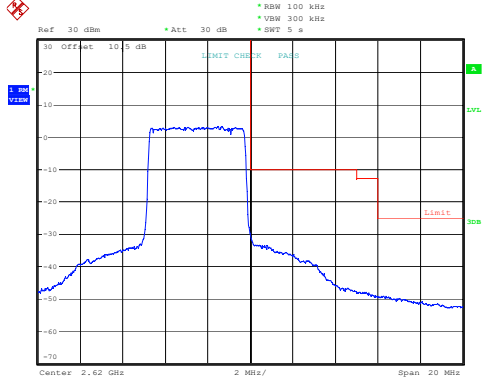
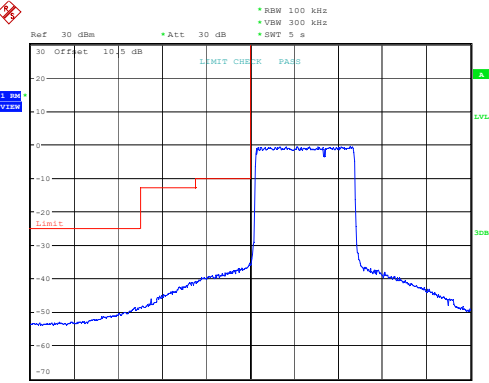
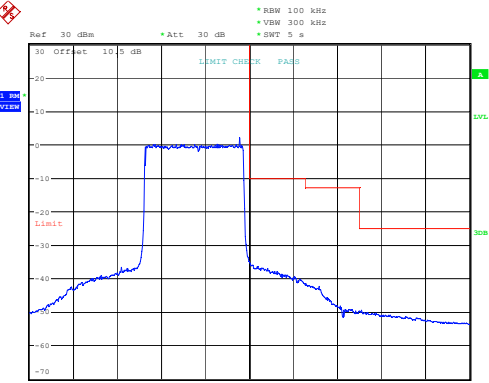
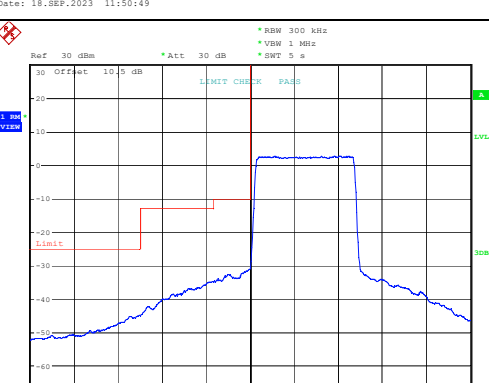
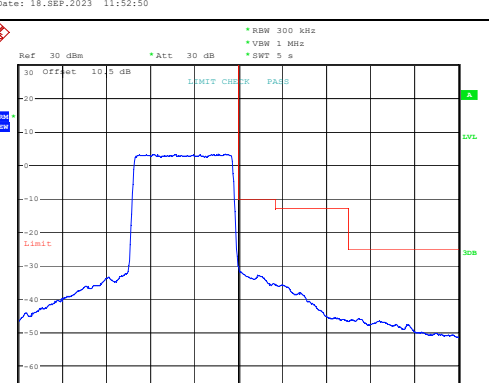
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:26:33ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:26:43

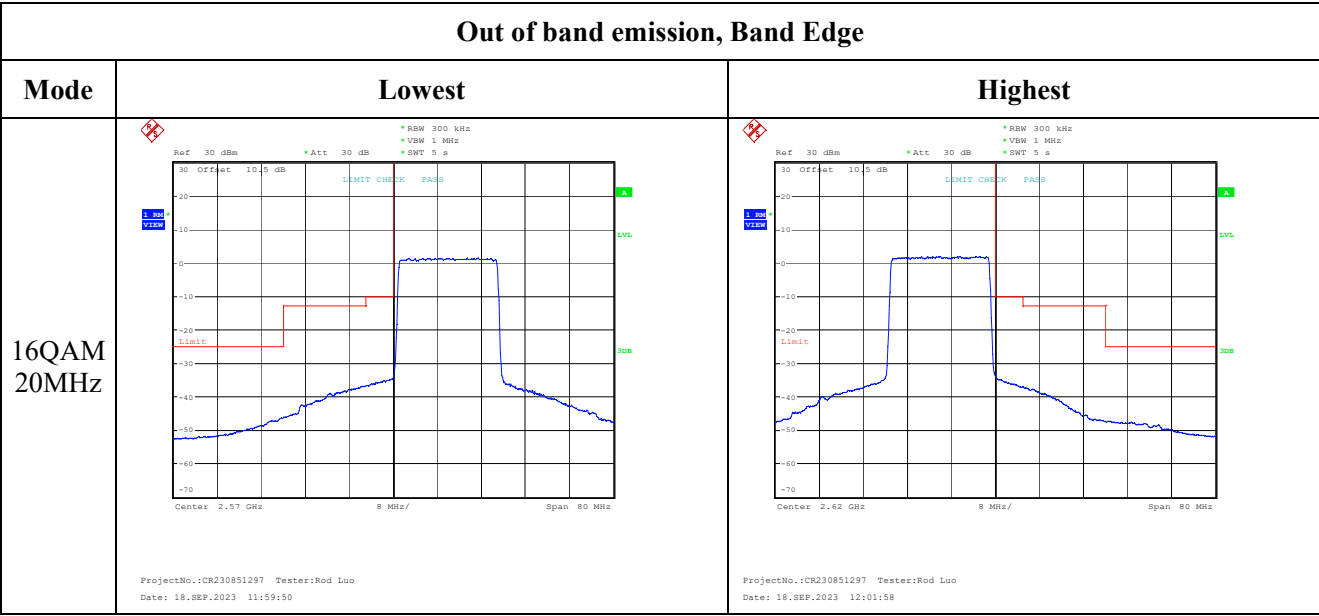
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 100 kHz *SWT 5 s 30 Offset 10.5 dB LIMIT CHECK PASS Center 2.57 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:40:38	Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 100 kHz *SWT 5 s 30 Offset 10.5 dB LIMIT CHECK PASS Center 2.62 GHz 2 MHz/ Span 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:45:09
QPSK 10MHz	Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 100 kHz *SWT 5 s 30 Offset 10.5 dB LIMIT CHECK PASS Center 2.57 GHz 4 MHz/ Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:49:49	Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 100 kHz *SWT 5 s 30 Offset 10.5 dB LIMIT CHECK PASS Center 2.62 GHz 4 MHz/ Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:51:57
QPSK 15MHz	Ref 30 dBm *Att 30 dB *RBW 300 kHz *VBW 1 MHz *SWT 5 s 30 Offset 10.5 dB LIMIT CHECK PASS Center 2.57 GHz 6 MHz/ Span 60 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:54:11	Ref 30 dBm *Att 30 dB *RBW 300 kHz *VBW 1 MHz *SWT 5 s 30 Offset 10.5 dB LIMIT CHECK PASS Center 2.62 GHz 6 MHz/ Span 60 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:56:50



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	 Ref: 30 dBm *Att: 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 5 s Center: 2.57 GHz 2 MHz/ Span: 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:41:41	 Ref: 30 dBm *Att: 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 5 s Center: 2.62 GHz 2 MHz/ Span: 20 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:47:14
16QAM 10MHz	 Ref: 30 dBm *Att: 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 5 s Center: 2.57 GHz 4 MHz/ Span: 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:50:49	 Ref: 30 dBm *Att: 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 5 s Center: 2.62 GHz 4 MHz/ Span: 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:52:50
16QAM 15MHz	 Ref: 30 dBm *Att: 30 dB *RBW 300 kHz *VSW 1 MHz *SWT 5 s Center: 2.57 GHz 6 MHz/ Span: 60 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:55:11	 Ref: 30 dBm *Att: 30 dB *RBW 300 kHz *VSW 1 MHz *SWT 5 s Center: 2.62 GHz 6 MHz/ Span: 60 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 11:57:37



4.13 Antenna Port Test Data and Results for LTE Band 40

Serial Number:	2AS5-5	Test Date:	2023/9/16~2023/9/22
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.5-28	Relative Humidity: (%)	55-65	ATM Pressure: (kPa)	100.1~101
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
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

* 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	23.12	/	23.01	20.50	24
	RB1#13	23.2	/	23.08		
	RB1#24	23.03	/	22.9		
	RB15#0	22.14	/	22.06		
	RB15#10	22.11	/	21.99		
	RB25#0	22.11	/	22.02		
5MHz 16QAM	RB1#0	22.16	/	21.99	19.53	24
	RB1#13	22.23	/	22.07		
	RB1#24	22.04	/	21.93		
	RB15#0	21.2	/	21.02		
	RB15#10	21.19	/	21.01		
	RB25#0	21.21	/	21.1		
10MHz QPSK	RB1#0	/	23.22	/	20.71	24
	RB1#25	/	23.41	/		
	RB1#49	/	23.02	/		
	RB25#0	/	22.15	/		
	RB25#25	/	22.11	/		
	RB50#0	/	22.13	/		
10MHz 16QAM	RB1#0	/	22.09	/	19.60	24
	RB1#25	/	22.3	/		
	RB1#49	/	21.94	/		
	RB25#0	/	21.25	/		
	RB25#25	/	21.21	/		
	RB50#0	/	21.17	/		

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	22.92	/	22.93	20.37	24
	RB1#13	23.01	/	23.07		
	RB1#24	22.92	/	22.96		
	RB15#0	21.98	/	21.97		
	RB15#10	21.97	/	22.04		
	RB25#0	21.99	/	21.96		
5MHz 16QAM	RB1#0	22	/	21.91	19.38	24
	RB1#13	22.08	/	22.04		
	RB1#24	21.95	/	21.99		
	RB15#0	21.06	/	20.97		
	RB15#10	21.05	/	21		
	RB25#0	21.1	/	21.06		
10MHz QPSK	RB1#0	/	23.04	/	20.61	24
	RB1#25	/	23.31	/		
	RB1#49	/	23.03	/		
	RB25#0	/	22.02	/		
	RB25#25	/	22.02	/		
	RB50#0	/	22	/		
10MHz 16QAM	RB1#0	/	21.92	/	19.48	24
	RB1#25	/	22.18	/		
	RB1#49	/	21.93	/		
	RB25#0	/	21.13	/		
	RB25#25	/	21.12	/		
	RB50#0	/	21.09	/		
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)						

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	10.01	29.97	38
	16QAM	5M	3	10.01	29.97	38
		10M	2.995	10.005	29.94	38
LTE Band 40 Upper	QPSK	5M	3	10.005	29.99	38
		10M	3.005	10.01	30.02	38
	16QAM	5M	2.995	10.005	29.94	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	4.520	/	4.520	5.060	/	5.180
5MHz 16QAM	4.520	/	4.540	5.160	/	5.360
10MHz QPSK	/	8.960	/	/	9.840	/
10MHz 16QAM	/	8.960	/	/	9.680	/
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	4.540	/	4.540	5.100	/	5.240
5MHz 16QAM	4.500	/	4.540	5.340	/	5.280
10MHz QPSK	/	9.000	/	/	9.960	/
10MHz 16QAM	/	8.960	/	/	9.760	/
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**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	2305.298	2305.000	2314.844	2315.000
	-20	3.85	2305.201	2305.000	2314.851	2315.000
	-10	3.85	2305.126	2305.000	2314.855	2315.000
	0	3.85	2305.101	2305.000	2314.890	2315.000
	10	3.85	2305.113	2305.000	2314.774	2315.000
	20	3.85	2305.272	2305.000	2314.894	2315.000
	30	3.85	2305.142	2305.000	2314.804	2315.000
	40	3.85	2305.191	2305.000	2314.748	2315.000
	50	3.85	2305.172	2305.000	2314.756	2315.000
Frequency Stability vs. Voltage	20	3.45	2305.147	2305.000	2314.788	2315.000
	20	4.4	2305.238	2305.000	2314.884	2315.000
Result:					Pass	

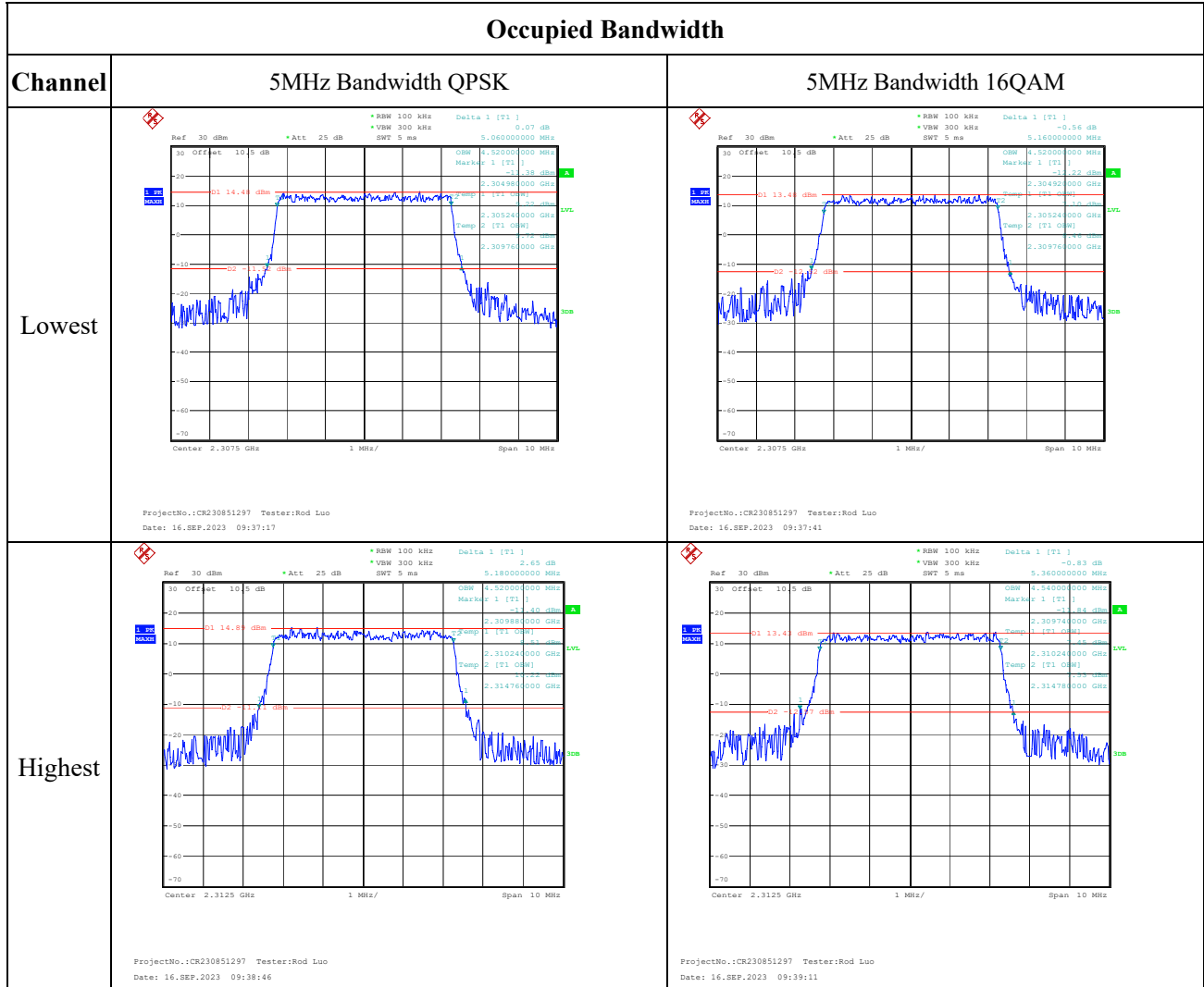
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2305.136	2305.000	2314.724	2315.000
	-20	3.85	2305.152	2305.000	2314.700	2315.000
	-10	3.85	2305.130	2305.000	2314.768	2315.000
	0	3.85	2305.188	2305.000	2314.861	2315.000
	10	3.85	2305.210	2305.000	2314.772	2315.000
	20	3.85	2305.162	2305.000	2314.752	2315.000
	30	3.85	2305.300	2305.000	2314.833	2315.000
	40	3.85	2305.188	2305.000	2314.802	2315.000
	50	3.85	2305.252	2305.000	2314.759	2315.000
Frequency Stability vs. Voltage	20	3.45	2305.216	2305.000	2314.894	2315.000
	20	4.4	2305.146	2305.000	2314.801	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	2350.170	2350.000	2359.847	2360.000
	-20	3.85	2350.158	2350.000	2359.794	2360.000
	-10	3.85	2350.109	2350.000	2359.715	2360.000
	0	3.85	2350.221	2350.000	2359.795	2360.000
	10	3.85	2350.288	2350.000	2359.707	2360.000
	20	3.85	2350.266	2350.000	2359.880	2360.000
	30	3.85	2350.105	2350.000	2359.715	2360.000
	40	3.85	2350.203	2350.000	2359.897	2360.000
	50	3.85	2350.286	2350.000	2359.823	2360.000
Frequency Stability vs. Voltage	20	3.45	2350.152	2350.000	2359.808	2360.000
	20	4.4	2350.248	2350.000	2359.713	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	2350.100	2350.000	2359.783	2360.000
	-20	3.85	2350.169	2350.000	2359.887	2360.000
	-10	3.85	2350.151	2350.000	2359.880	2360.000
	0	3.85	2350.131	2350.000	2359.848	2360.000
	10	3.85	2350.215	2350.000	2359.857	2360.000
	20	3.85	2350.126	2350.000	2359.737	2360.000
	30	3.85	2350.126	2350.000	2359.852	2360.000
	40	3.85	2350.237	2350.000	2359.898	2360.000
	50	3.85	2350.221	2350.000	2359.871	2360.000
Frequency Stability vs. Voltage	20	3.45	2350.288	2350.000	2359.795	2360.000
	20	4.4	2350.180	2350.000	2359.856	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):

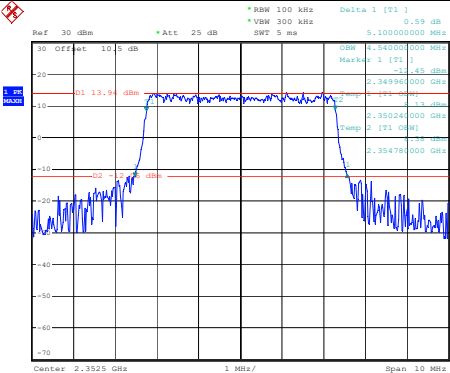
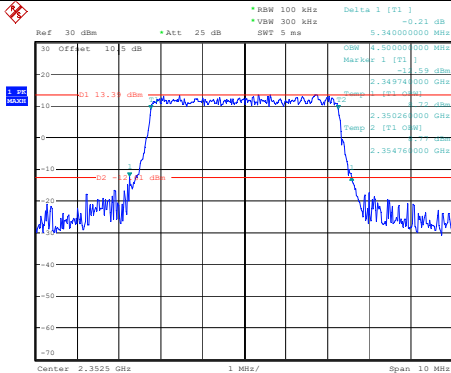
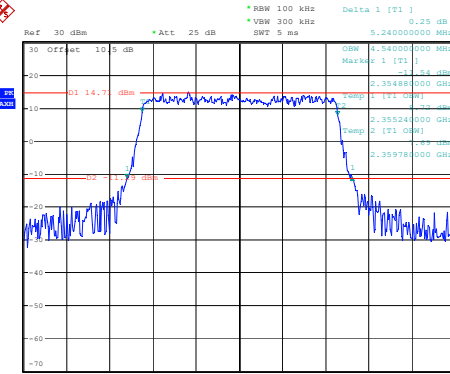
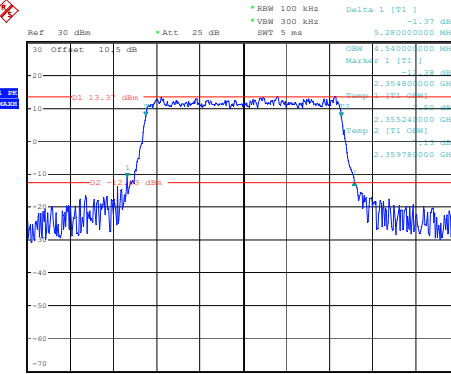
LTE Band 40 Lower:



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LTE Band 40 Upper:

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 09:43:06	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 09:43:30
Highest	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 09:44:41	 ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 09:45:05

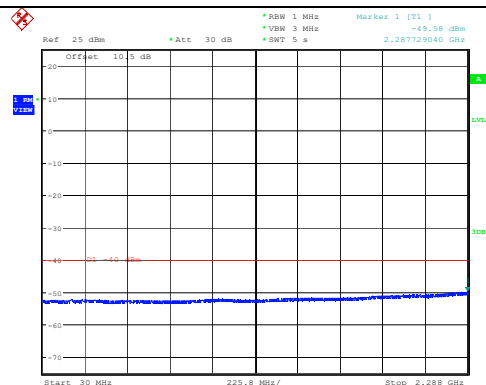
Page 193 of 263

LTE Band 40 Lower:

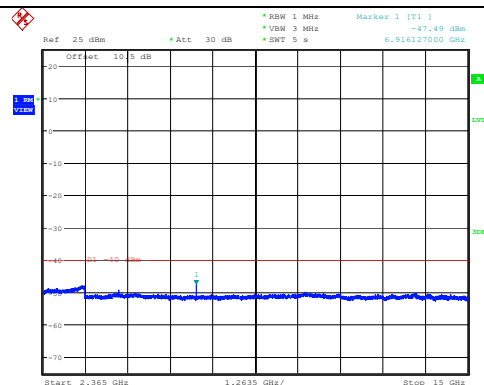
Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

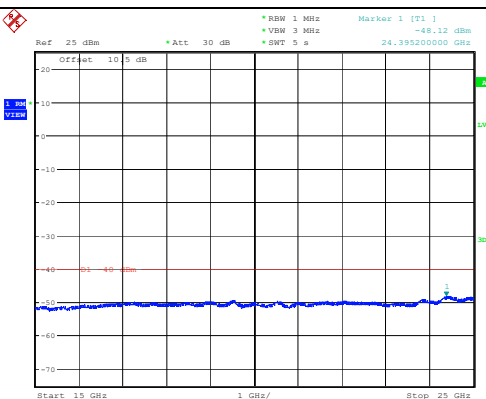


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:29:25



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:30:38

Lowest

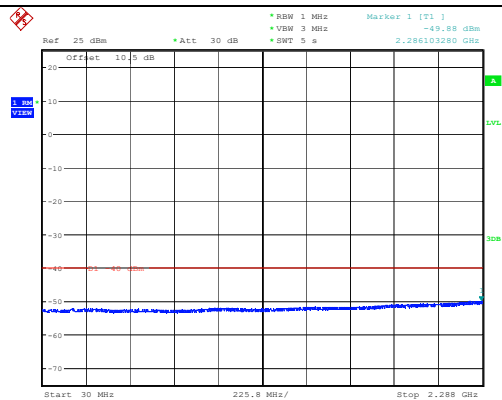


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:31:18

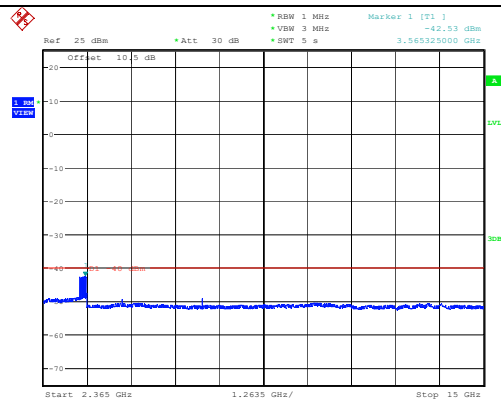
Spurious Emissions at Antenna Terminal

5MHz Bandwidth QPSK

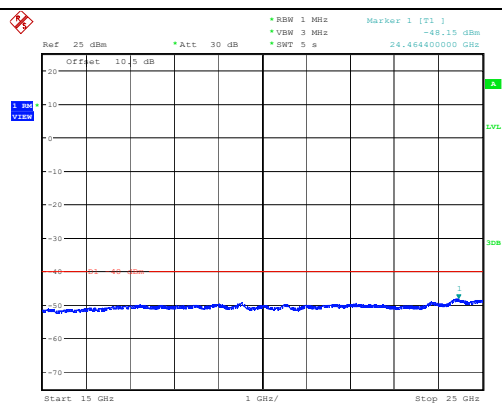
Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:34:31

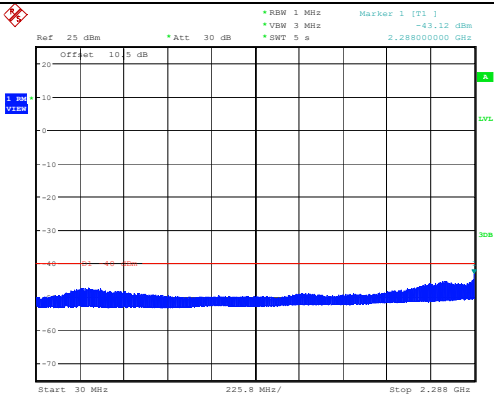
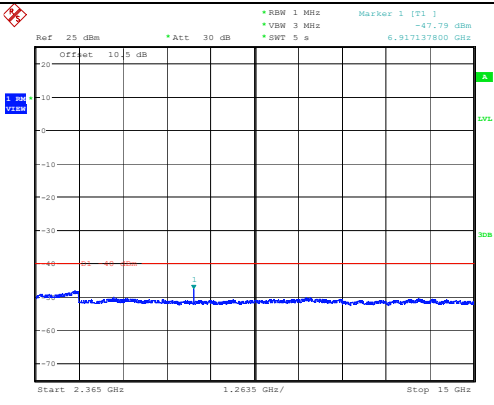
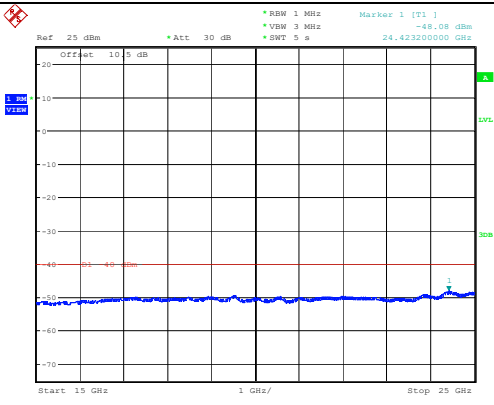


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:35:11



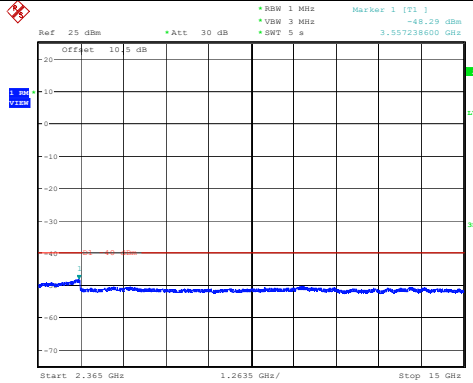
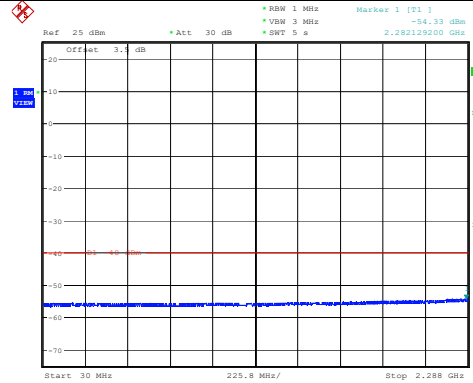
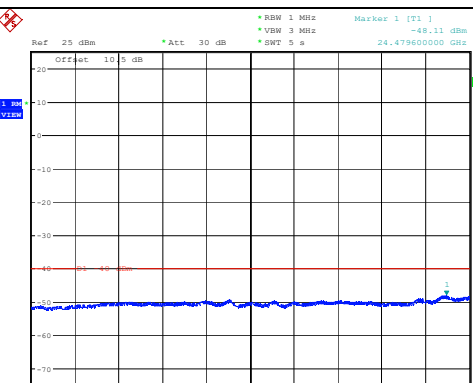
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:35:51

Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK	
Middle	 Ref: 25 dBm *Att: 30 dB *RBW 1 MHz Marker 1 [T1] -43.12 dBm *VBW 3 MHz *SWT 5 s 2.28800000 GHz Start 30 MHz 229.6 MHz/ Stop 2.288 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 13:37:13	 Ref: 25 dBm *Att: 30 dB *RBW 1 MHz Marker 1 [T1] -47.79 dBm *VBW 3 MHz *SWT 5 s 6.917137800 GHz Start 2.365 GHz 1.2635 GHz/ Stop 15 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 13:37:53
	 Ref: 25 dBm *Att: 30 dB *RBW 1 MHz Marker 1 [T1] -48.08 dBm *VBW 3 MHz *SWT 5 s 24.423200000 GHz Start 15 GHz 1 GHz/ Stop 25 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 13:38:33	

LTE Band 40 Upper:

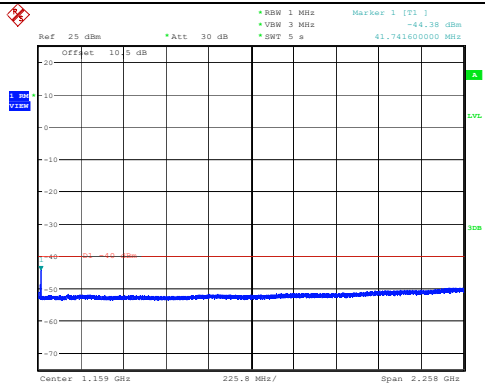
Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK	
Lowest	 Ref: 25 dBm *Att: 30 dB *RBW: 1 MHz *VBW: 3 MHz *SWT: 5 s Marker 1 [T1] -48.29 dBm 3.557238600 GHz Start: 2.365 GHz 1.2635 GHz/ Stop: 2.375 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 22.SEP.2023 10:22:43	 Ref: 25 dBm *Att: 30 dB *RBW: 1 MHz *VBW: 3 MHz *SWT: 5 s Marker 1 [T1] -54.33 dBm 2.282129200 GHz Start: 2.280 GHz 225.8 MHz/ Stop: 2.288 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 22.SEP.2023 10:25:07
	 Ref: 25 dBm *Att: 30 dB *RBW: 1 MHz *VBW: 3 MHz *SWT: 5 s Marker 1 [T1] -48.11 dBm 24.479600000 GHz Start: 2.465 GHz 1 GHz/ Stop: 2.475 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 13:40:16	

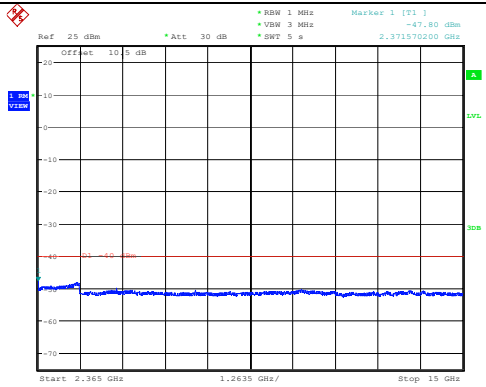
Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

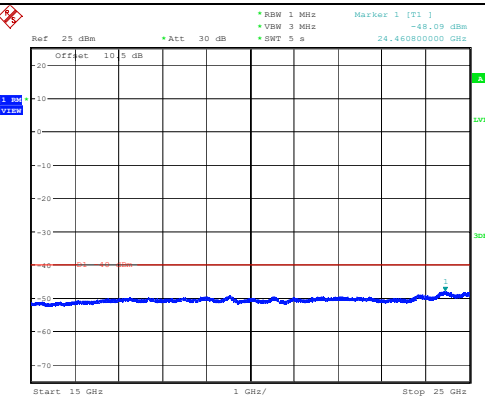


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:52:21



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:43:24

Highest



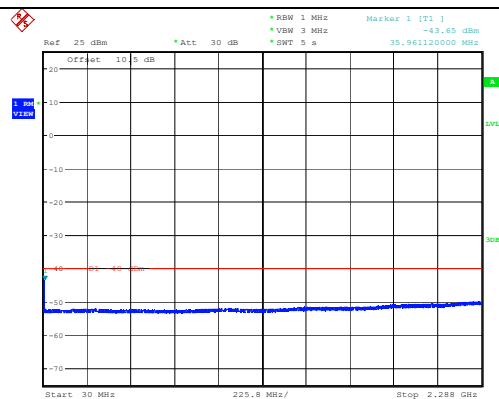
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:43:52

Spurious Emissions at Antenna Terminal

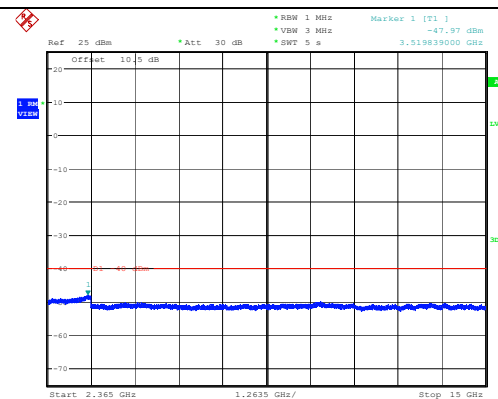
Channel

10MHz Bandwidth QPSK

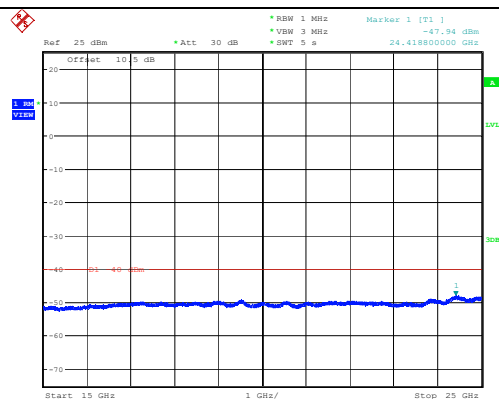
Middle



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:53:55



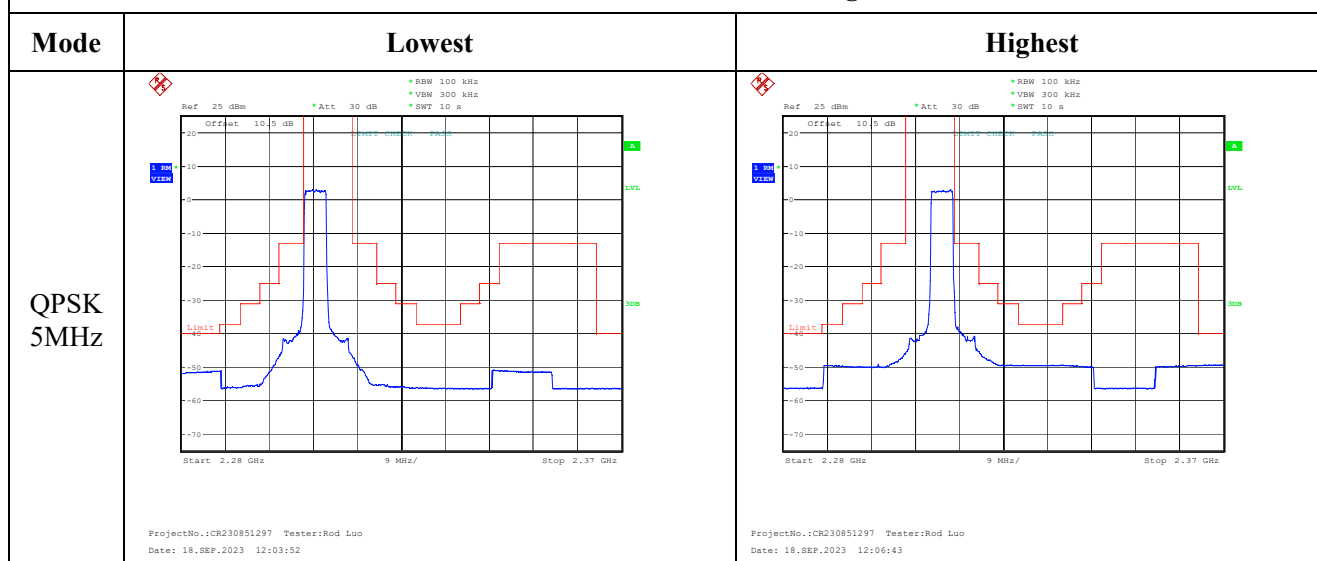
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:56:26



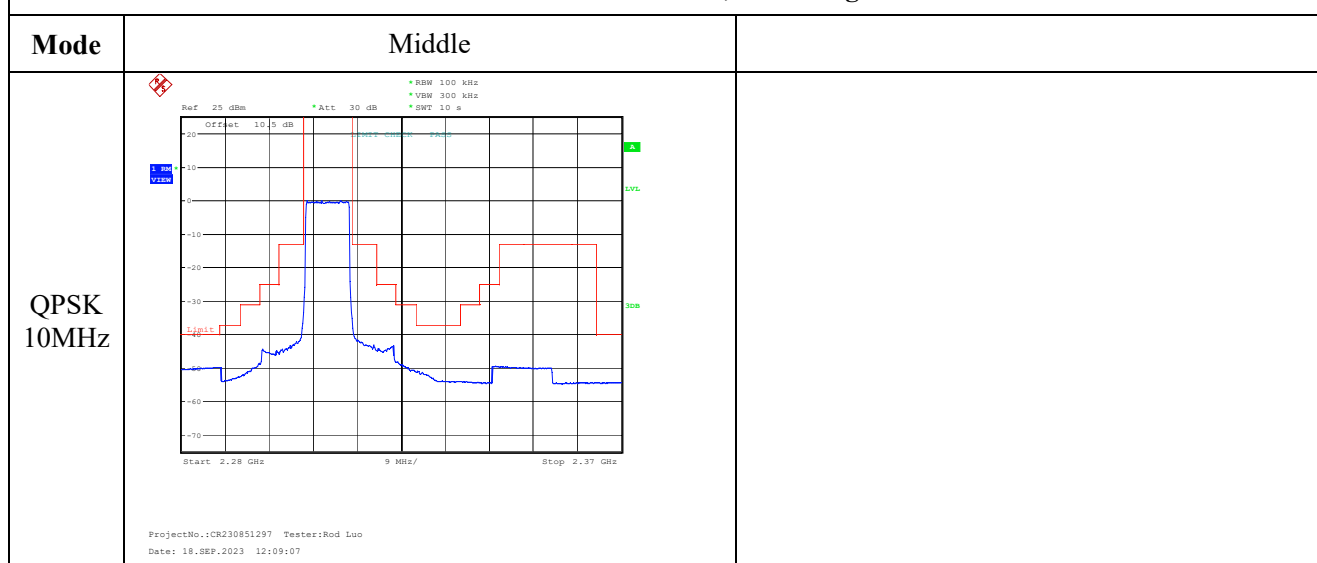
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 18.SEP.2023 13:49:26

LTE Band 40 Lower:

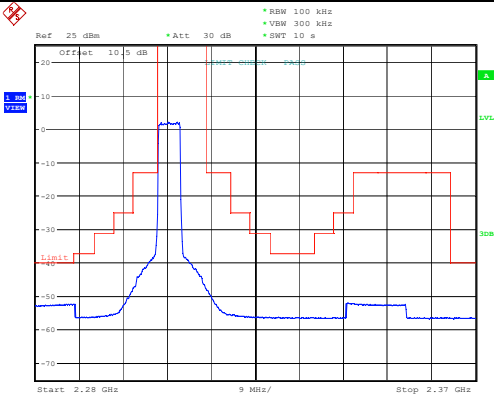
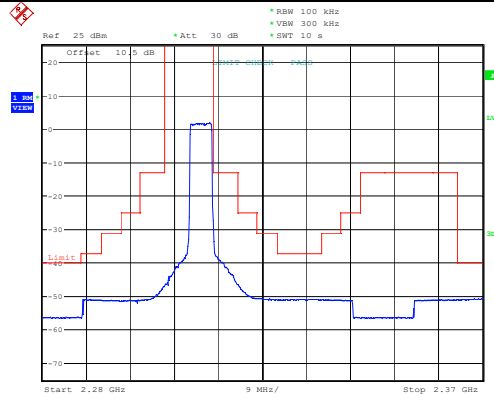
Out of band emission, Band Edge



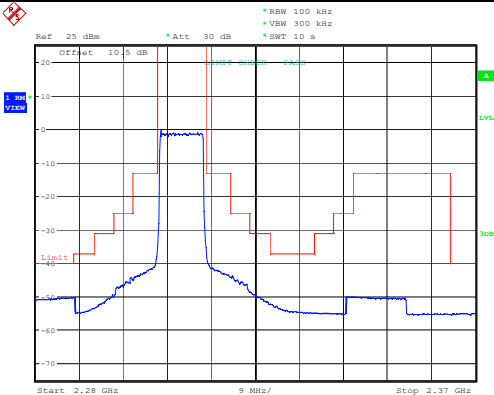
Out of band emission, Band Edge



Out of band emission, Band Edge

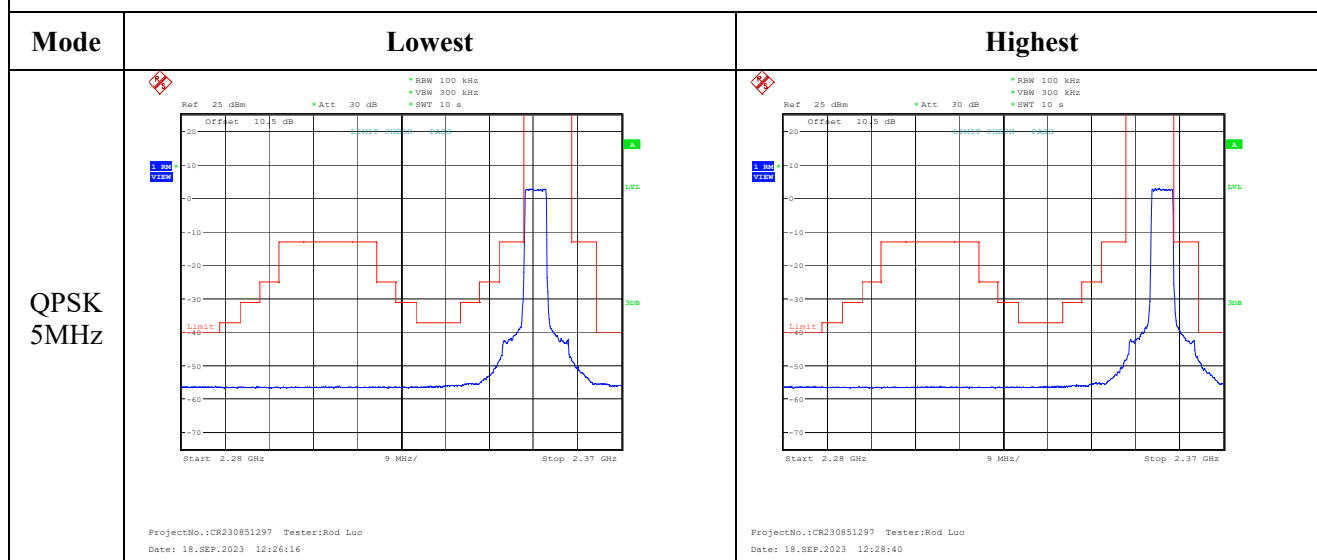
Mode	Lowest	Highest
16QAM 5MHz	 Ref: 25 dBm Offset: 10.5 dB *RBW 100 kHz *VBW 300 kHz *Att: 30 dB *SWT 10 s Start: 2.28 GHz 9 MHz/ Stop: 2.37 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 12:05:01	 Ref: 25 dBm Offset: 10.5 dB *RBW 100 kHz *VBW 300 kHz *Att: 30 dB *SWT 10 s Start: 2.28 GHz 9 MHz/ Stop: 2.37 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 12:07:54

Out of band emission, Band Edge

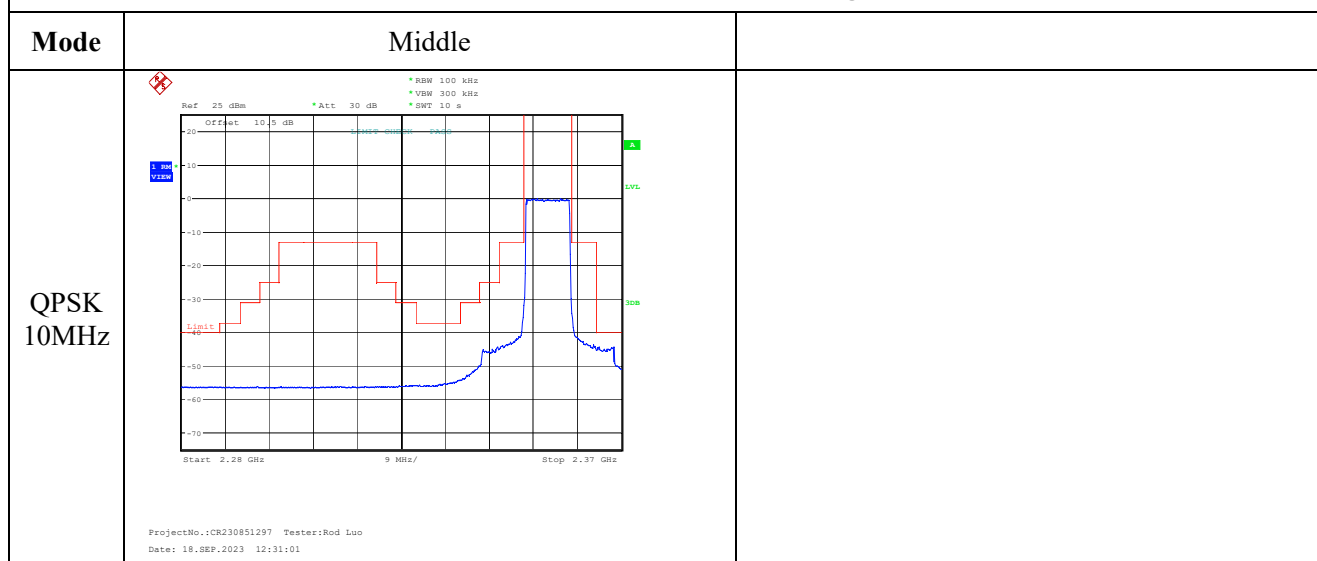
Mode	Middle	
16QAM 10MHz	 Ref: 25 dBm Offset: 10.5 dB *RBW 100 kHz *VBW 300 kHz *Att: 30 dB *SWT 10 s Start: 2.28 GHz 9 MHz/ Stop: 2.37 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 12:10:19	

LTE Band 40 Upper:

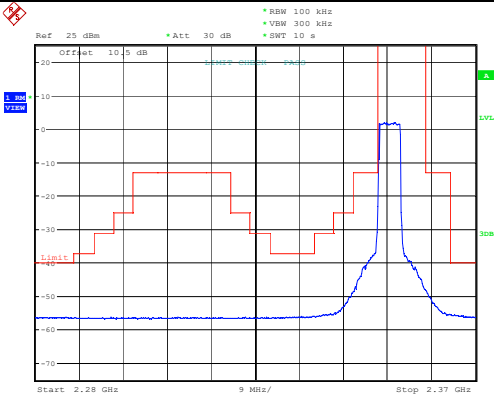
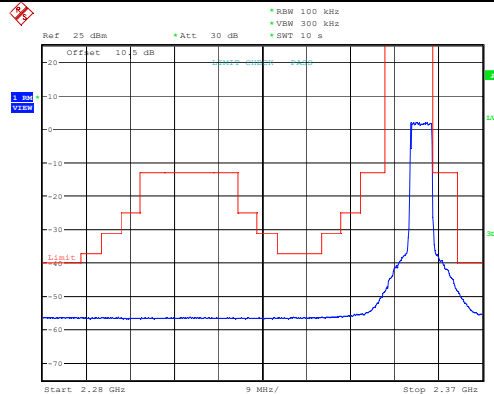
Out of band emission, Band Edge



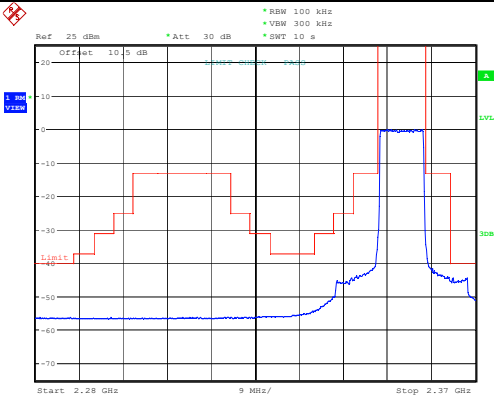
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	 Ref: 25 dBm *RBW 100 kHz *VSW 300 kHz *SWT 10 s Offset: 10.5 dB Limit: -40 dBm Signal: -10 dBm Start: 2.28 GHz 9 MHz/ Stop: 2.37 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 12:27:22	 Ref: 25 dBm *RBW 100 kHz *VSW 300 kHz *SWT 10 s Offset: 10.5 dB Limit: -40 dBm Signal: -10 dBm Start: 2.28 GHz 9 MHz/ Stop: 2.37 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 12:36:53

Out of band emission, Band Edge

Mode	Middle	
16QAM 10MHz	 Ref: 25 dBm *RBW 100 kHz *VSW 300 kHz *SWT 10 s Offset: 10.5 dB Limit: -40 dBm Signal: -10 dBm Start: 2.28 GHz 9 MHz/ Stop: 2.37 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 12:31:58	

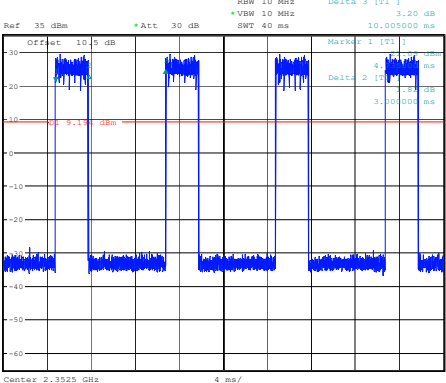
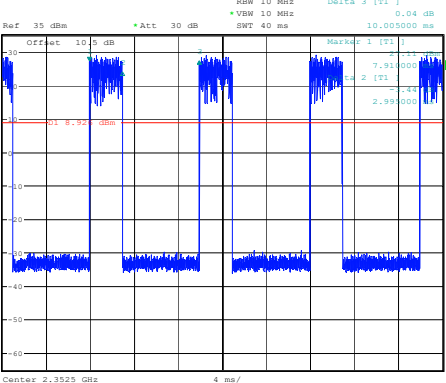
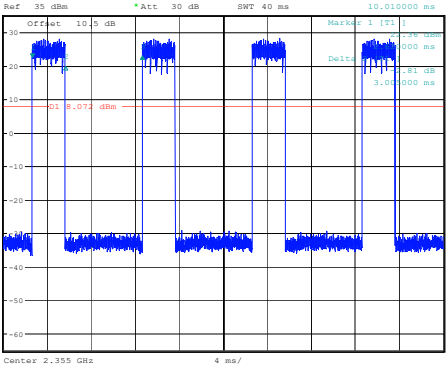
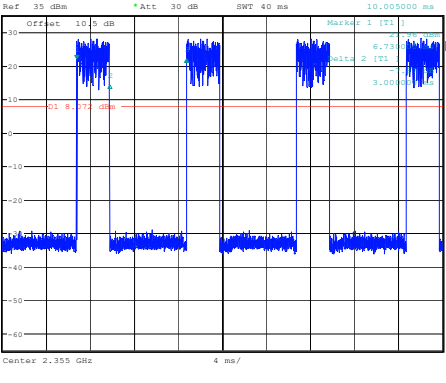
LTE Band 40 Lower:

Duty Cycle

Mode	QPSK	16QAM
5MHz	Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 0.76 dB *VBW 10 MHz SWT 40 ms 10.010000 ms Marker 1 [T1] 8.454 dBm Delta 2 [T1] 8.000000 ms Delta 3 [T1] 8.000000 ms Center 2.3075 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:02:29	Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 3.18 dB *VBW 10 MHz SWT 40 ms 10.010000 ms Marker 1 [T1] 8.254 dBm Delta 2 [T1] 8.000000 ms Delta 3 [T1] 8.000000 ms Center 2.3075 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:02:10
10MHz	Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 0.80 dB *VBW 10 MHz SWT 40 ms 10.010000 ms Marker 1 [T1] 7.5 dBm Delta 2 [T1] 8.740000 ms Delta 3 [T1] 8.000000 ms Center 2.31 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:03:51	Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 0.20 dB *VBW 10 MHz SWT 40 ms 10.000000 ms Marker 1 [T1] 7.494 dBm Delta 2 [T1] 9.430000 ms Delta 3 [T1] 8.000000 ms Center 2.31 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:03:25

LTE Band 40 Upper:

Duty Cycle

Mode	QPSK	16QAM
5MHz	 Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 3.20 dB *VBW 10 MHz 10.000000 ms SWT 40 ms Marker 1 [T1] 3.20 dB Delta 2 [T1] 3.20 dB 3.200000 ms 30b Center 2.3525 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:04:44	 Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 0.04 dB *VBW 10 MHz 10.000000 ms SWT 40 ms Marker 1 [T1] 0.04 dB Delta 2 [T1] 0.04 dB 0.040000 ms 30b Center 2.3525 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:04:25
10MHz	 Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] 0.31 dB *VBW 10 MHz 10.000000 ms SWT 40 ms Marker 1 [T1] 0.31 dB Delta 2 [T1] 0.31 dB 0.000000 ms 30b Center 2.355 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:05:20	 Ref: 35 dBm *Att: 30 dB RBW 10 MHz Delta 3 [T1] -0.01 dB *VBW 10 MHz 10.000000 ms SWT 40 ms Marker 1 [T1] -0.01 dB Delta 2 [T1] -0.01 dB 0.000000 ms 30b Center 2.355 GHz 4 ms/ ProjectNo.:CR230851297 Tester:Rod Luo Date: 18.SEP.2023 14:05:05

4.14 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	2AS5-5	Test Date:	2023/9/15~2023/9/18
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.9~26.2	Relative Humidity: (%)	54~60	ATM Pressure: (kPa)	100.2~100.8
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
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

* 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	22.01	22.76	22.84	20.27	33
	RB1#13	22.18	22.86	22.97		
	RB1#24	22.05	22.75	22.88		
	RB15#0	21.06	21.77	21.87		
	RB15#10	21.13	21.76	21.88		
	RB25#0	21.09	21.78	21.91		
5MHz 16QAM	RB1#0	21.02	21.7	22.02	19.47	33
	RB1#13	21.12	21.8	22.17		
	RB1#24	21.03	21.69	22.07		
	RB15#0	20.05	20.74	20.89		
	RB15#10	20.09	20.72	20.92		
	RB25#0	20.14	20.75	20.87		
10MHz QPSK	RB1#0	22.19	22.85	22.9	20.48	33
	RB1#25	22.49	23.08	23.18		
	RB1#49	22.2	22.83	22.96		
	RB25#0	21.08	21.85	21.91		
	RB25#25	21.2	21.8	22.01		
	RB50#0	21.11	21.84	21.91		
10MHz 16QAM	RB1#0	21.23	21.94	21.72	19.49	33
	RB1#25	21.5	22.19	22.05		
	RB1#49	21.22	21.95	21.85		
	RB25#0	20.15	20.79	20.92		
	RB25#25	20.26	20.74	20.94		
	RB50#0	20.18	20.8	20.91		
15MHz QPSK	RB1#0	22.15	22.79	22.83	20.25	33
	RB1#38	22.27	22.87	22.95		
	RB1#74	22.24	22.8	22.9		
	RB36#0	21.2	22	21.95		
	RB36#39	21.37	21.95	22.02		
	RB75#0	21.27	22	22.02		
15MHz 16QAM	RB1#0	21.29	21.9	21.74	19.26	33
	RB1#38	21.44	21.96	21.86		
	RB1#74	21.35	21.91	21.84		
	RB36#0	20.25	20.83	20.86		
	RB36#39	20.39	20.82	20.94		
	RB75#0	20.26	20.82	20.95		

20MHz QPSK	RB1#0	22	22.71	22.6	20.43	33
	RB1#50	22.49	23.13	23.05		
	RB1#99	22.18	22.72	22.62		
	RB50#0	21.03	21.83	21.66		
	RB50#50	21.28	21.88	21.77		
	RB100#0	21.21	21.89	21.72		
20MHz 16QAM	RB1#0	20.97	21.61	21.82	19.56	33
	RB1#50	21.45	22.08	22.26		
	RB1#99	21.11	21.29	21.84		
	RB50#0	20.04	20.58	20.68		
	RB50#50	20.25	20.68	20.76		
	RB100#0	20.21	20.69	20.72		
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	8.38	7.65	8.35	13
	RB100#0	8.75	8.52	8.72	13
20MHz 16QAM	RB1#0	9.13	8.61	9.25	13
	RB100#0	9.59	9.36	9.57	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	4.520	4.500	4.500	4.960	5.100	5.000
5MHz 16QAM	4.500	4.500	4.500	4.940	4.960	5.240
10MHz QPSK	9.000	8.960	9.000	9.640	9.640	10.000
10MHz 16QAM	9.000	9.000	9.000	9.480	10.120	9.480
15MHz QPSK	13.560	13.500	13.560	15.180	15.120	15.120
15MHz 16QAM	13.560	13.560	13.620	14.820	16.920	16.020
20MHz QPSK	17.920	18.000	18.000	19.520	19.440	19.760
20MHz 16QAM	18.000	18.000	18.000	19.360	19.360	19.440
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

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

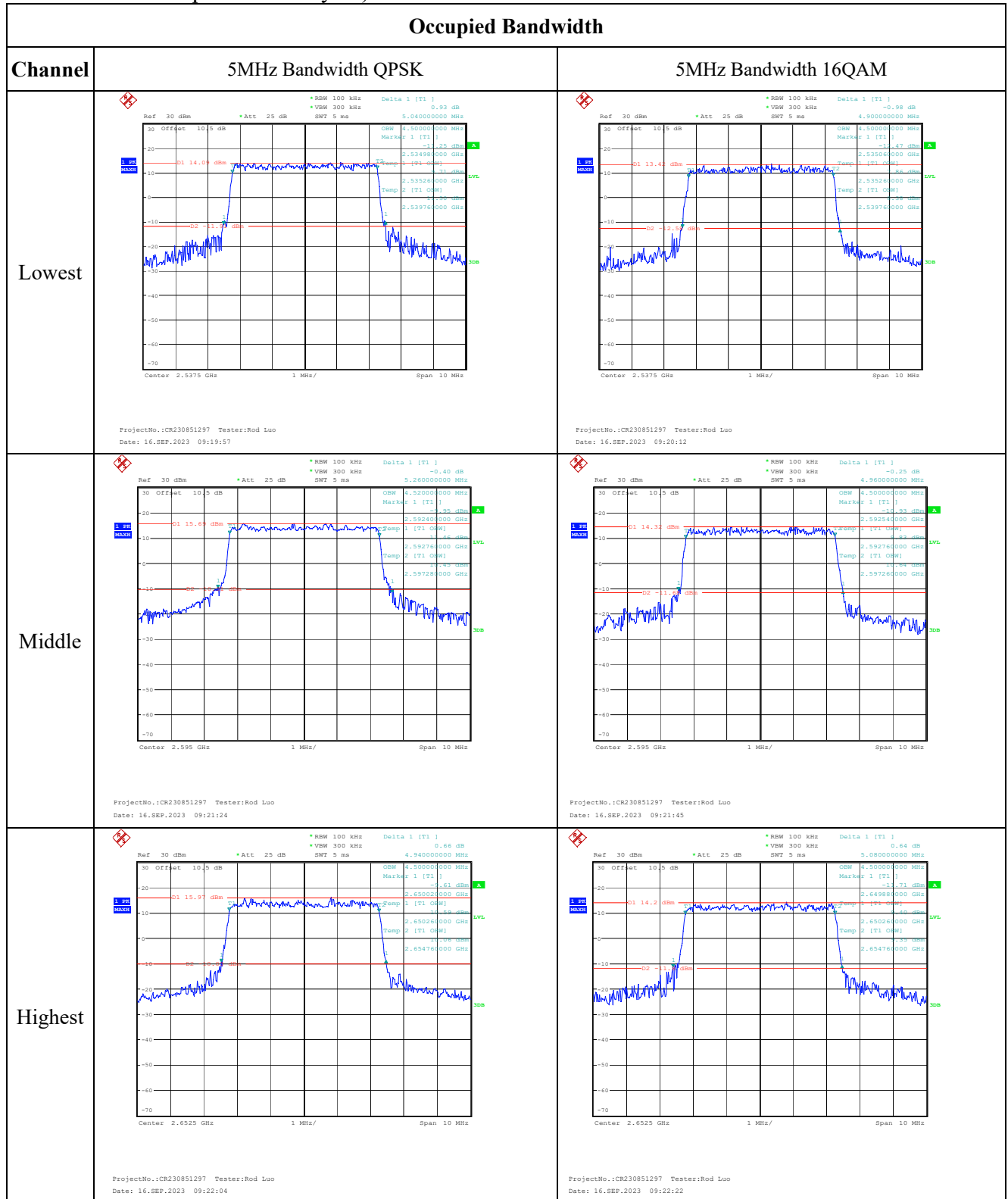
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
----------------	---

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	2535.222	2535.00	2654.773	2655
	-20	3.85	2535.286	2535.00	2654.882	2655
	-10	3.85	2535.288	2535.00	2654.864	2655
	0	3.85	2535.245	2535.00	2654.755	2655
	10	3.85	2535.300	2535.00	2654.866	2655
	20	3.85	2535.123	2535.00	2654.896	2655
	30	3.85	2535.114	2535.00	2654.900	2655
	40	3.85	2535.268	2535.00	2654.710	2655
	50	3.85	2535.118	2535.00	2654.768	2655
Frequency Stability vs. Voltage	20	3.45	2535.176	2535.00	2654.761	2655
	20	4.4	2535.156	2535.00	2654.831	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	2535.284	2535.00	2654.840	2655
	-20	3.85	2535.230	2535.00	2654.799	2655
	-10	3.85	2535.224	2535.00	2654.707	2655
	0	3.85	2535.278	2535.00	2654.779	2655
	10	3.85	2535.261	2535.00	2654.756	2655
	20	3.85	2535.133	2535.00	2654.753	2655
	30	3.85	2535.149	2535.00	2654.777	2655
	40	3.85	2535.176	2535.00	2654.739	2655
	50	3.85	2535.102	2535.00	2654.728	2655
Frequency Stability vs. Voltage	20	3.45	2535.245	2535.00	2654.877	2655
	20	4.4	2535.192	2535.00	2654.853	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):



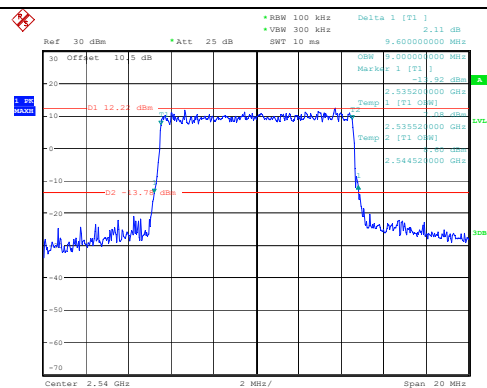
Occupied Bandwidth

Channel

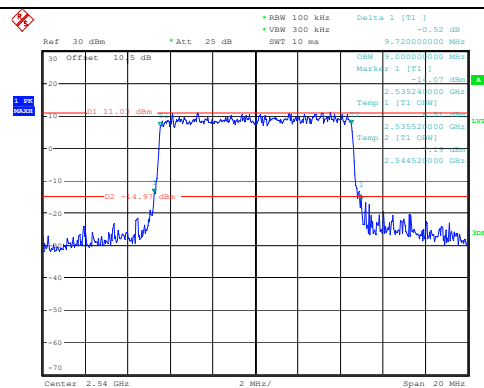
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

Lowest

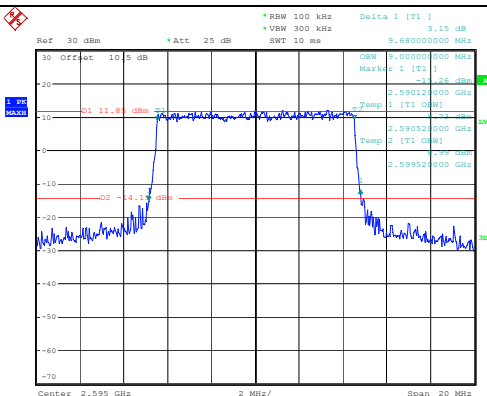


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:22:48

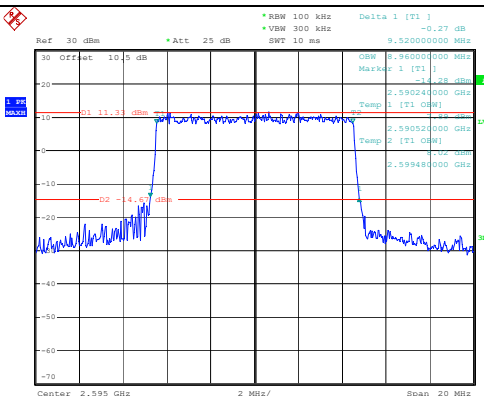


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:23:09

Middle

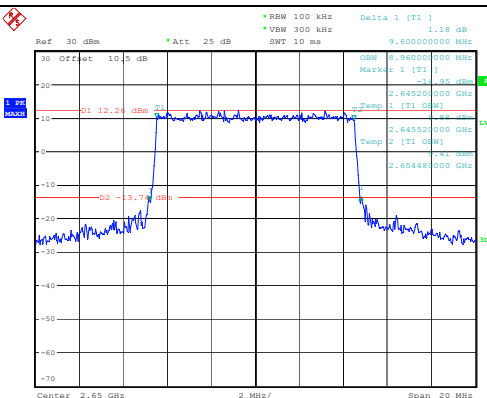


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:23:29

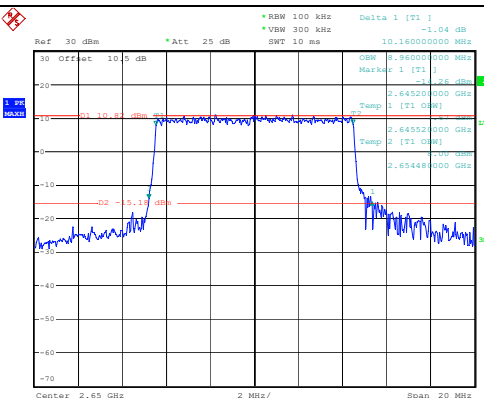


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:23:50

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:24:10



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:24:32

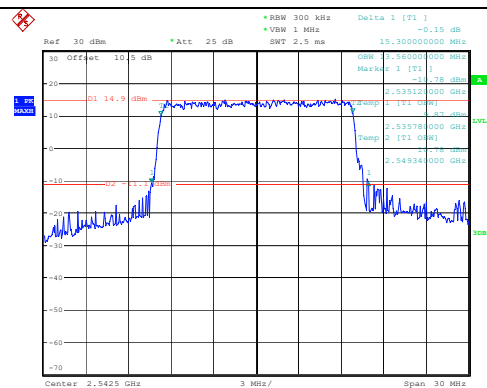
Occupied Bandwidth

Channel

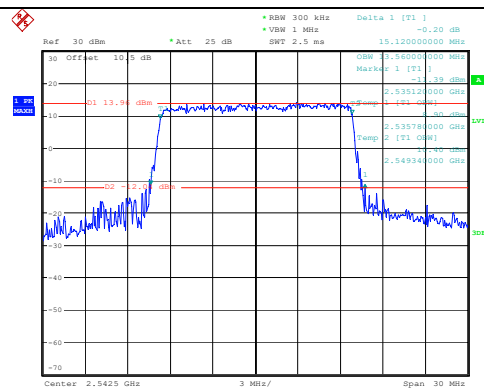
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

Lowest

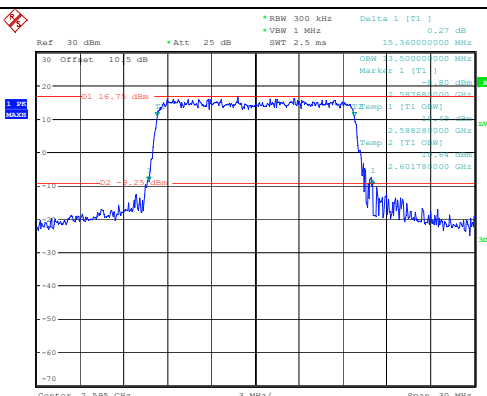


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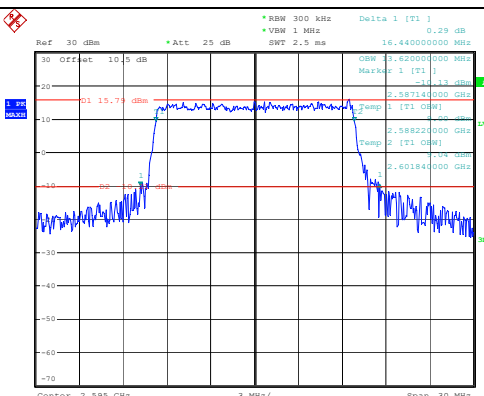


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:25:17

Middle

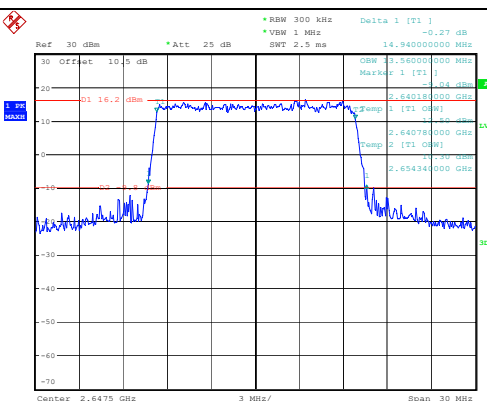


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Date: 16.SEP.2023 09:25:42

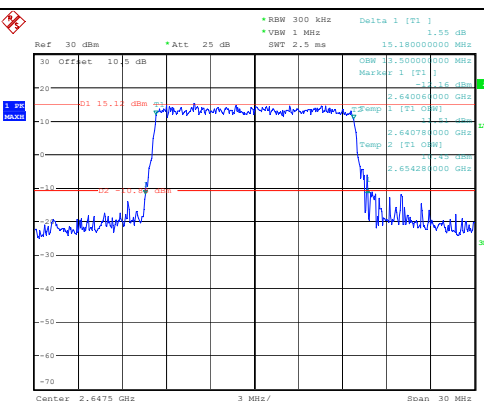


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:26:16

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:26:41



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:27:02

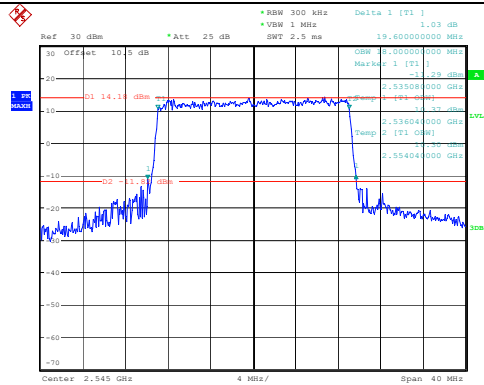
Occupied Bandwidth

Channel

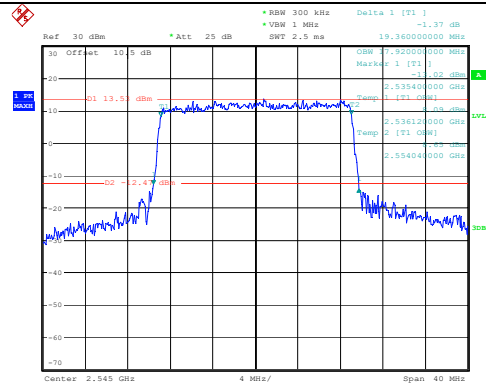
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

Lowest

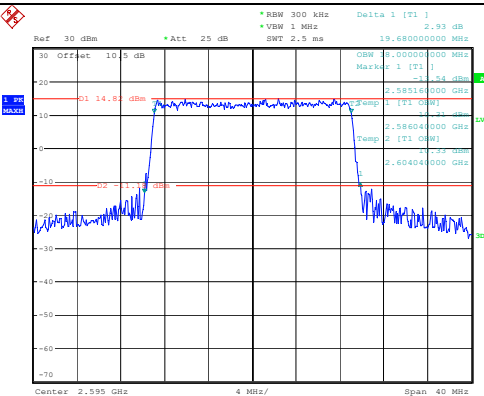


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:27:35

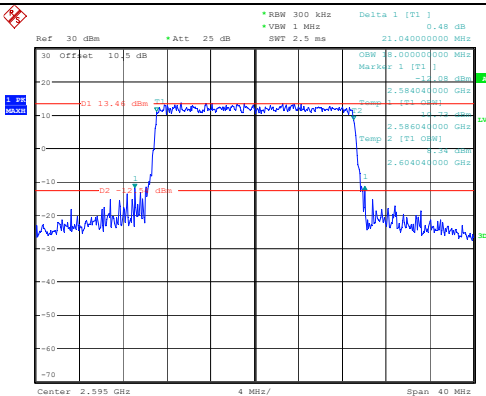


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:27:56

Middle

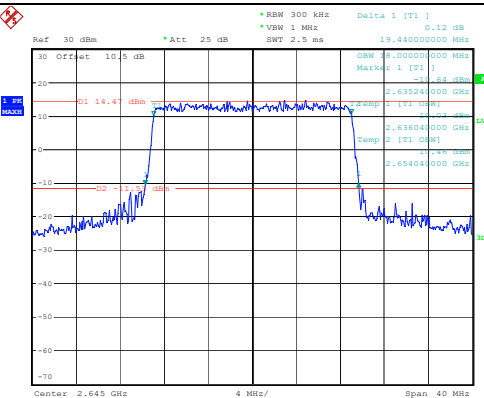


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:28:25

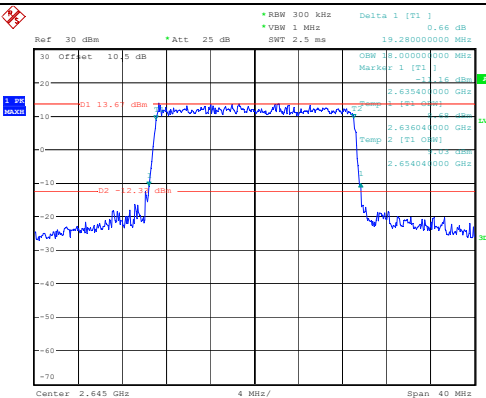


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:28:47

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 09:29:09



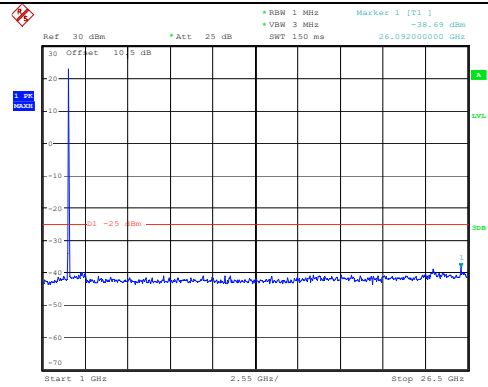
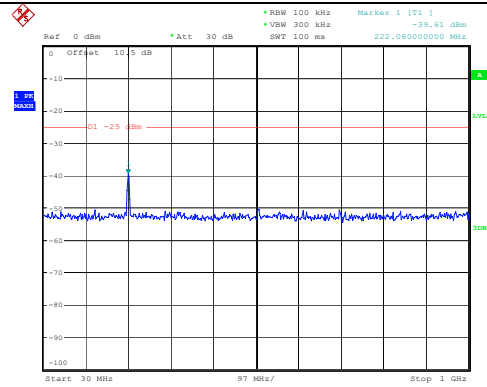
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Date: 16.SEP.2023 09:29:31

Spurious Emissions at Antenna Terminal

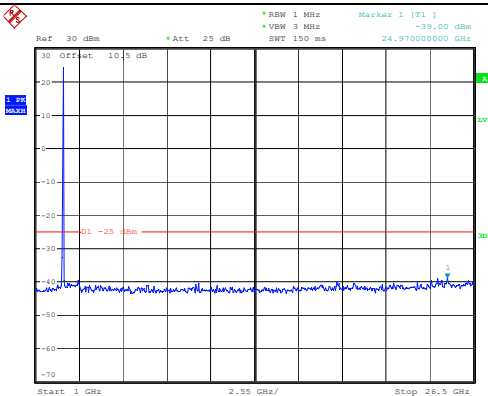
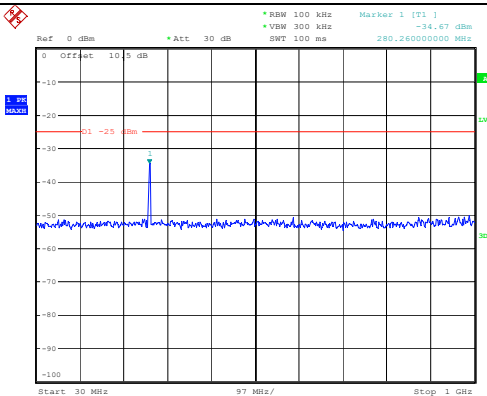
Channel

5MHz Bandwidth QPSK

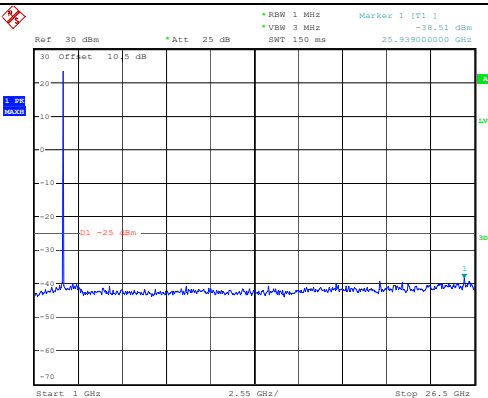
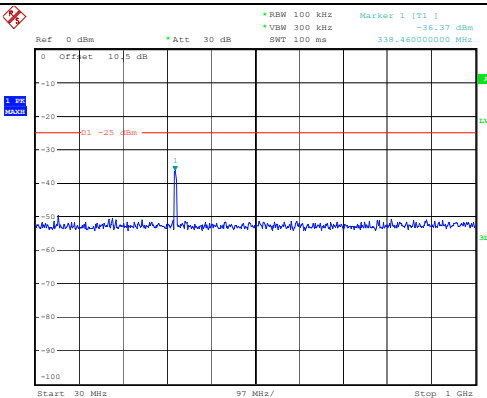
Lowest



Middle



Highest

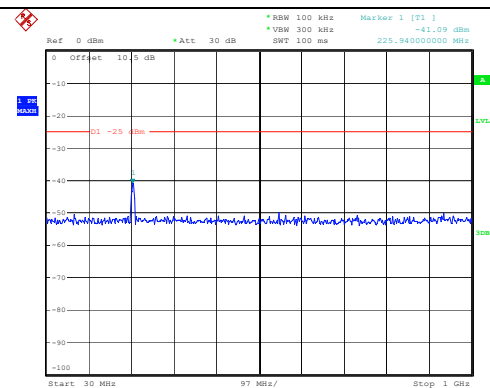
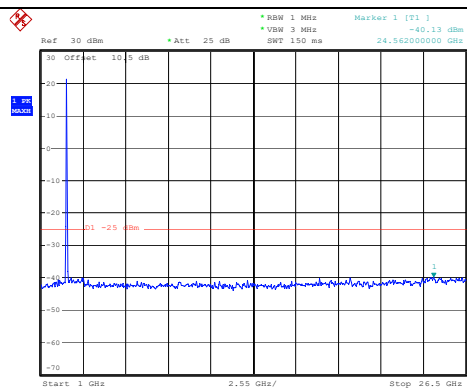


Spurious Emissions at Antenna Terminal

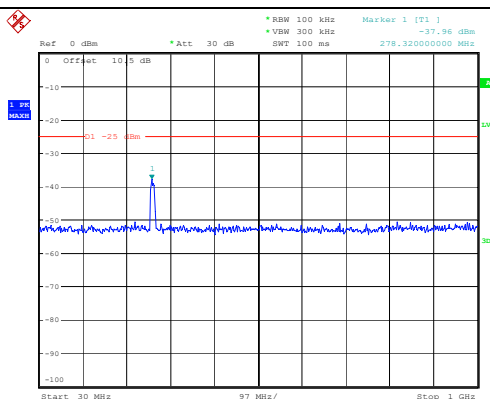
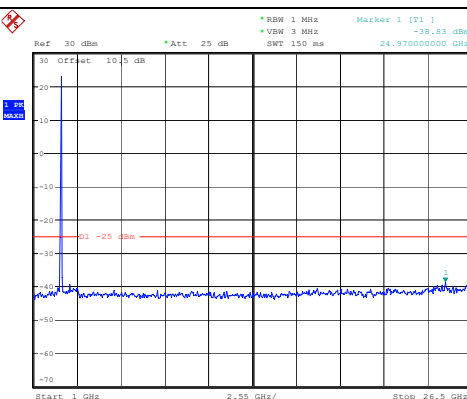
Channel

10MHz Bandwidth QPSK

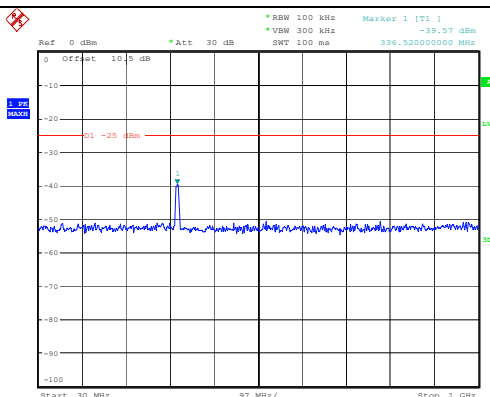
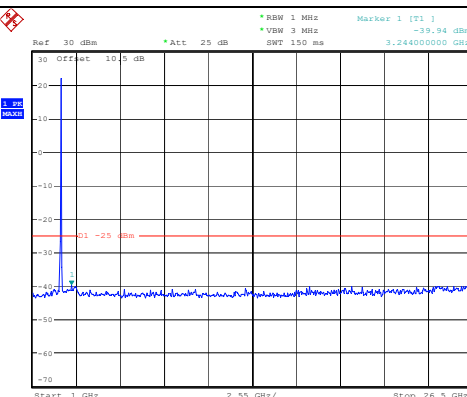
Lowest

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:20:16ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:20:26

Middle

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:20:41ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:20:51

Highest

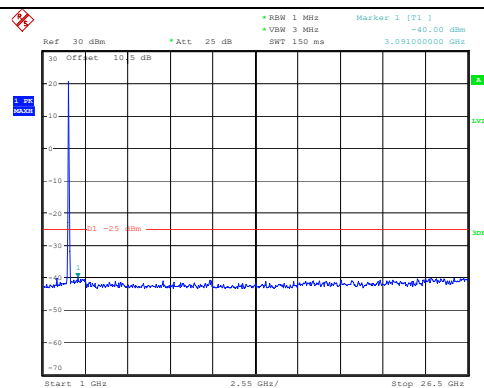
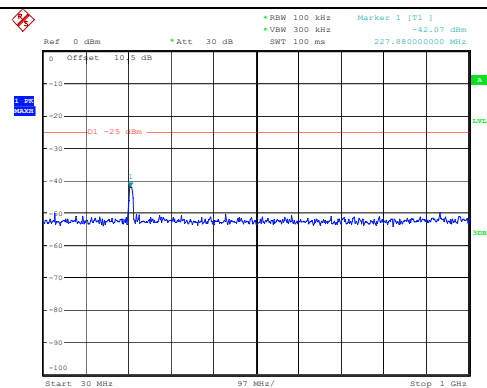
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Date: 15.SEP.2023 17:21:06ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:21:16

Spurious Emissions at Antenna Terminal

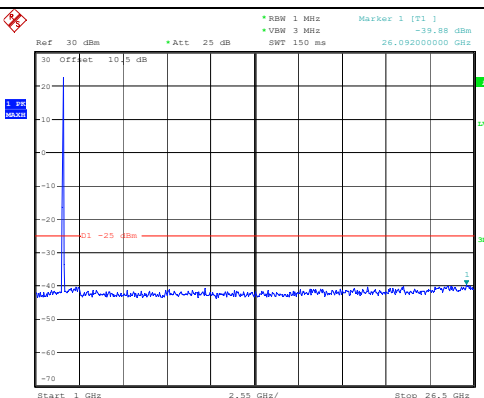
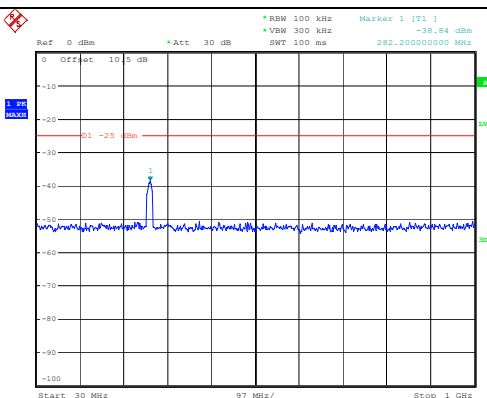
Channel

15MHz Bandwidth QPSK

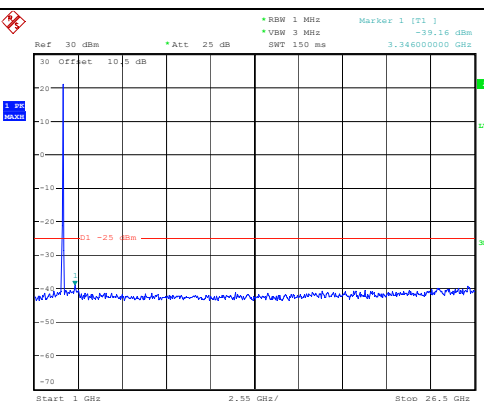
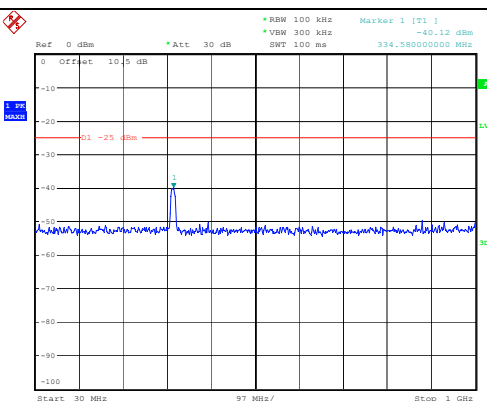
Lowest



Middle



Highest

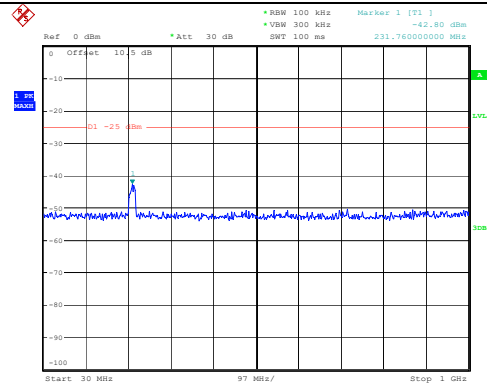


Spurious Emissions at Antenna Terminal

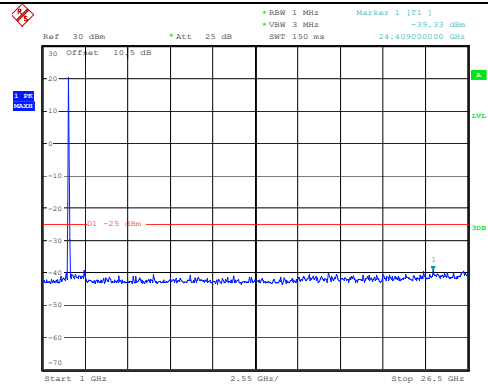
Channel

20MHz Bandwidth QPSK

Lowest

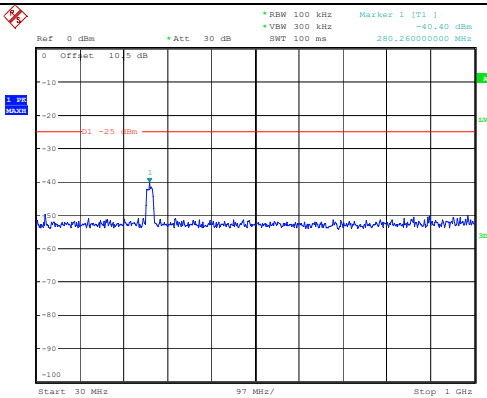


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:23:15

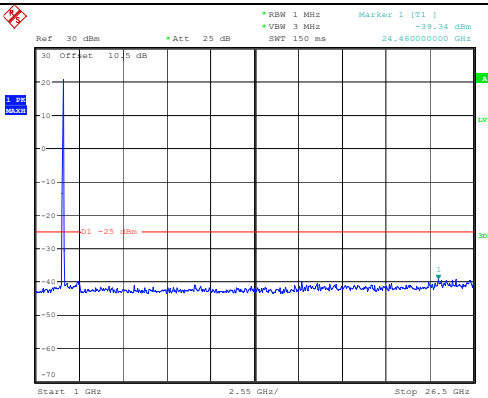


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:23:25

Middle

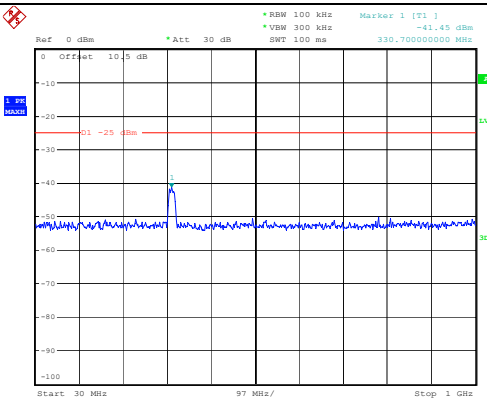


ProjectNo.:CR230851297 Tester:Rod Luo
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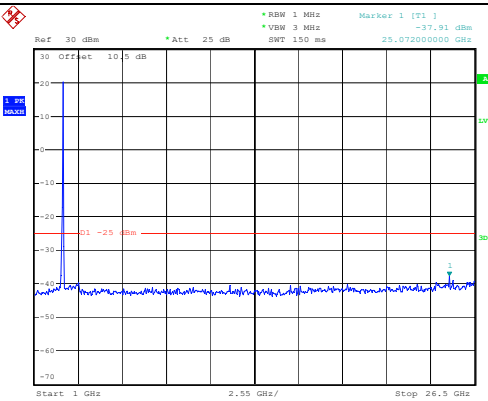


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:23:53

Highest

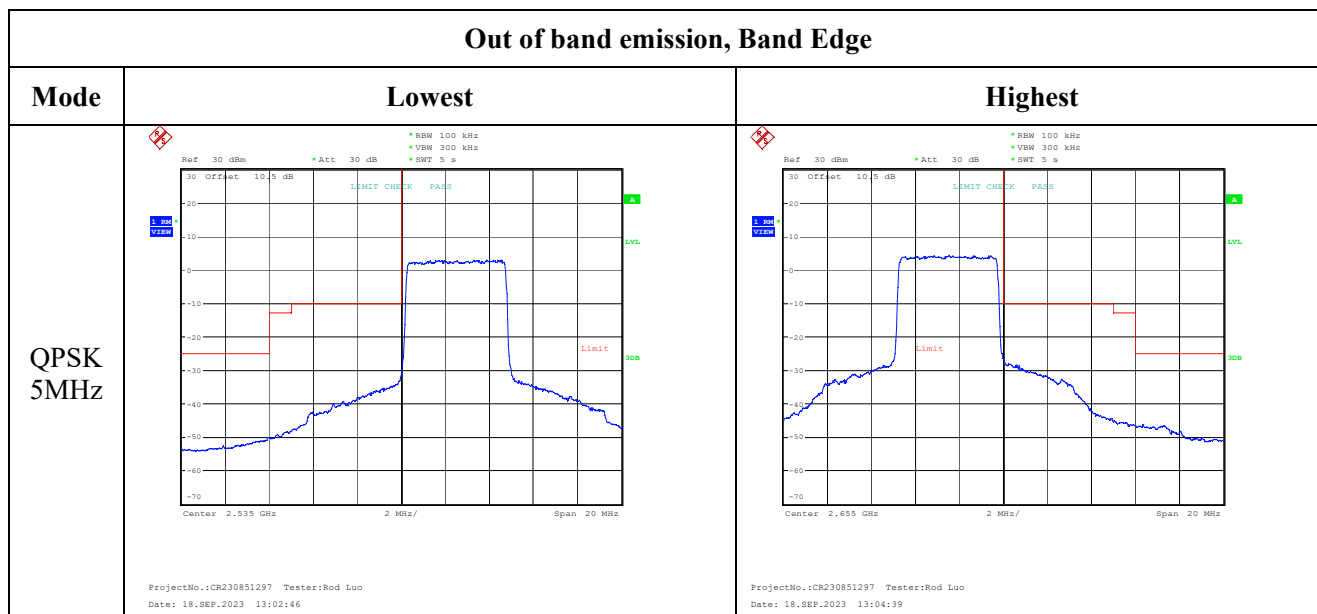


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 15.SEP.2023 17:24:11

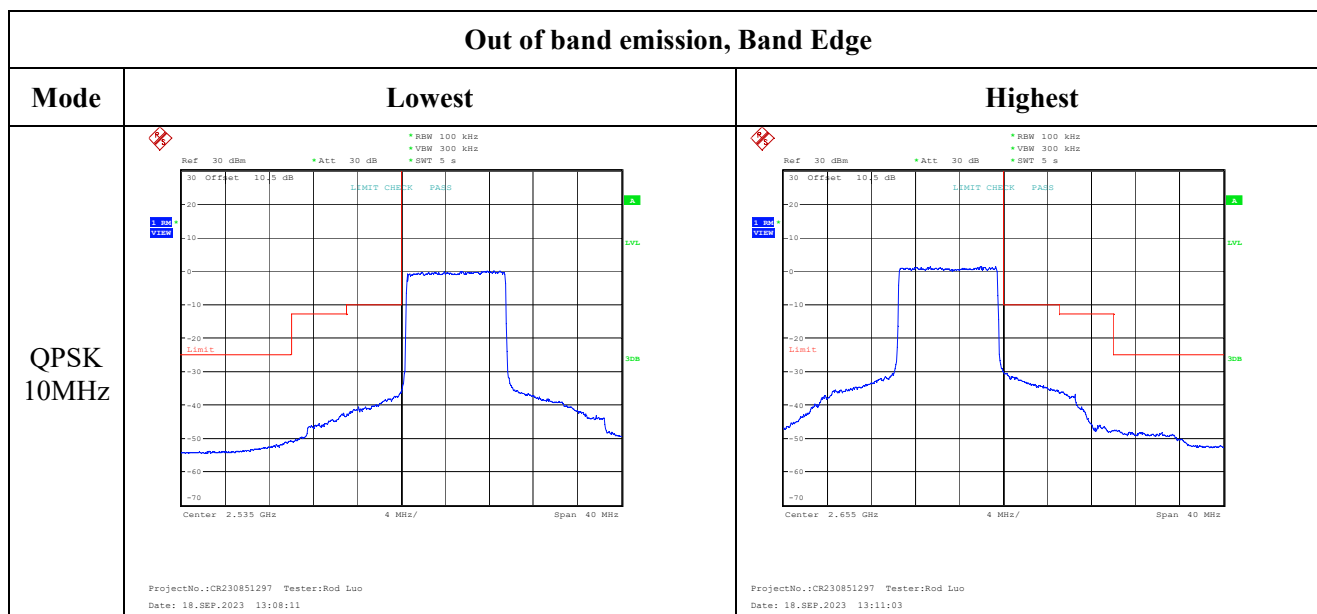


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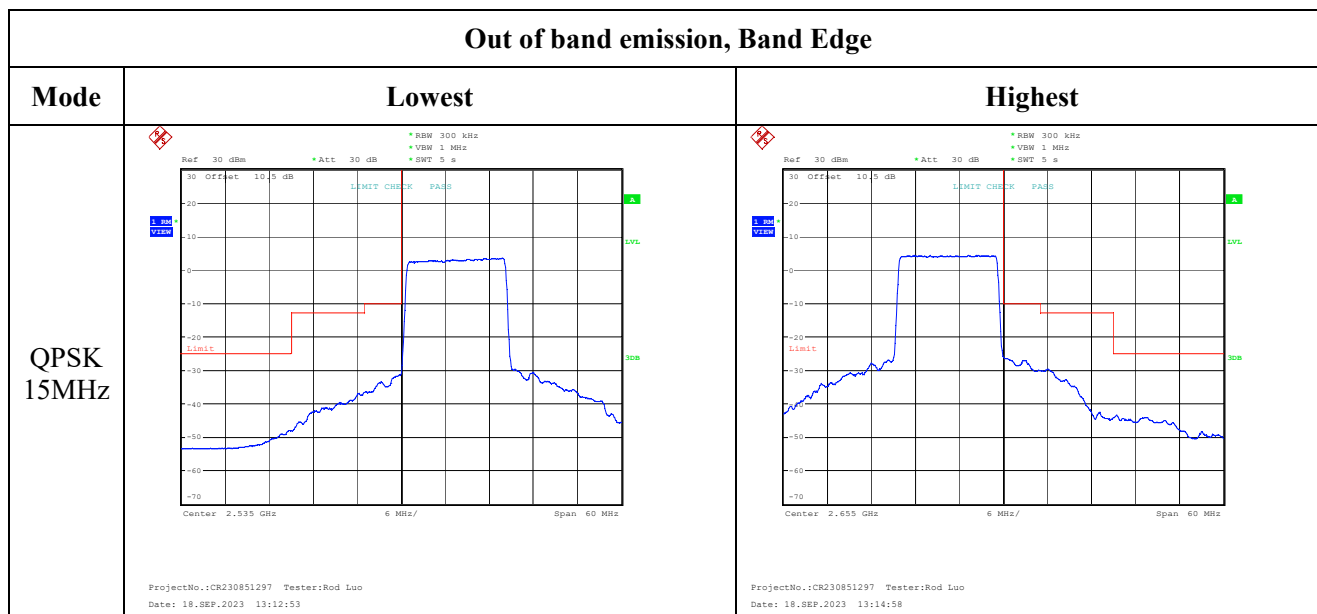
Out of band emission, Band Edge



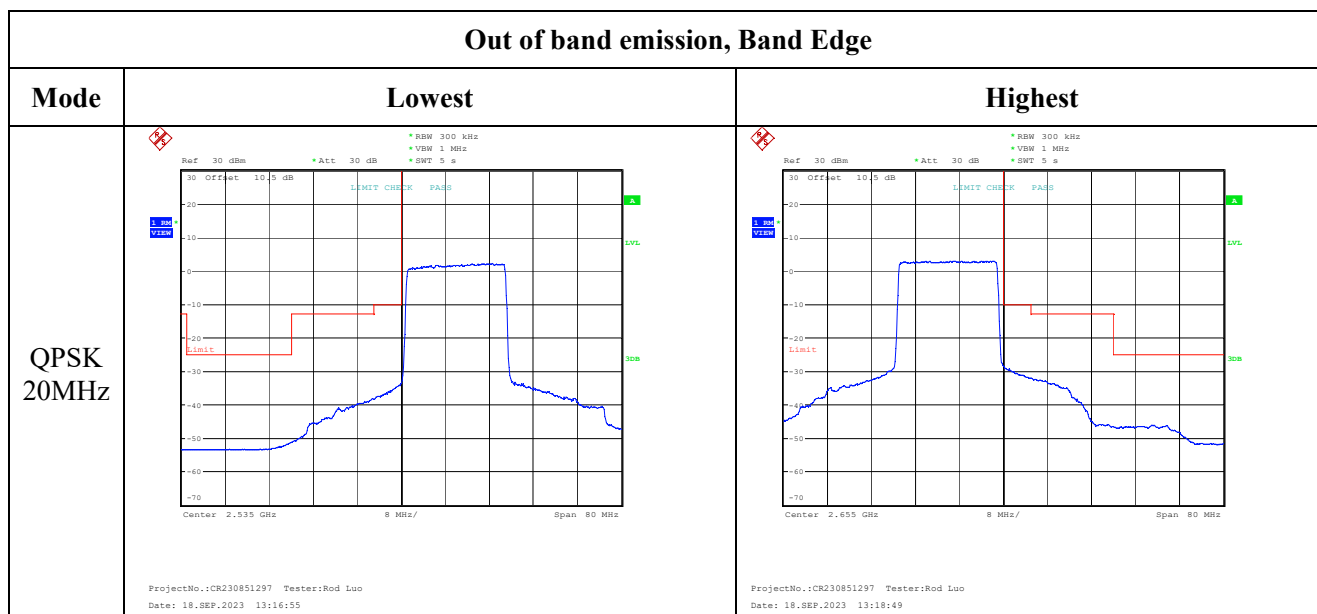
Out of band emission, Band Edge



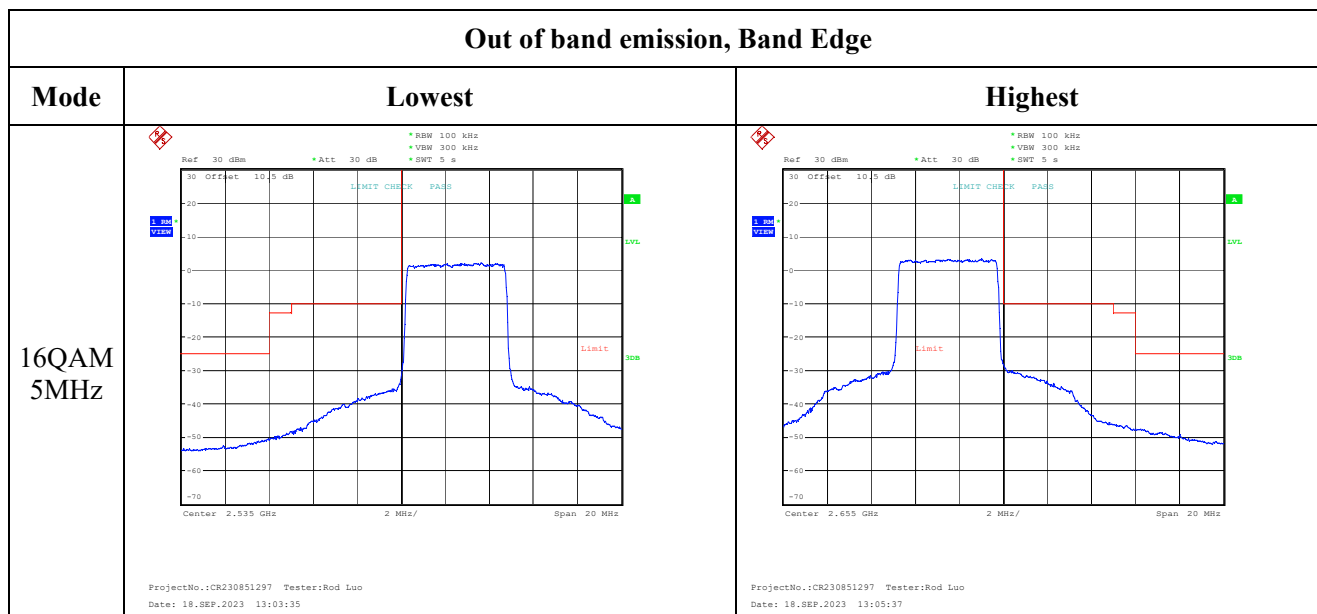
Out of band emission, Band Edge



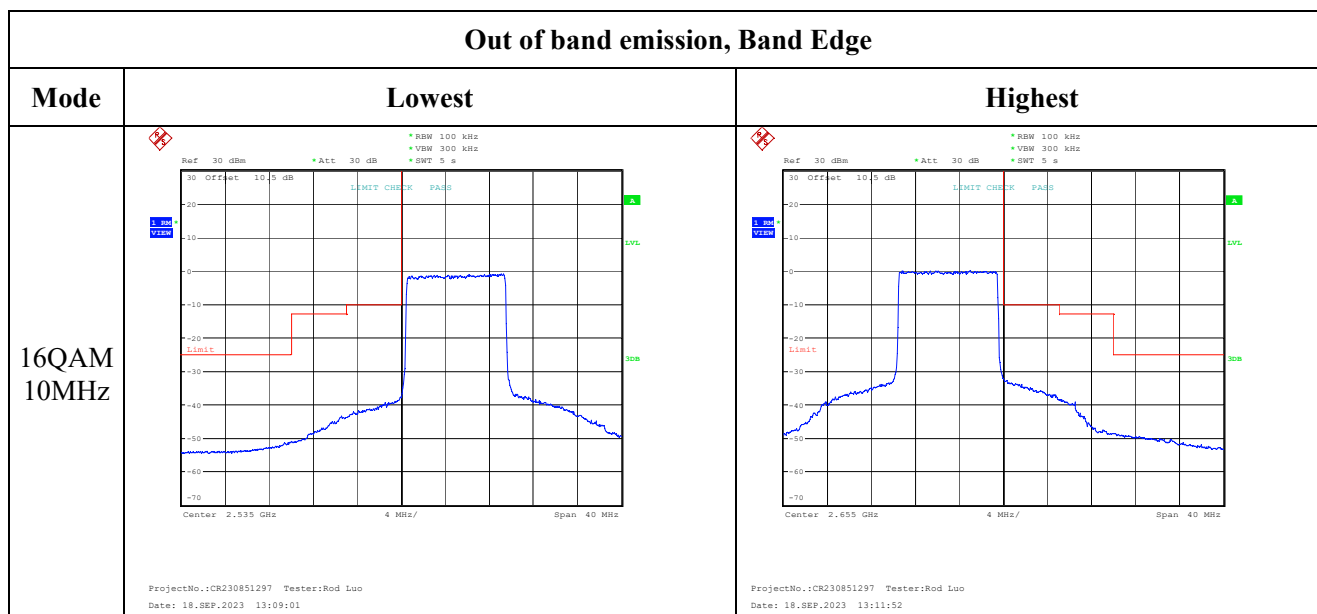
Out of band emission, Band Edge



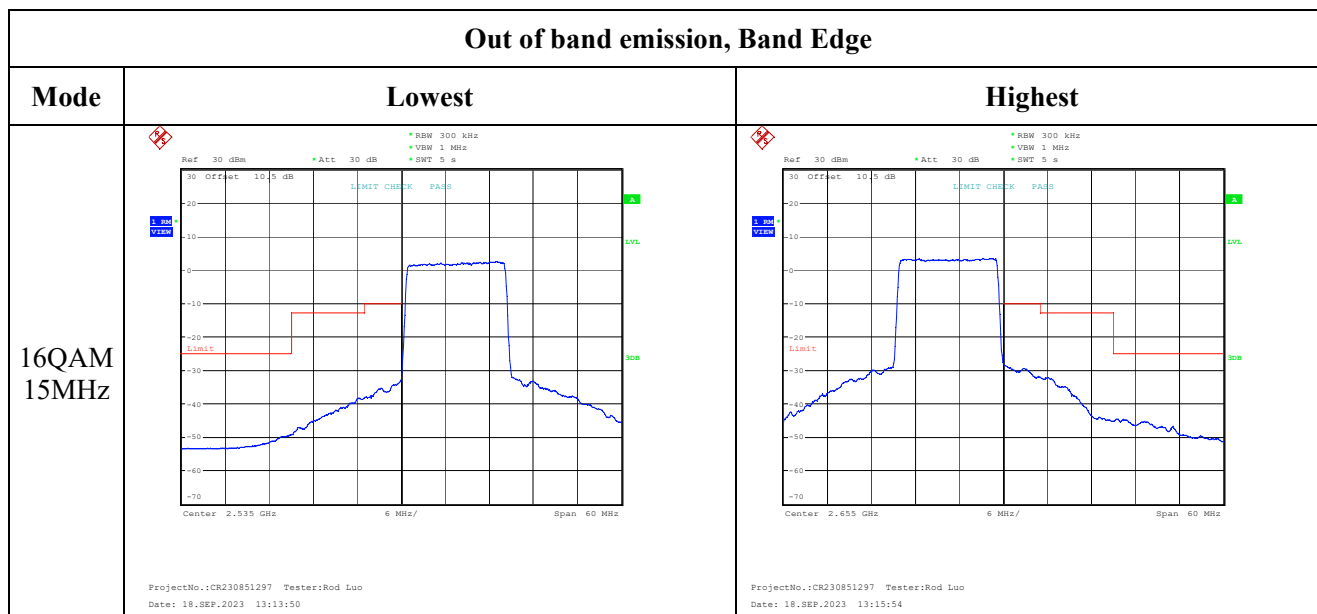
Out of band emission, Band Edge



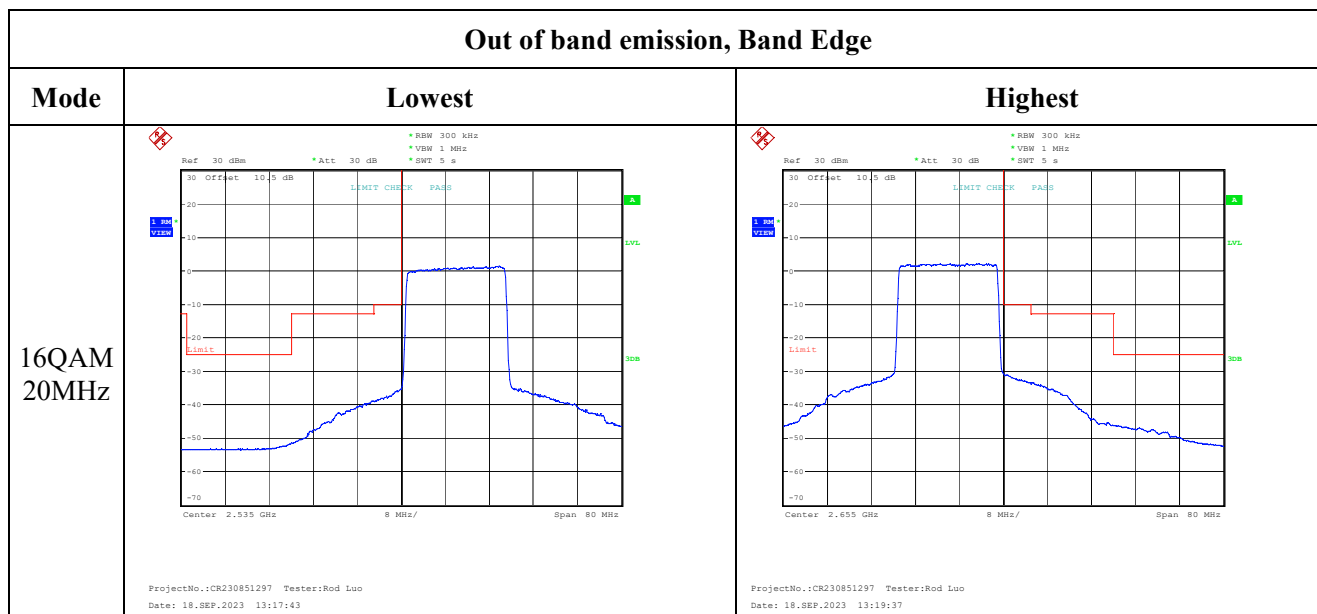
Out of band emission, Band Edge



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:	2AS5-5	Test Date:	2023/9/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	28	Relative Humidity: (%)	55	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
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

* 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	23.83	23.65	23.66	21.69	30
	RB1#3	23.99	23.85	23.82		
	RB1#5	23.78	23.62	23.66		
	RB3#0	23.86	23.62	23.66		
	RB3#3	23.84	23.68	23.68		
	RB6#0	22.56	22.65	22.73		
1.4MHz 16QAM	RB1#0	22.87	22.55	22.55	20.80	30
	RB1#3	23.1	22.74	22.73		
	RB1#5	22.73	22.58	22.56		
	RB3#0	22.56	22.68	22.74		
	RB3#3	22.33	22.63	22.76		
	RB6#0	21.41	21.57	21.67		
3MHz QPSK	RB1#0	23.89	23.68	23.77	21.59	30
	RB1#8	23.86	23.67	23.73		
	RB1#14	23.65	23.66	23.71		
	RB6#0	22.29	22.65	22.77		
	RB6#9	22.31	22.66	22.72		
	RB15#0	22.34	22.64	22.71		
3MHz 16QAM	RB1#0	22.37	23.13	22.76	20.83	30
	RB1#8	22.35	23.09	22.78		
	RB1#14	22.25	23.07	22.77		
	RB6#0	21.26	21.67	21.67		
	RB6#9	21.23	21.66	21.69		
	RB15#0	21.37	21.67	21.62		
5MHz QPSK	RB1#0	23.75	23.57	23.65	21.54	30
	RB1#13	23.84	23.7	23.76		
	RB1#24	23.68	23.58	23.61		
	RB15#0	22.36	22.63	22.72		
	RB15#10	22.37	22.67	22.69		
	RB25#0	22.3	22.61	22.67		
5MHz 16QAM	RB1#0	22.13	22.82	22.63	20.64	30
	RB1#13	22.22	22.94	22.77		
	RB1#24	22.07	22.81	22.6		
	RB15#0	21.39	21.63	21.73		
	RB15#10	21.37	21.63	21.69		
	RB25#0	21.37	21.6	21.68		

10MHz QPSK	RB1#0	23.9	23.75	23.66	21.6	30
	RB1#25	23.89	23.86	23.89		
	RB1#49	23.86	23.71	23.76		
	RB25#0	22.46	22.71	22.7		
	RB25#25	22.32	22.65	22.69		
	RB50#0	22.36	22.69	22.69		
10MHz 16QAM	RB1#0	22.48	22.7	23.1	20.97	30
	RB1#25	22.5	22.77	23.27		
	RB1#49	22.54	22.62	23.11		
	RB25#0	21.34	21.77	21.76		
	RB25#25	21.35	21.75	21.74		
	RB50#0	21.34	21.71	21.69		
15MHz QPSK	RB1#0	23.8	23.65	23.59	21.51	30
	RB1#38	23.72	23.74	23.81		
	RB1#74	23.41	23.56	23.73		
	RB36#0	22.4	22.8	22.8		
	RB36#39	22.53	22.77	22.88		
	RB75#0	22.44	22.78	22.83		
15MHz 16QAM	RB1#0	22.76	22.75	22.83	20.75	30
	RB1#38	22.85	22.81	23.05		
	RB1#74	22.96	22.63	22.91		
	RB36#0	21.34	21.73	21.64		
	RB36#39	21.46	21.68	21.75		
	RB75#0	21.45	21.74	21.73		
20MHz QPSK	RB1#0	23.58	23.47	23.32	21.75	30
	RB1#50	24.05	23.88	23.78		
	RB1#99	23.39	23.41	23.5		
	RB50#0	22.29	22.66	22.61		
	RB50#50	22.5	22.65	22.63		
	RB100#0	22.37	22.67	22.64		
20MHz 16QAM	RB1#0	22.37	22.61	22.81	20.98	30
	RB1#50	22.82	22.98	23.28		
	RB1#99	22.68	22.52	22.94		
	RB50#0	21.27	21.66	21.6		
	RB50#50	21.45	21.58	21.61		
	RB100#0	21.4	21.62	21.58		
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	4.14	4.32	3.97	13
	RB100#0	4.84	4.58	4.55	13
20MHz 16QAM	RB1#0	4.93	5.33	4.64	13
	RB100#0	5.77	5.51	5.54	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	1.110	1.104	1.104	1.314	1.314	1.332
1.4MHz 16QAM	1.098	1.104	1.098	1.296	1.320	1.296
3MHz QPSK	2.688	2.688	2.700	2.880	2.868	2.892
3MHz 16QAM	2.688	2.676	2.688	2.868	2.880	2.880
5MHz QPSK	4.540	4.540	4.540	5.220	5.200	5.200
5MHz 16QAM	4.540	4.560	4.540	5.240	5.180	5.200
10MHz QPSK	8.960	9.000	9.000	9.840	9.920	10.040
10MHz 16QAM	9.000	8.960	8.960	9.800	9.960	9.640
15MHz QPSK	13.620	13.620	13.500	15.360	15.240	15.180
15MHz 16QAM	13.620	13.620	13.560	15.060	15.120	15.120
20MHz QPSK	18.000	18.000	18.000	19.760	19.600	19.600
20MHz 16QAM	18.000	18.000	18.000	19.680	19.840	19.680
Note: The test plots please refer to the Plots of Occupied Bandwidth						

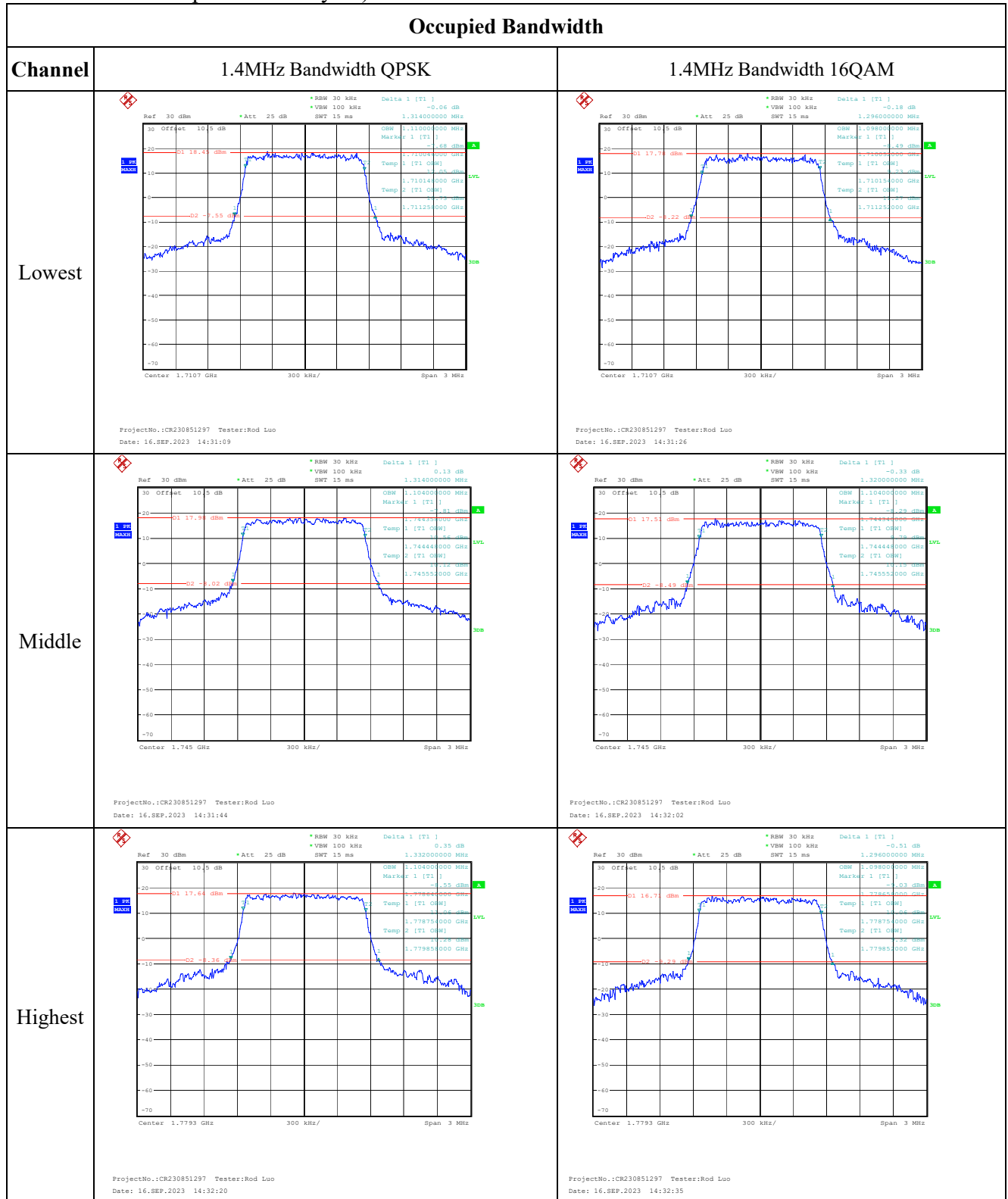
FCC §2.1051, § 27.53:Spurious Emissions at Antenna Terminal	
Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

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.

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	1710.180	1710.00	1779.868	1780
	-20	3.85	1710.146	1710.00	1779.752	1780
	-10	3.85	1710.199	1710.00	1779.778	1780
	0	3.85	1710.300	1710.00	1779.726	1780
	10	3.85	1710.236	1710.00	1779.723	1780
	20	3.85	1710.263	1710.00	1779.793	1780
	30	3.85	1710.123	1710.00	1779.826	1780
	40	3.85	1710.221	1710.00	1779.812	1780
	50	3.85	1710.290	1710.00	1779.716	1780
Frequency Stability vs. Voltage	20	3.45	1710.162	1710.00	1779.829	1780
	20	4.4	1710.296	1710.00	1779.806	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	1710.179	1710.00	1779.762	1780
	-20	3.85	1710.179	1710.00	1779.709	1780
	-10	3.85	1710.106	1710.00	1779.756	1780
	0	3.85	1710.172	1710.00	1779.830	1780
	10	3.85	1710.286	1710.00	1779.763	1780
	20	3.85	1710.170	1710.00	1779.774	1780
	30	3.85	1710.198	1710.00	1779.869	1780
	40	3.85	1710.124	1710.00	1779.743	1780
	50	3.85	1710.241	1710.00	1779.813	1780
Frequency Stability vs. Voltage	20	3.45	1710.151	1710.00	1779.828	1780
	20	4.4	1710.199	1710.00	1779.885	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):



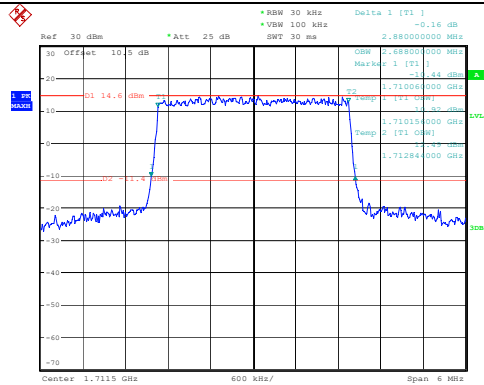
Occupied Bandwidth

Channel

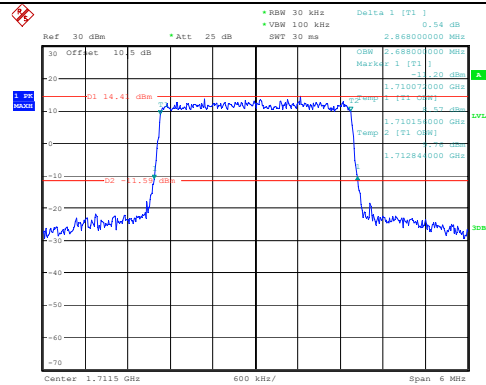
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

Lowest

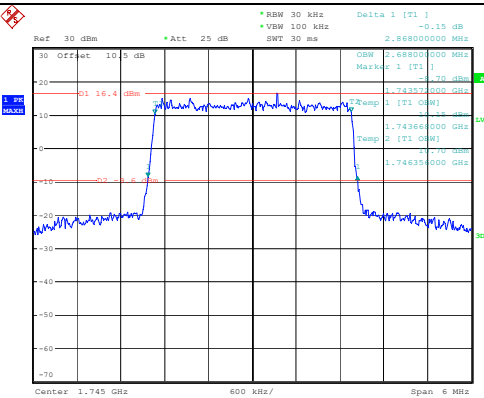


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Date: 16.SEP.2023 14:33:19

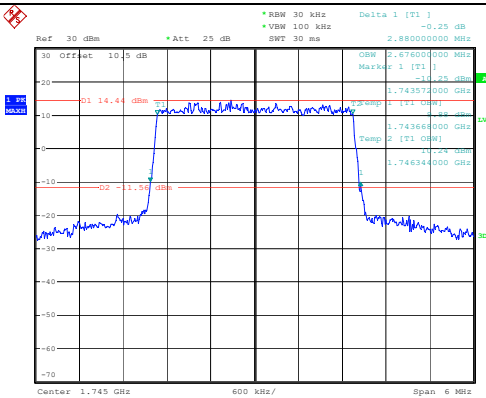


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:33:33

Middle

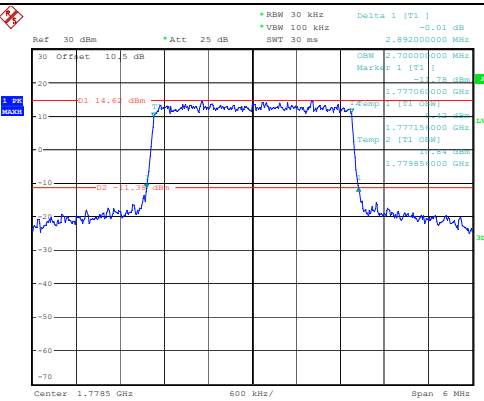


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Date: 16.SEP.2023 14:33:48

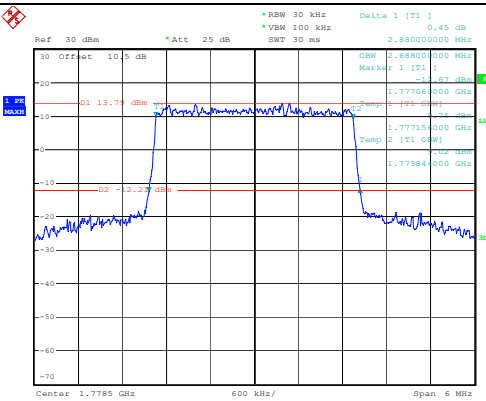


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:34:03

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:34:21



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:34:39

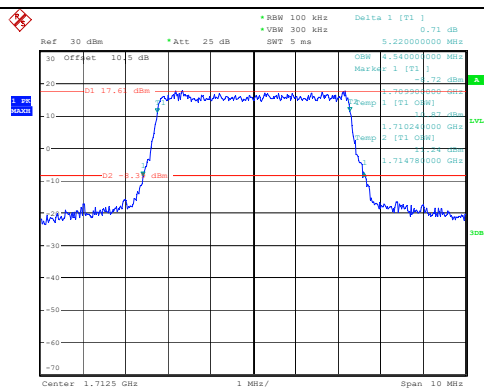
Occupied Bandwidth

Channel

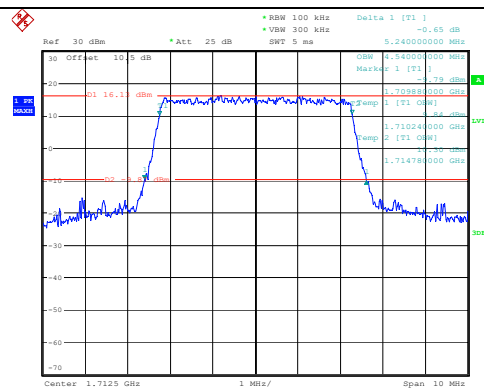
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

Lowest

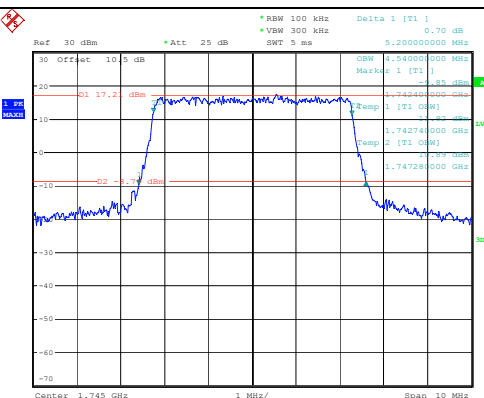


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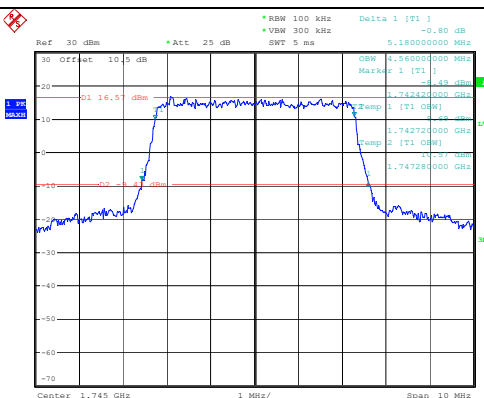


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Date: 16.SEP.2023 14:35:50

Middle

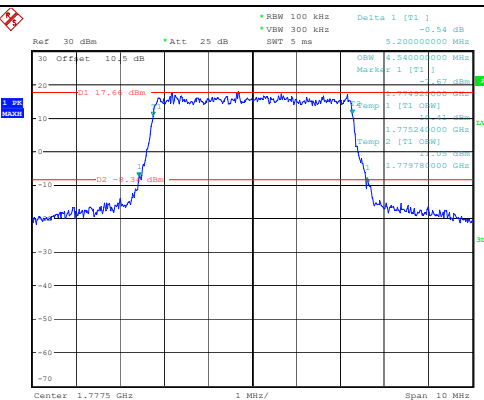


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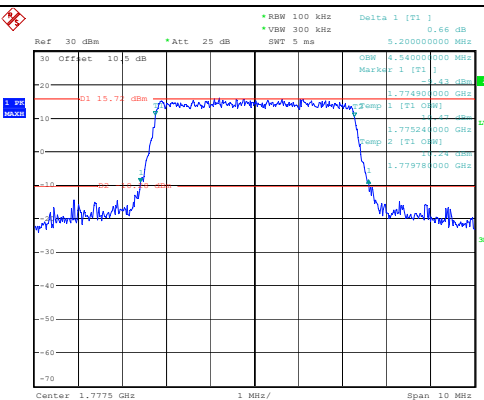


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Date: 16.SEP.2023 14:36:48

Highest



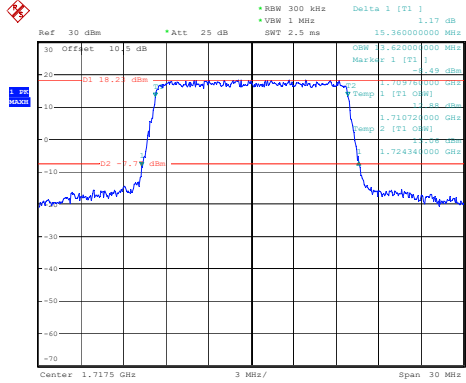
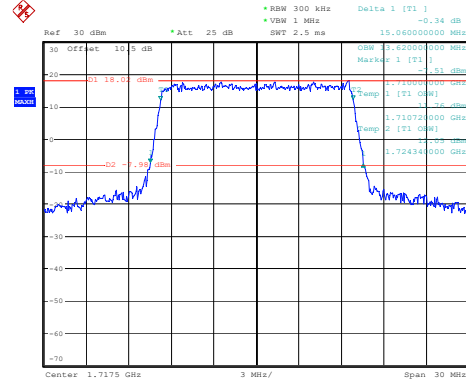
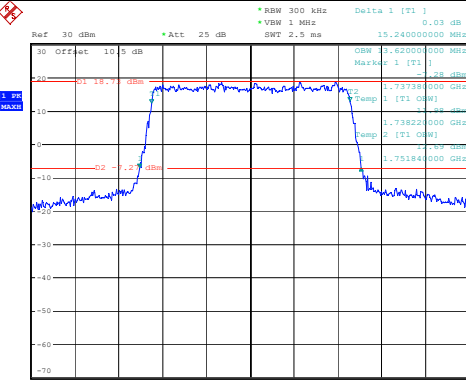
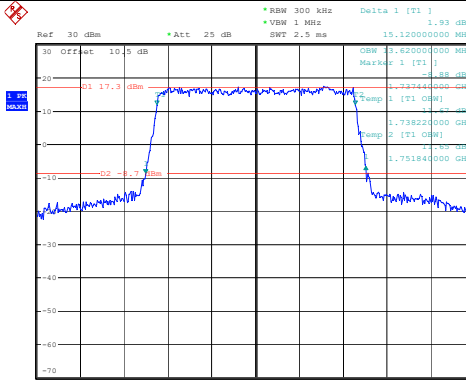
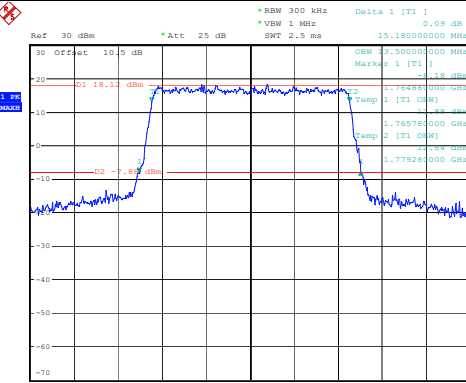
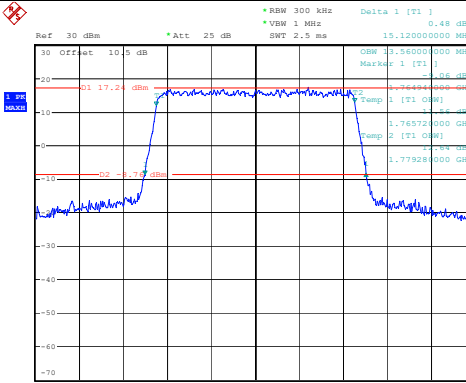
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:37:13



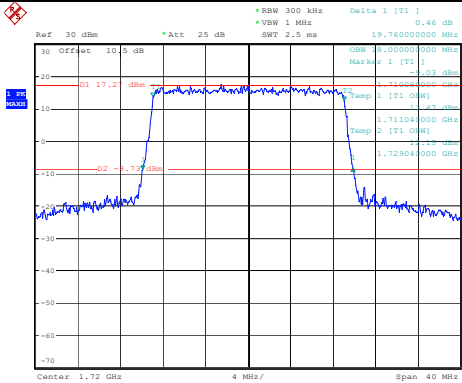
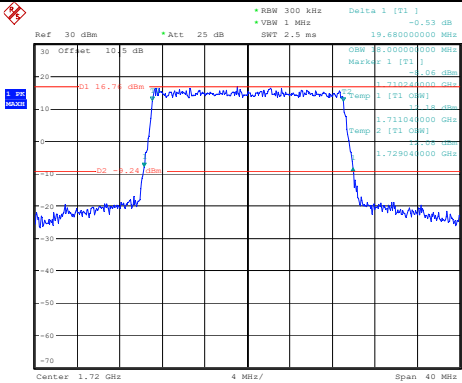
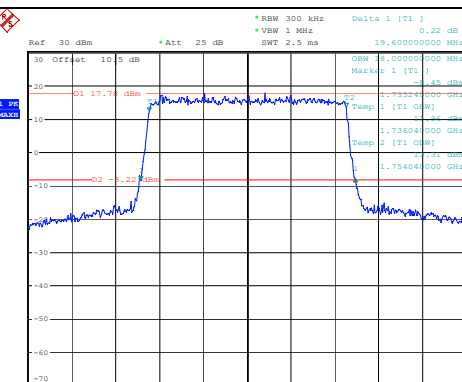
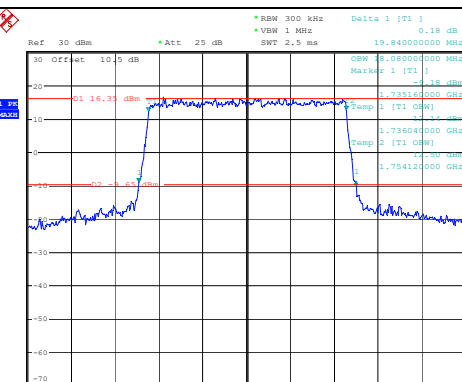
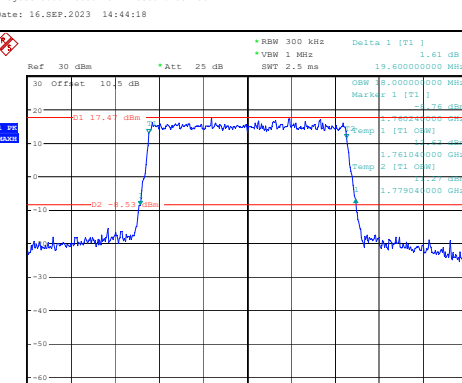
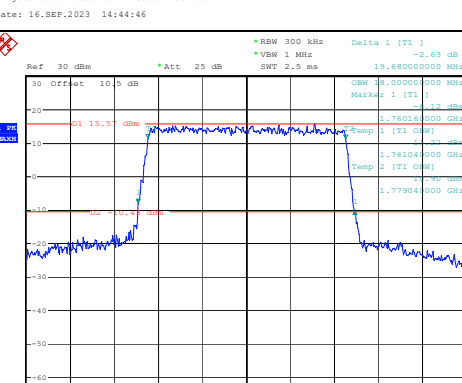
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 14:37:34

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Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 1.17 dB *VBW 1 MHz 15.360000000 MHz 30 Offset 10.5 dB D1 18.2 dBm D2 -12.7 dBm OSW 15.620000000 MHz Marker 1 [T1] Temp 1 [T1 OSW] Temp 2 [T1 OSW] 1.710720000 GHz 1.724340000 GHz Center 1.7175 GHz 3 MHz/ Span 30 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:40:42	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 1.34 dB *VBW 1 MHz 15.060000000 MHz 30 Offset 10.5 dB D1 18.0 dBm D2 -12.9 dBm OSW 15.620000000 MHz Marker 1 [T1] Temp 1 [T1 OSW] Temp 2 [T1 OSW] 1.710720000 GHz 1.724340000 GHz Center 1.7175 GHz 3 MHz/ Span 30 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:41:07
Middle	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.03 dB *VBW 1 MHz 15.240000000 MHz 30 Offset 10.5 dB D1 18.7 dBm D2 -12.8 dBm OSW 15.620000000 MHz Marker 1 [T1] Temp 1 [T1 OSW] Temp 2 [T1 OSW] 1.738220000 GHz 1.751840000 GHz Center 1.745 GHz 3 MHz/ Span 30 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:41:29	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 1.93 dB *VBW 1 MHz 15.120000000 MHz 30 Offset 10.5 dB D1 17.3 dBm D2 -12.8 dBm OSW 15.620000000 MHz Marker 1 [T1] Temp 1 [T1 OSW] Temp 2 [T1 OSW] 1.738220000 GHz 1.751840000 GHz Center 1.745 GHz 3 MHz/ Span 30 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:41:54
Highest	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.09 dB *VBW 1 MHz 15.180000000 MHz 30 Offset 10.5 dB D1 18.1 dBm D2 -12.8 dBm OSW 15.500000000 MHz Marker 1 [T1] Temp 1 [T1 OSW] Temp 2 [T1 OSW] 1.762720000 GHz 1.779280000 GHz Center 1.7725 GHz 3 MHz/ Span 30 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:42:16	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.48 dB *VBW 1 MHz 15.120000000 MHz 30 Offset 10.5 dB D1 17.2 dBm D2 -12.8 dBm OSW 15.560000000 MHz Marker 1 [T1] Temp 1 [T1 OSW] Temp 2 [T1 OSW] 1.762720000 GHz 1.779280000 GHz Center 1.7725 GHz 3 MHz/ Span 30 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:42:43

Occupied Bandwidth

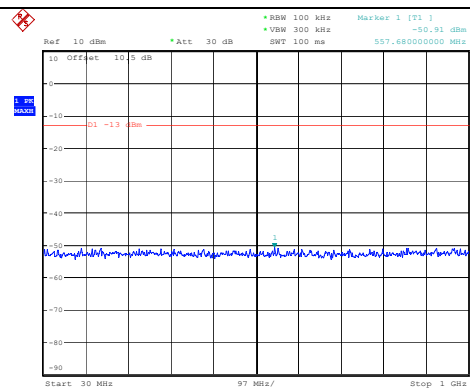
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.46 dB *VBW 1 MHz 19.60000000 MHz 30 Offset 10.5 dB -17.2 dBm -17.3 dBm 1.72 GHz 4 MHz Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:43:33	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.53 dB *VBW 1 MHz 19.60000000 MHz 30 Offset 10.5 dB -16.7 dBm -16.8 dBm 1.72 GHz 4 MHz Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:43:55
Middle	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.22 dB *VBW 1 MHz 19.60000000 MHz 30 Offset 10.5 dB -17.4 dBm -17.5 dBm 1.745 GHz 4 MHz Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:43:18	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 0.18 dB *VBW 1 MHz 19.60000000 MHz 30 Offset 10.5 dB -16.3 dBm -16.4 dBm 1.745 GHz 4 MHz Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:44:46
Highest	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] 1.61 dB *VBW 1 MHz 19.60000000 MHz 30 Offset 10.5 dB -17.4 dBm -17.5 dBm 1.77 GHz 4 MHz Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:45:09	 Ref 30 dBm *Att 25 dB *RBW 300 kHz Delta 1 [T1] -2.63 dB *VBW 1 MHz 19.60000000 MHz 30 Offset 10.5 dB -15.5 dBm -15.6 dBm 1.77 GHz 4 MHz Span 40 MHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 14:45:30

Spurious Emissions at Antenna Terminal

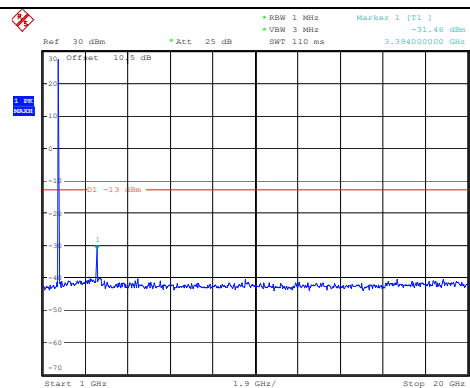
Channel

1.4MHz Bandwidth QPSK

Lowest

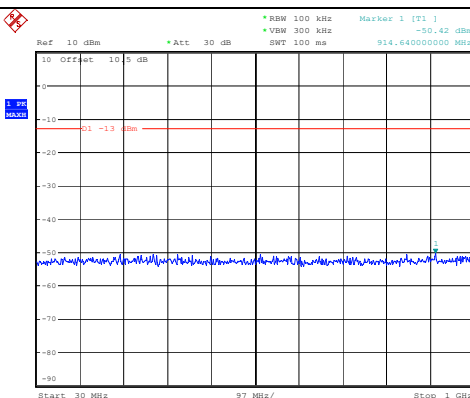


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Date: 16.SEP.2023 15:27:09

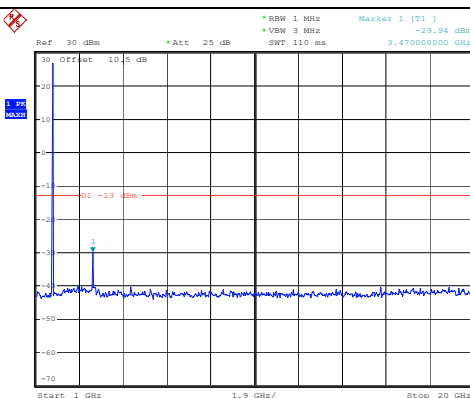


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:27:19

Middle

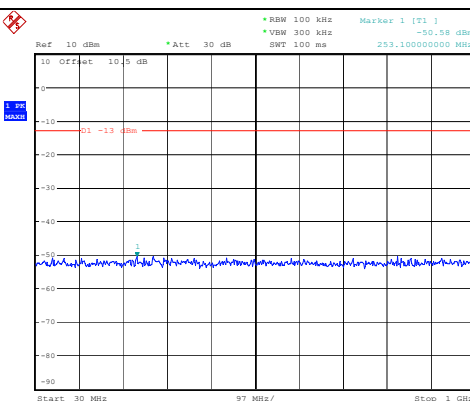


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Date: 16.SEP.2023 15:27:32

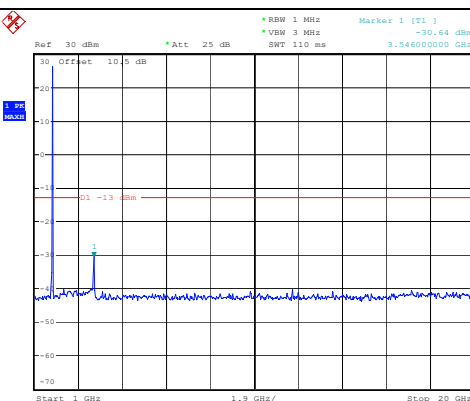


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Date: 16.SEP.2023 15:27:43

Highest

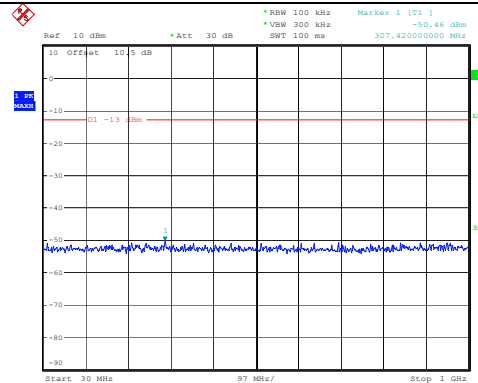
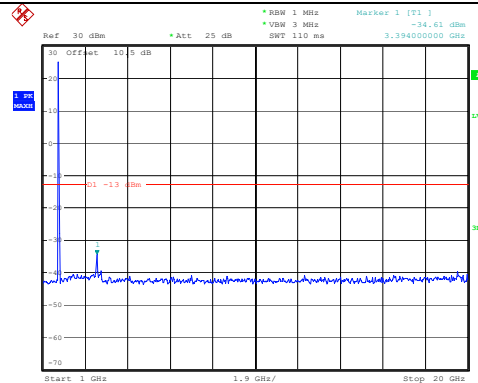
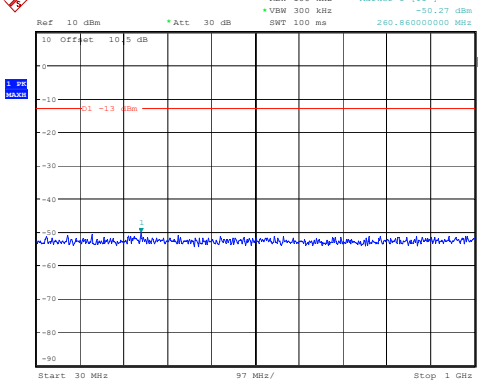
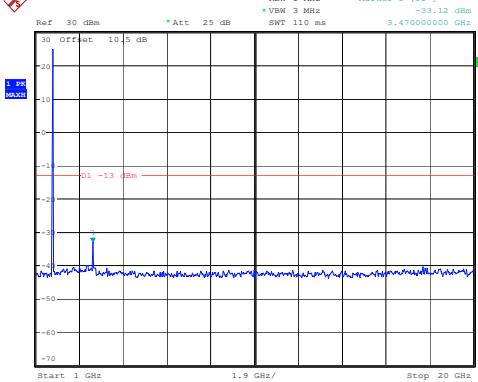
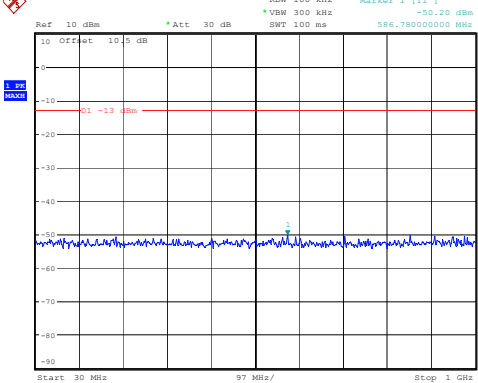
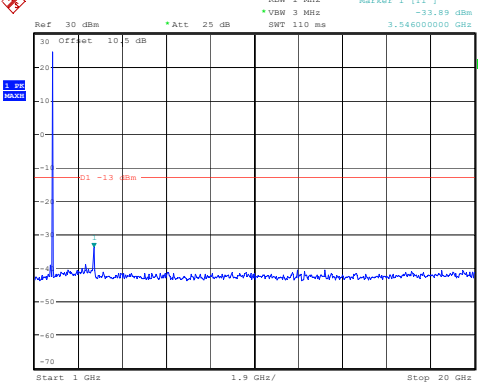


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:27:59



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:28:10

Spurious Emissions at Antenna Terminal

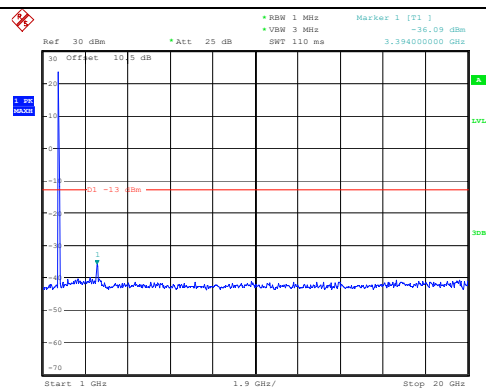
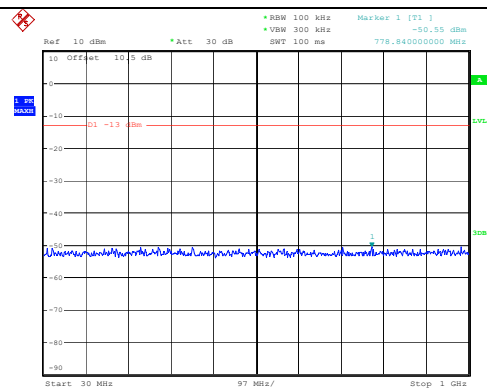
Channel	3MHz Bandwidth QPSK	
Lowest	 Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -50.46 dBm *VSW 300 kHz SWT 100 ms 307.42000000 MHz Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:28:49	 Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -34.61 dBm *VSW 3 MHz SWT 110 ms 3.394000000 GHz Start 1 GHz 1.9 GHz/ Stop 20 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:29:00
	 Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -50.27 dBm *VSW 300 kHz SWT 100 ms 260.860000000 MHz Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:29:13	 Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -33.12 dBm *VSW 3 MHz SWT 110 ms 3.470000000 GHz Start 1 GHz 1.9 GHz/ Stop 20 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:29:24
Highest	 Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -50.20 dBm *VSW 300 kHz SWT 100 ms 586.780000000 MHz Start 30 MHz 97 MHz/ Stop 1 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:29:38	 Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -33.89 dBm *VSW 3 MHz SWT 110 ms 3.546000000 GHz Start 1 GHz 1.9 GHz/ Stop 20 GHz ProjectNo.:CR230851297 Tester:Rod Luo Date: 16.SEP.2023 15:29:48

Spurious Emissions at Antenna Terminal

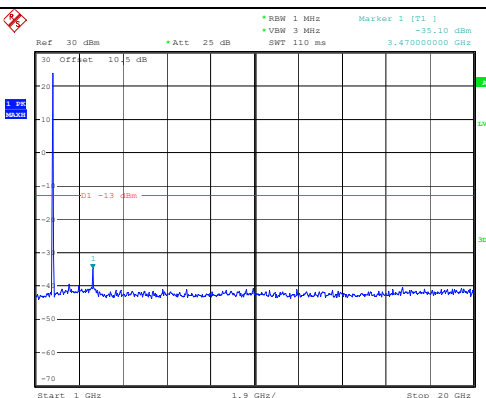
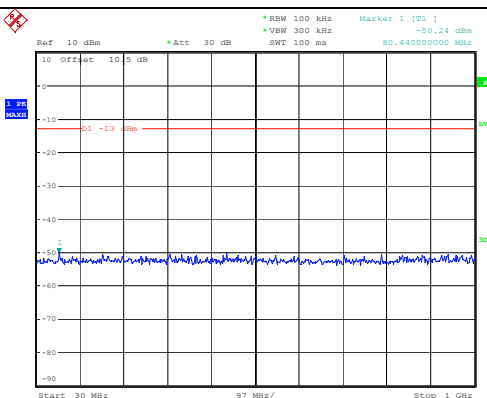
Channel

5MHz Bandwidth QPSK

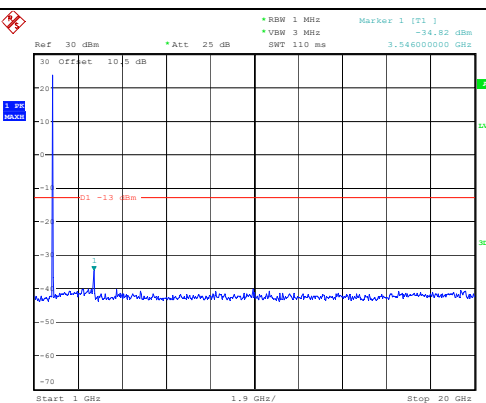
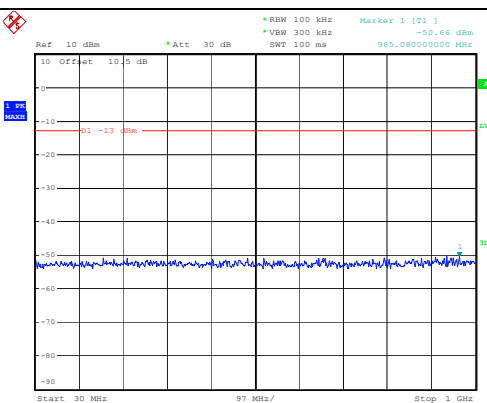
Lowest



Middle



Highest

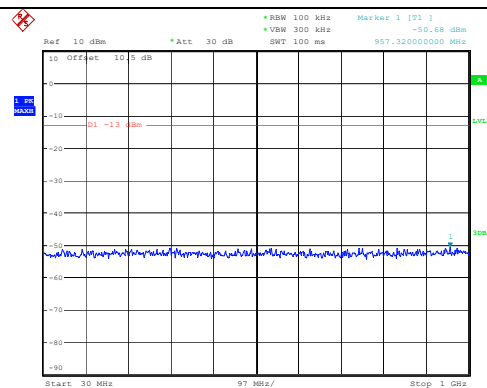


Spurious Emissions at Antenna Terminal

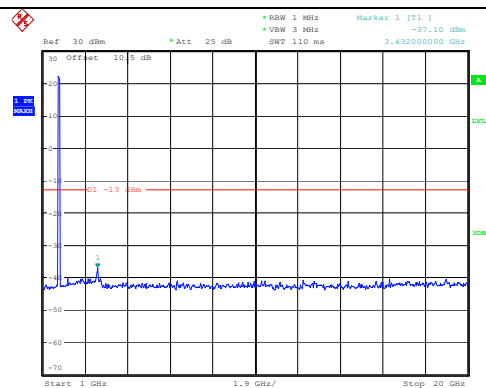
Channel

10MHz Bandwidth QPSK

Lowest

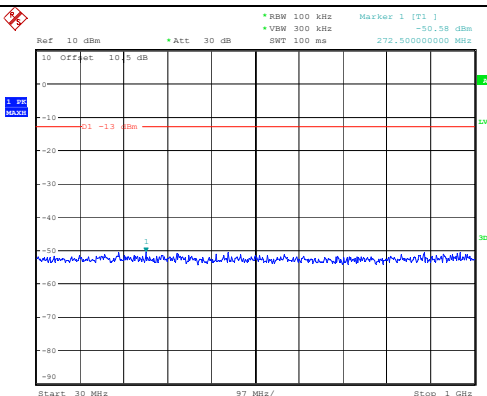


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:32:25

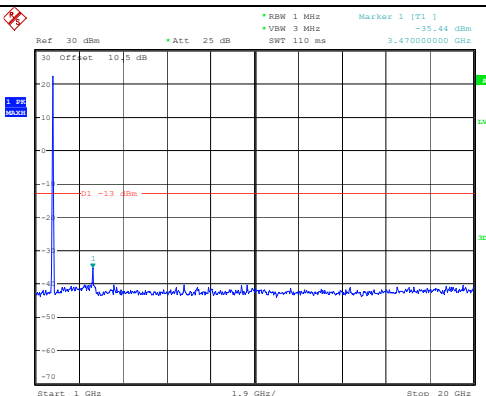


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:32:35

Middle

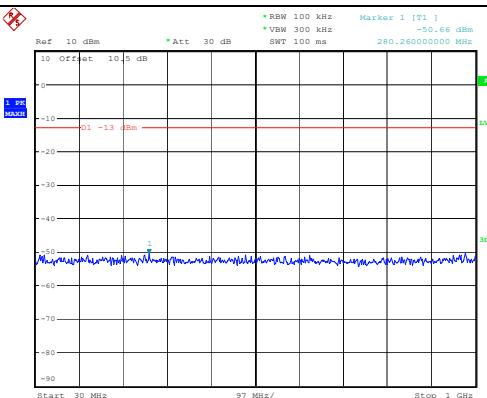


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:32:50

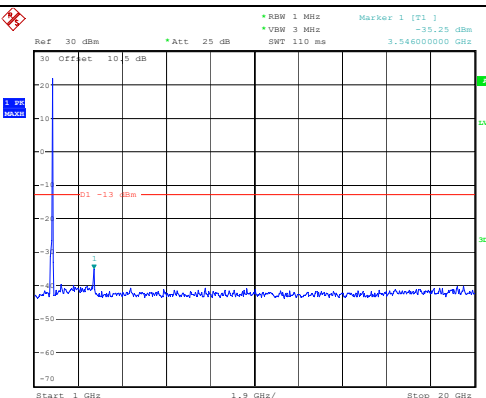


ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:33:00

Highest



ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:33:15



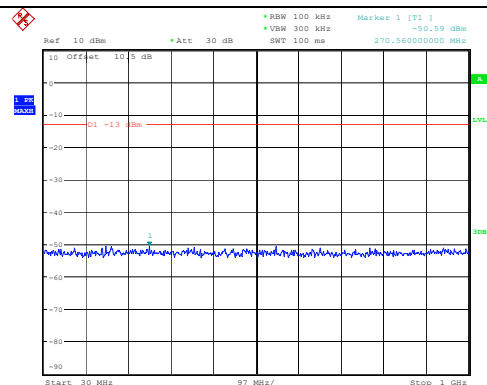
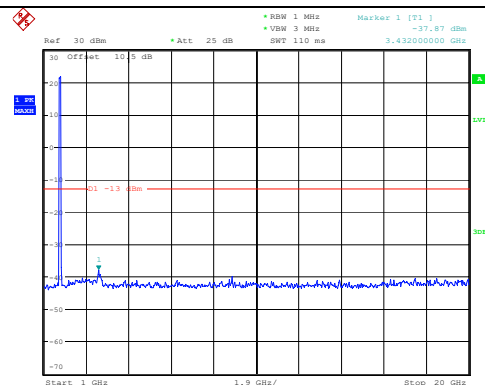
ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:33:25

Spurious Emissions at Antenna Terminal

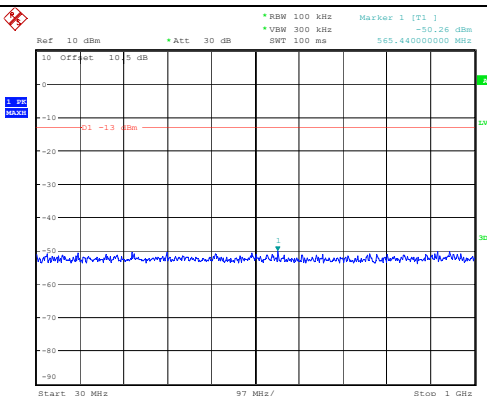
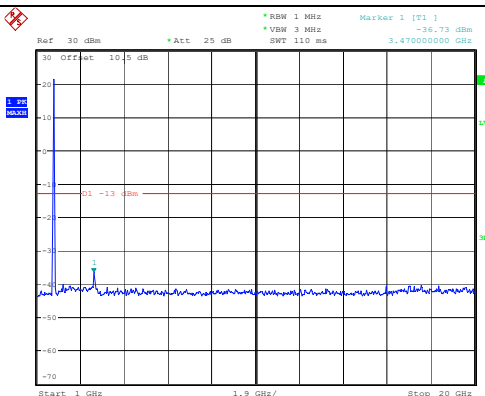
Channel

15MHz Bandwidth QPSK

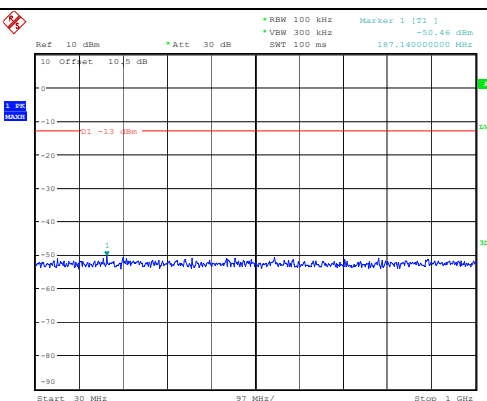
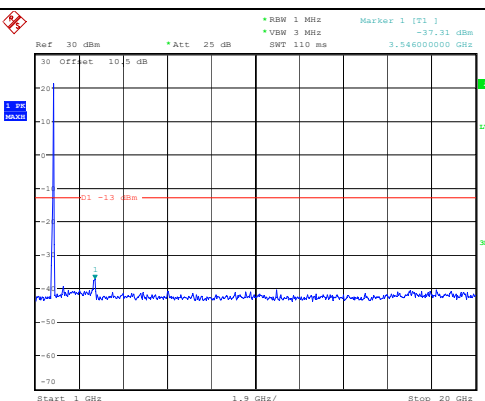
Lowest

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:34:09ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:34:20

Middle

ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:34:40ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:34:51

Highest

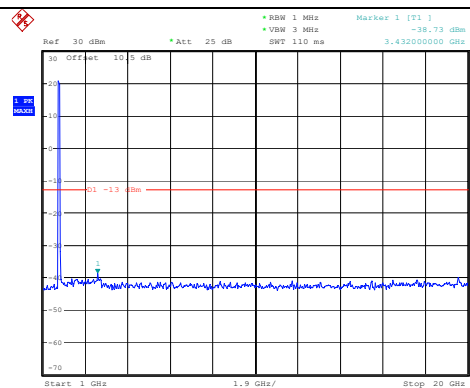
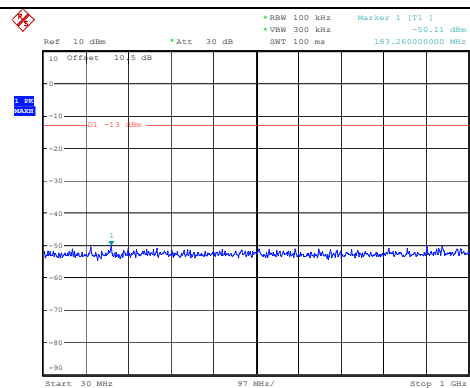
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Date: 16.SEP.2023 15:35:08ProjectNo.:CR230851297 Tester:Rod Luo
Date: 16.SEP.2023 15:35:18

Spurious Emissions at Antenna Terminal

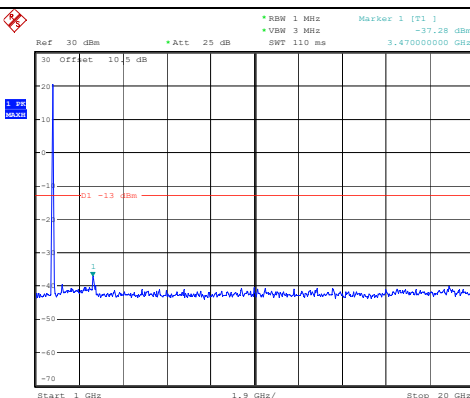
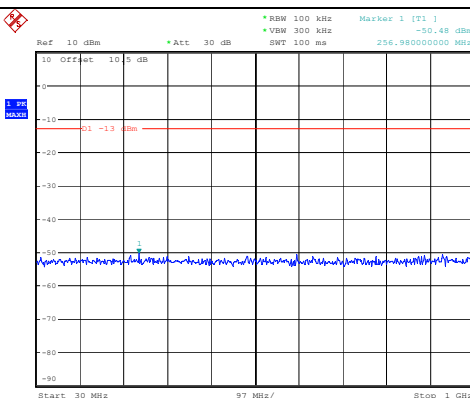
Channel

20MHz Bandwidth QPSK

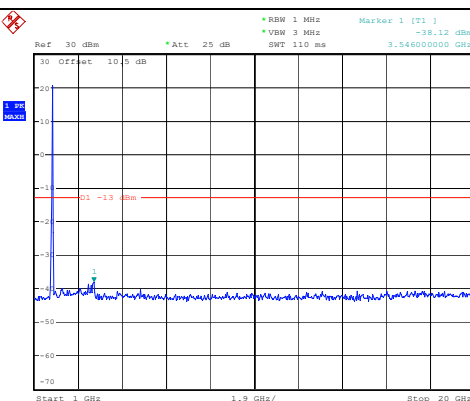
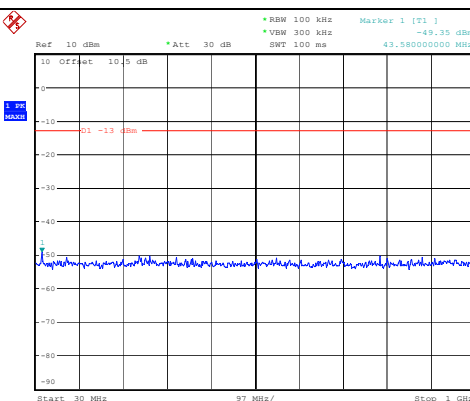
Lowest



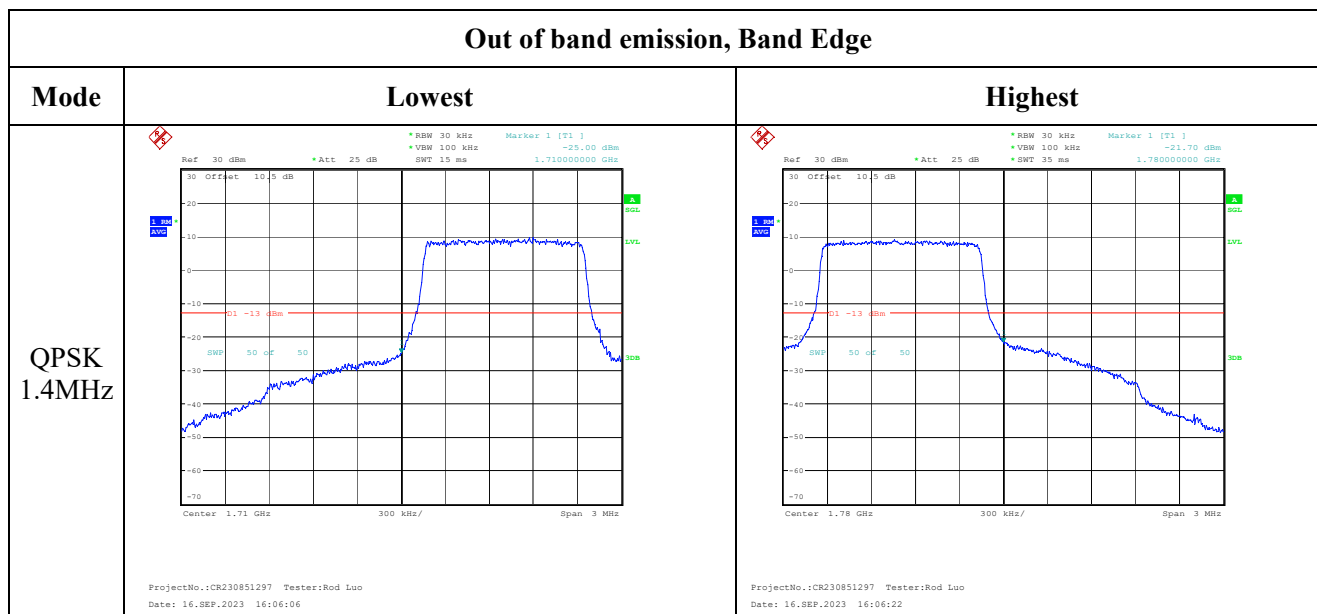
Middle



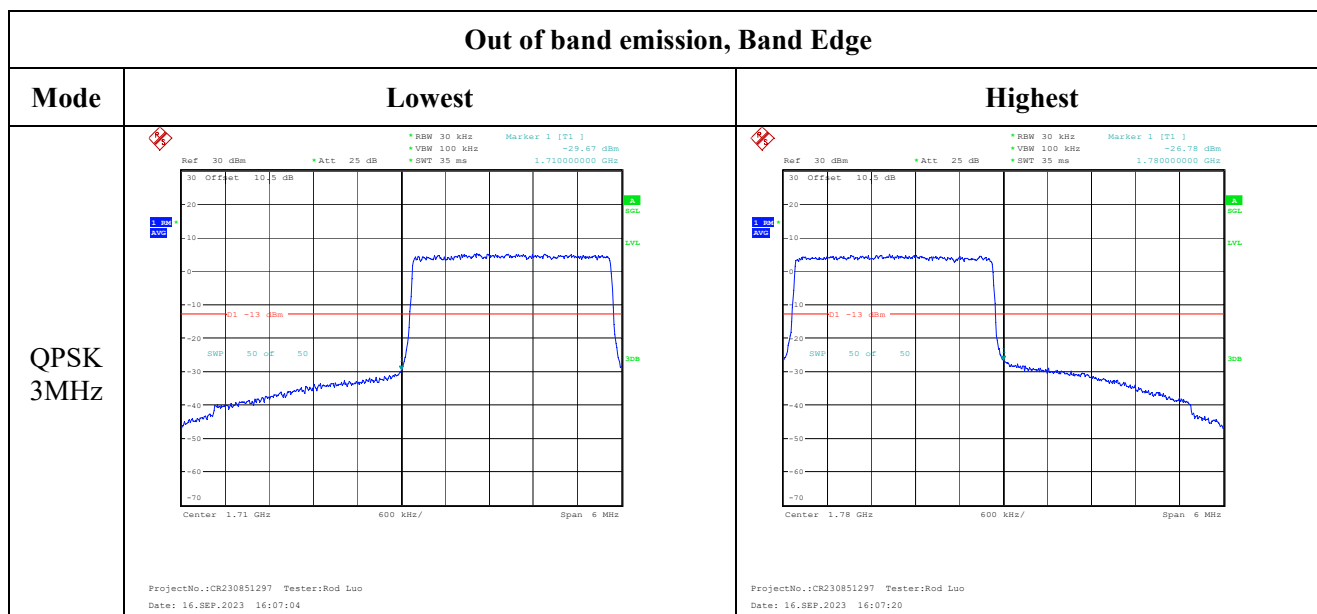
Highest

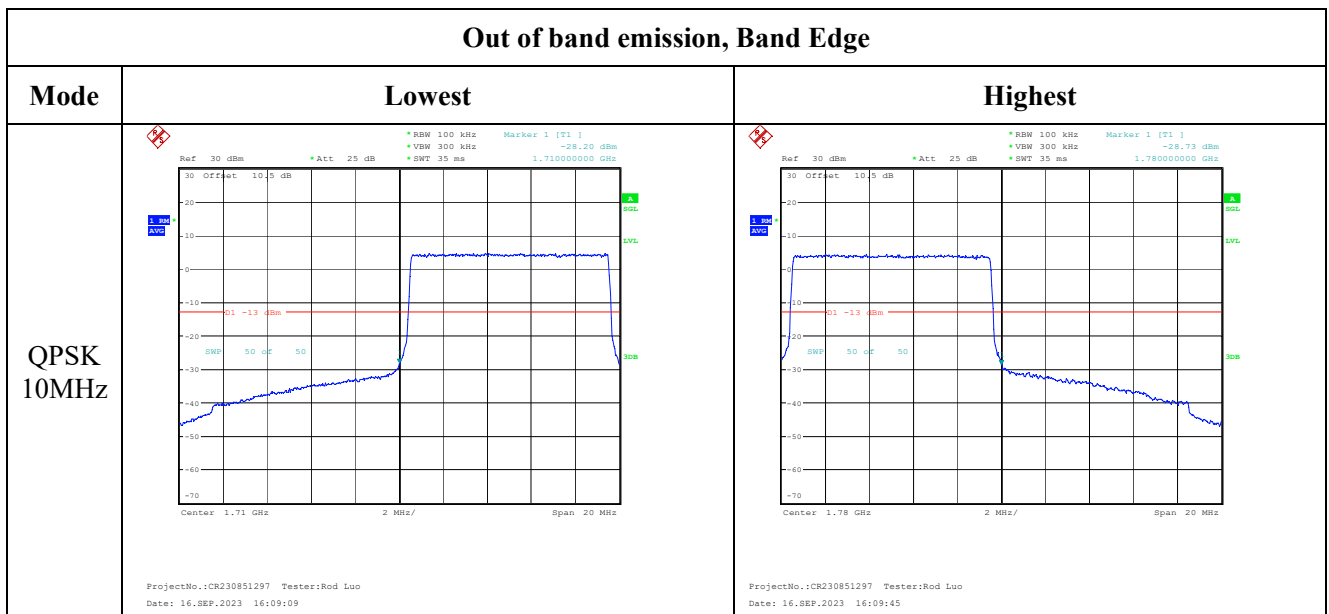
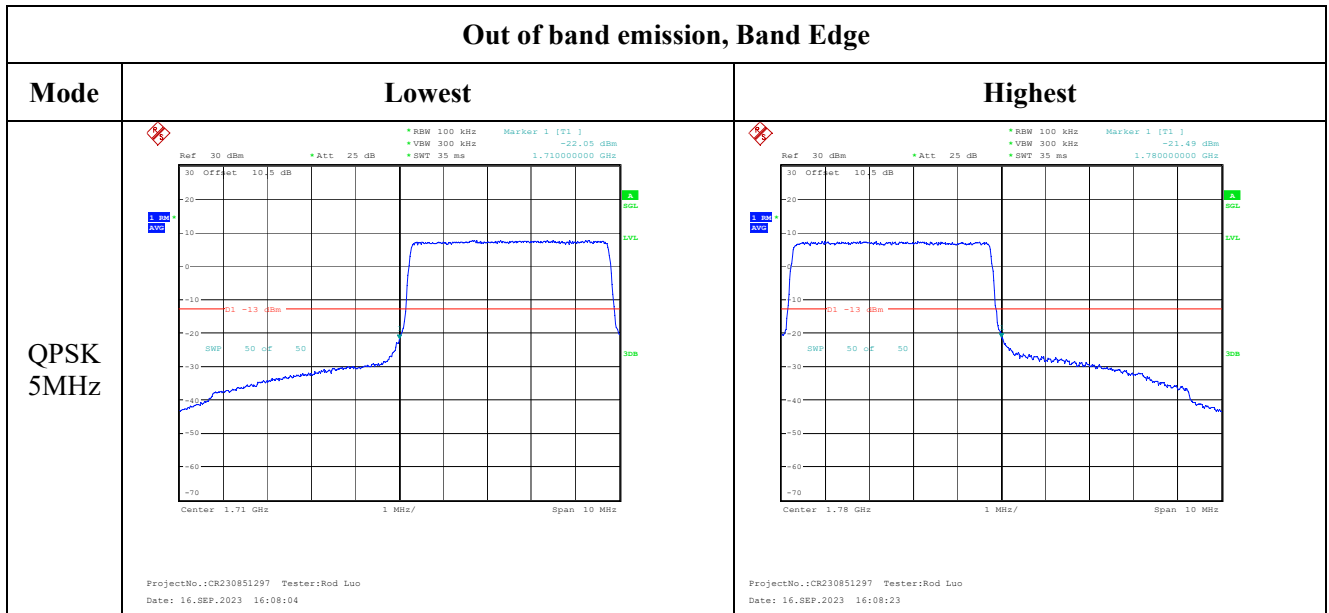


Out of band emission, Band Edge

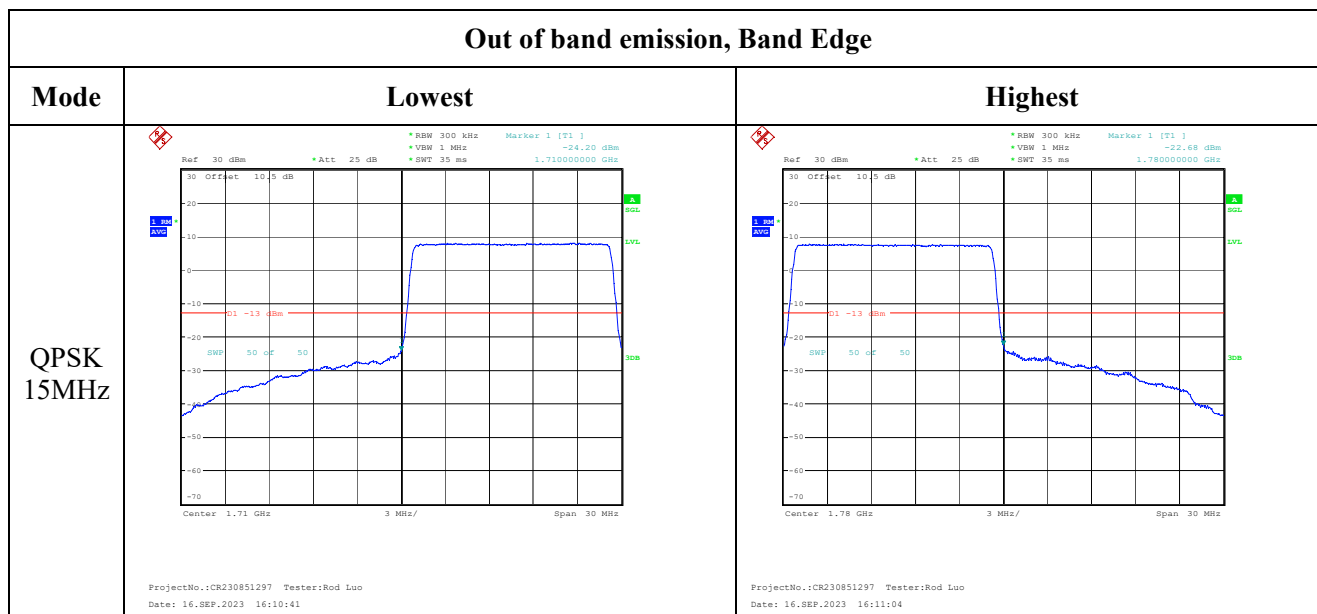


Out of band emission, Band Edge

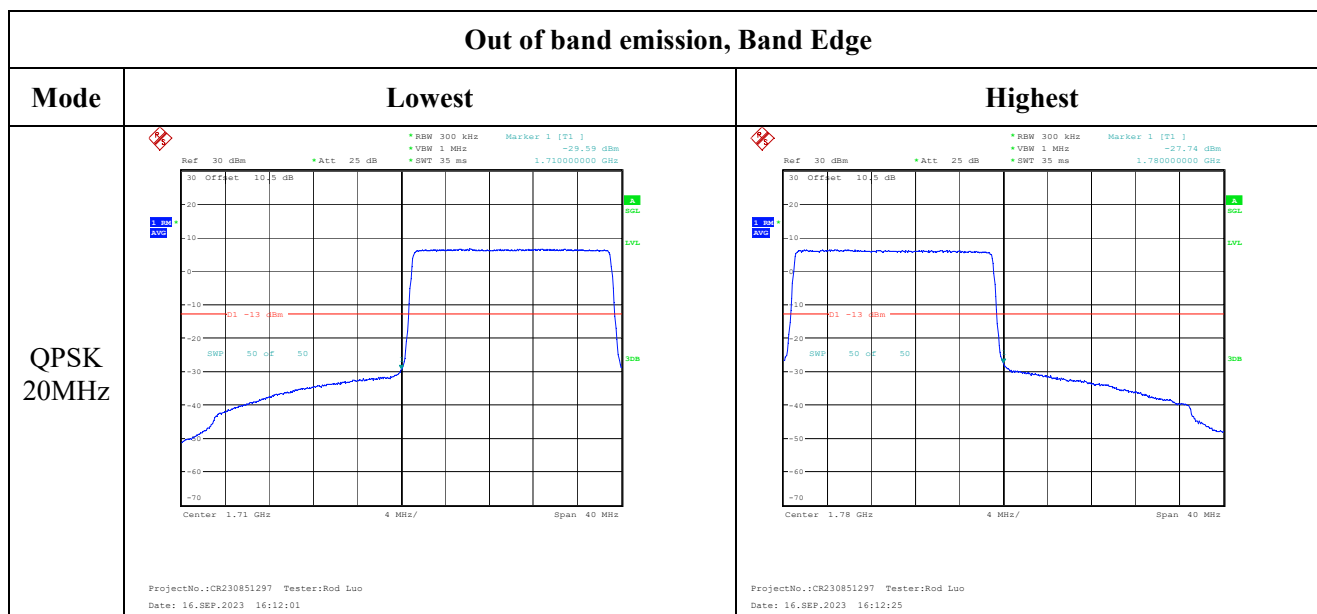




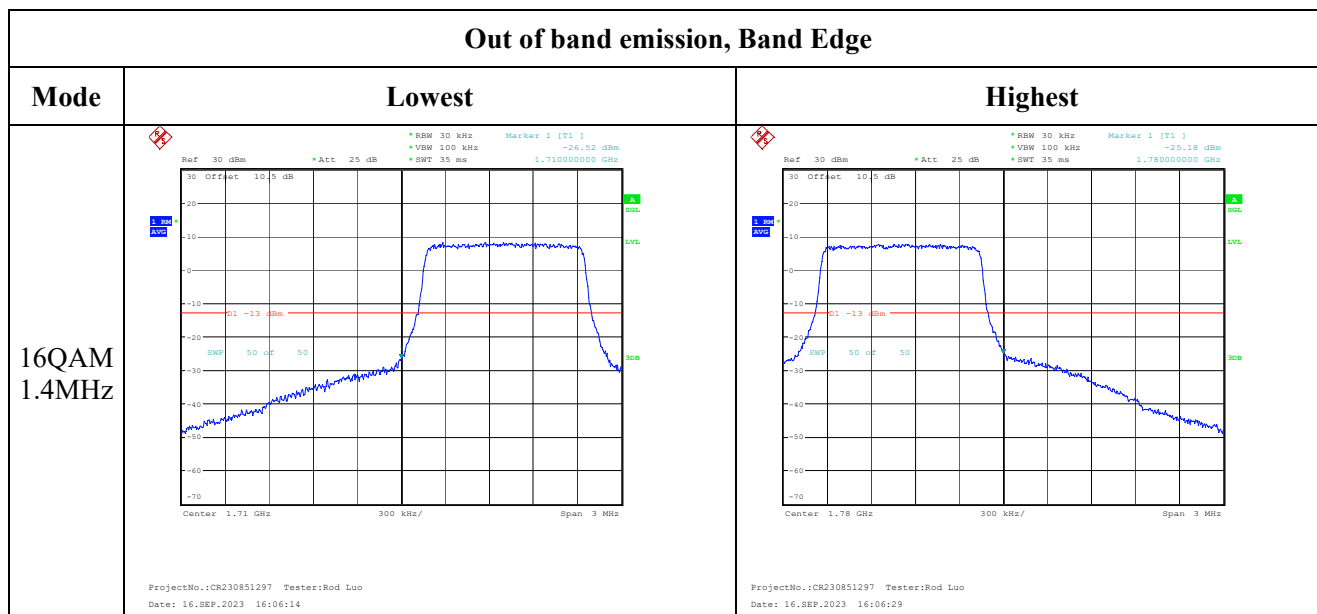
Out of band emission, Band Edge



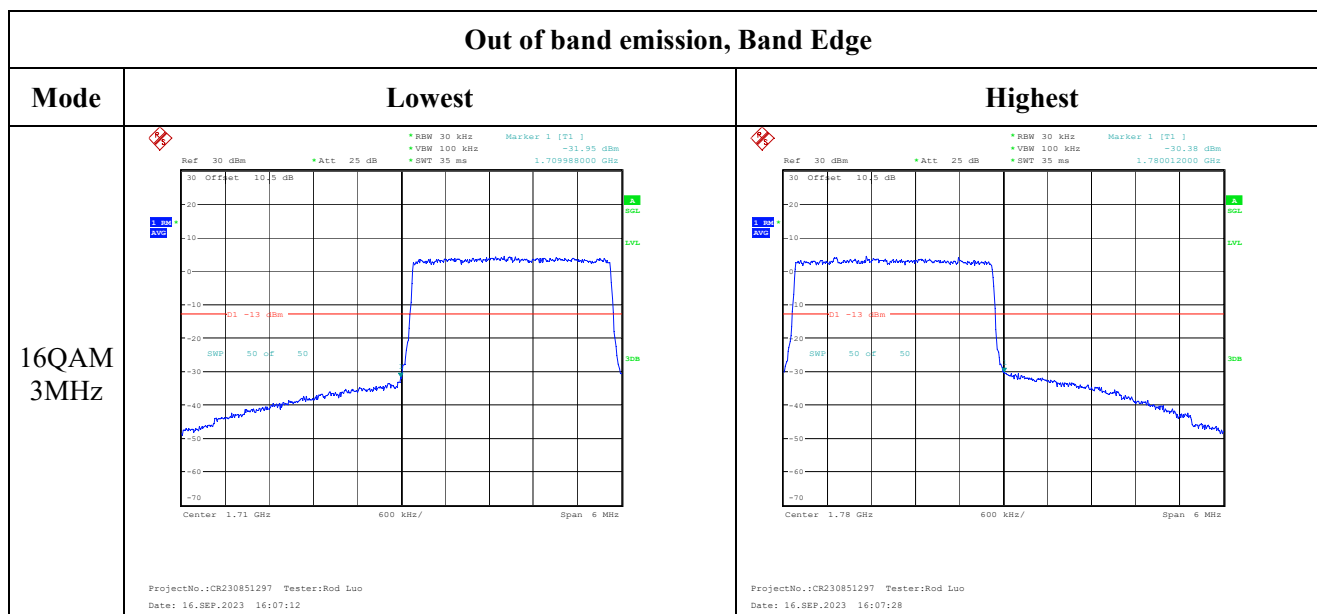
Out of band emission, Band Edge



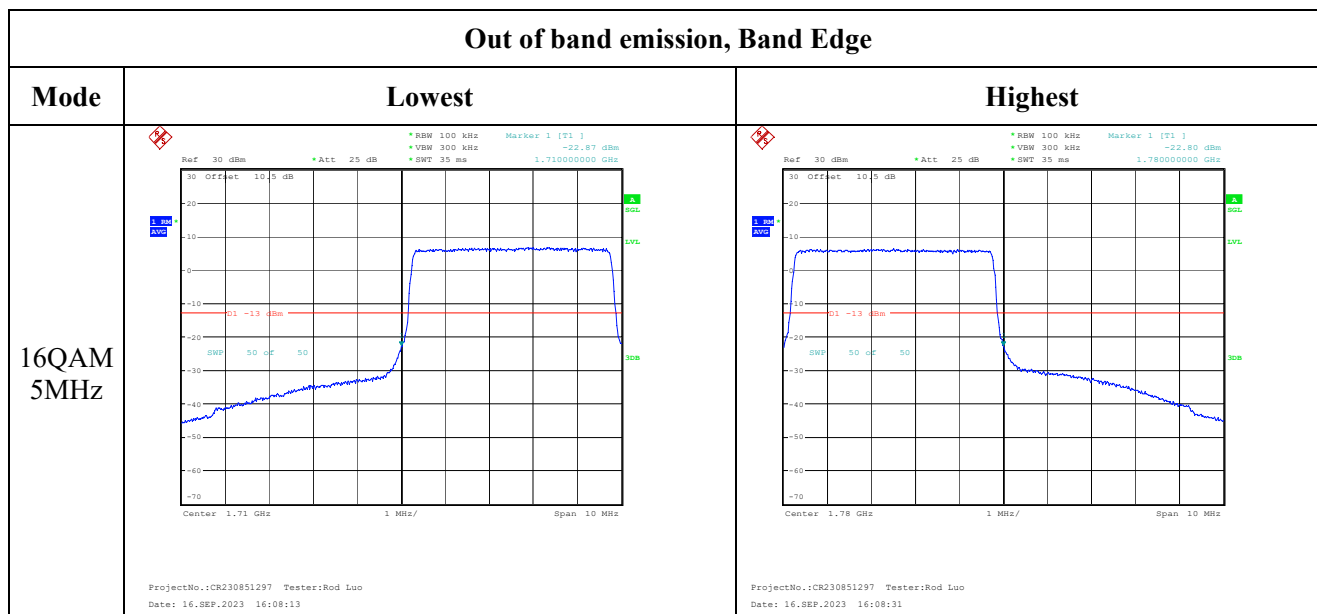
Out of band emission, Band Edge



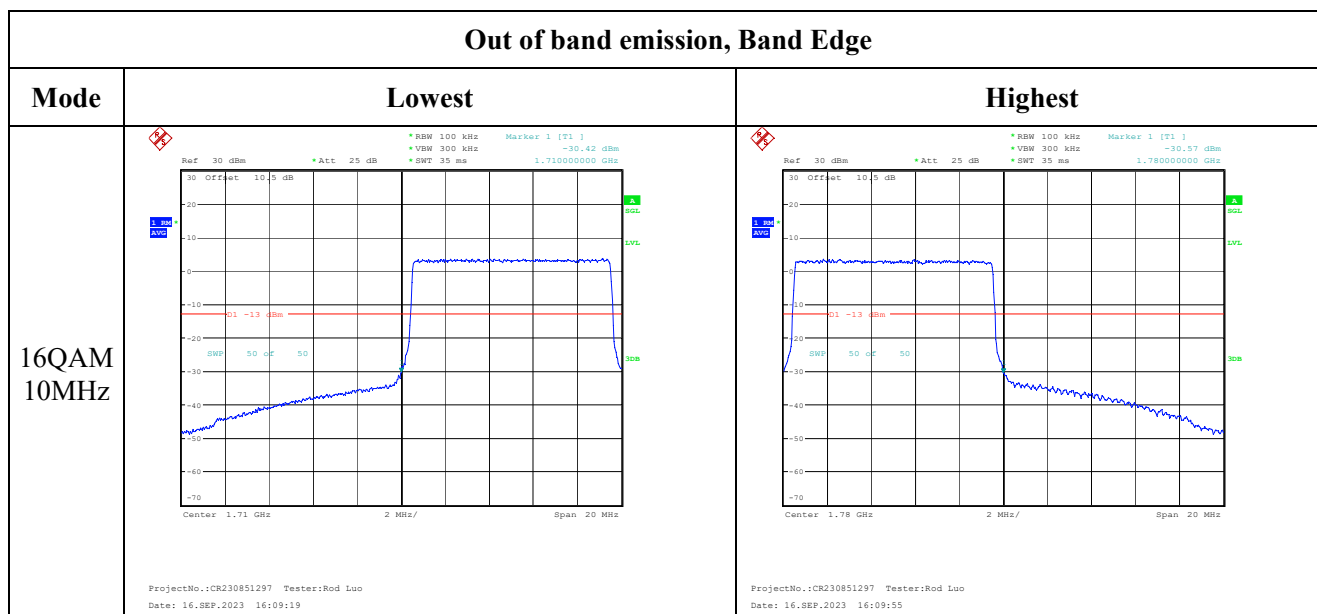
Out of band emission, Band Edge



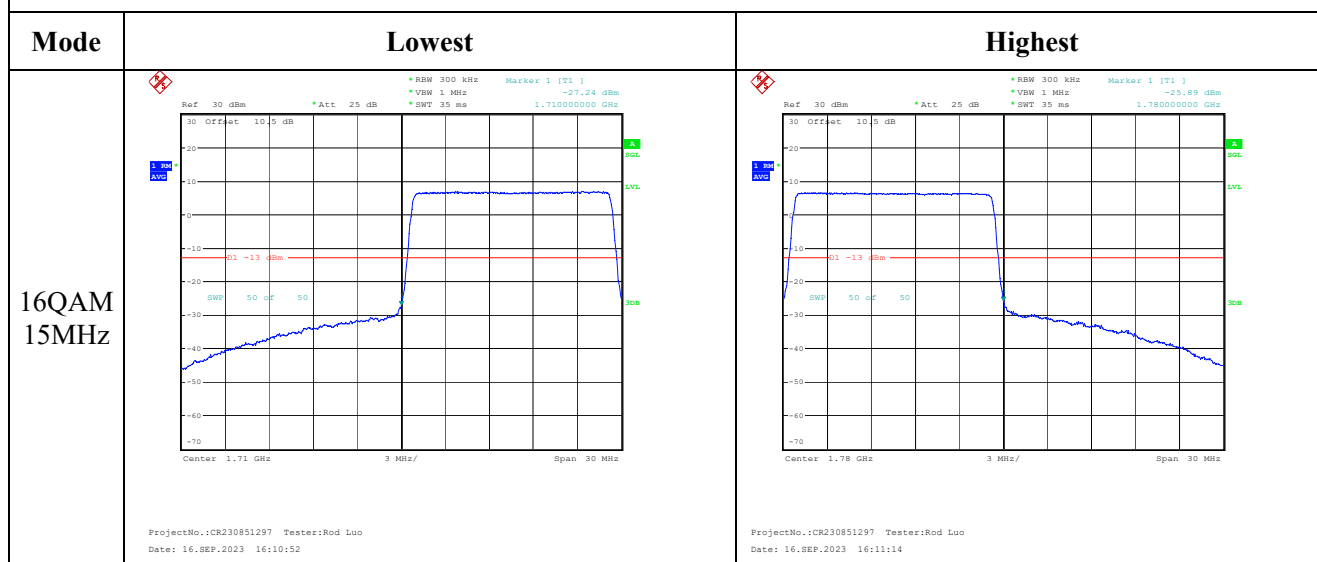
Out of band emission, Band Edge



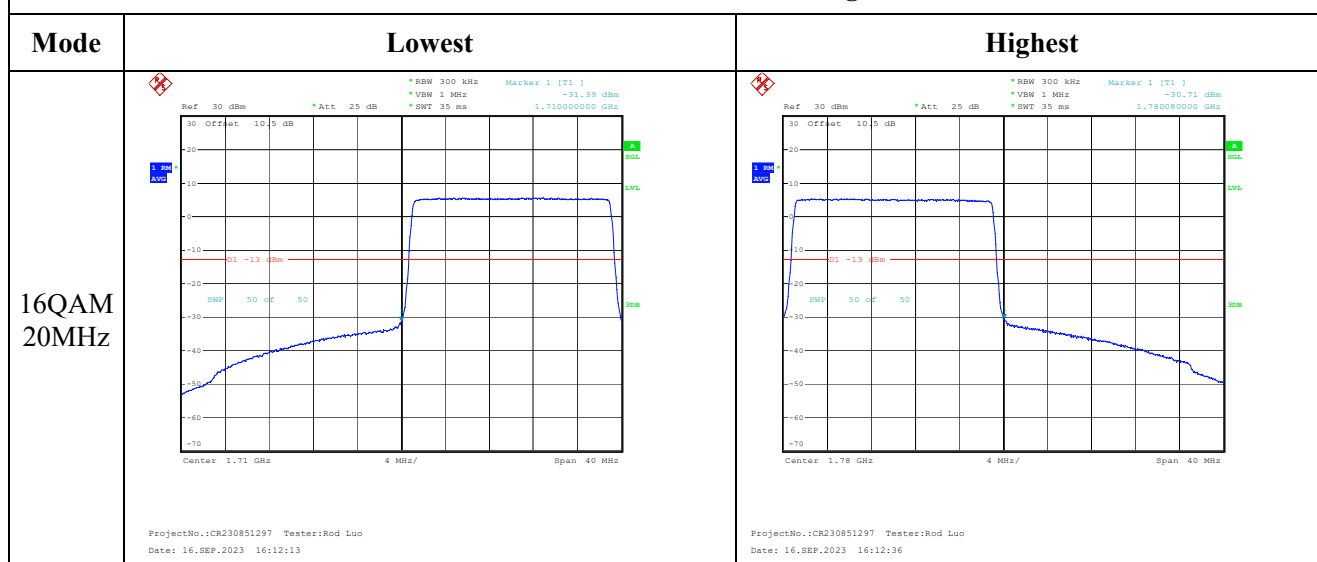
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.16 Radiated Spurious Emissions

Serial Number:	2AS5-1	Test Date:	2023/9/15~2023/9/16
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Carl Xue, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.6~25.8	Relative Humidity: (%)	60~64	ATM Pressure: (kPa)	100~100.2
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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	2023/9/15	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								
726.78	H	20.60	-52.18	0.00	0.52	-52.70	-13.00	39.70
701.76	V	20.72	-49.16	0.00	0.55	-49.71	-13.00	36.71
1648.400	H	38.36	-65.97	8.68	0.80	-58.09	-13.00	45.09
1648.400	V	37.63	-66.78	8.68	0.80	-58.90	-13.00	45.90
2472.600	H	45.55	-55.23	9.38	1.00	-46.85	-13.00	33.85
2472.600	V	40.57	-60.16	9.38	1.00	-51.78	-13.00	38.78
3296.800	H	36.24	-60.44	10.32	1.15	-51.27	-13.00	38.27
3296.800	V	35.08	-61.36	10.32	1.15	-52.19	-13.00	39.19
GSM 850 Frequency:836.6MHz								
689.57	H	20.81	-52.57	0.00	0.54	-53.11	-13.00	40.11
620.78	V	20.88	-50.47	0.00	0.49	-50.96	-13.00	37.96
1673.200	H	41.48	-62.83	8.71	0.85	-54.97	-13.00	41.97
1673.200	V	38.44	-65.97	8.71	0.85	-58.11	-13.00	45.11
2509.800	H	45.45	-55.16	9.42	1.01	-46.75	-13.00	33.75
2509.800	V	39.92	-60.70	9.42	1.01	-52.29	-13.00	39.29
3346.400	H	36.02	-61.15	10.34	1.16	-51.97	-13.00	38.97
3346.400	V	35.01	-62.02	10.34	1.16	-52.84	-13.00	39.84
GSM 850 Frequency:848.8MHz								
566.74	H	20.94	-53.58	0.00	0.46	-54.04	-13.00	41.04
721.70	V	20.85	-48.60	0.00	0.50	-49.10	-13.00	36.10
1697.600	H	44.25	-60.04	8.74	0.90	-52.20	-13.00	39.20
1697.600	V	41.05	-63.37	8.74	0.90	-55.53	-13.00	42.53
2546.400	H	45.59	-54.74	9.47	1.01	-46.28	-13.00	33.28
2546.400	V	39.68	-60.60	9.47	1.01	-52.14	-13.00	39.14
3395.200	H	36.34	-61.35	10.36	1.19	-52.18	-13.00	39.18
3395.200	V	35.54	-62.12	10.36	1.19	-52.95	-13.00	39.95

PCS Band (30MHz-20GHz)

1850 Band (GSM 1900)								
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								
299.31	H	34.06	-76.68	0.00	0.34	-77.02	-13.00	64.02
47.15	V	37.06	-61.36	-17.69	0.12	-79.17	-13.00	66.17
3700.400	H	40.96	-56.36	10.60	1.25	-47.01	-13.00	34.01
3700.400	V	40.10	-57.20	10.60	1.25	-47.85	-13.00	34.85
5550.600	H	39.85	-53.41	11.44	1.49	-43.46	-13.00	30.46
5550.600	V	40.68	-52.42	11.44	1.49	-42.47	-13.00	29.47
GSM 1900 Frequency:1880MHz								
243.42	H	34.15	-77.88	0.00	0.30	-78.18	-13.00	65.18
45.05	V	37.24	-59.11	-19.75	0.12	-78.98	-13.00	65.98
3760.000	H	36.85	-59.56	10.66	1.24	-50.14	-13.00	37.14
3760.000	V	37.41	-58.88	10.66	1.24	-49.46	-13.00	36.46
5640.000	H	40.20	-53.25	11.33	1.54	-43.46	-13.00	30.46
5640.000	V	43.77	-49.56	11.33	1.54	-39.77	-13.00	26.77
GSM 1900 Frequency:1909.8MHz								
217.64	H	33.87	-78.67	0.00	0.27	-78.94	-13.00	65.94
45.69	V	36.86	-60.12	-19.12	0.12	-79.36	-13.00	66.36
3819.600	H	37.01	-58.85	10.72	1.29	-49.42	-13.00	36.42
3819.600	V	35.74	-59.98	10.72	1.29	-50.55	-13.00	37.55
5729.400	H	45.87	-47.61	11.22	1.59	-37.98	-13.00	24.98
5729.400	V	45.88	-47.48	11.22	1.59	-37.85	-13.00	24.85

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								
72.44	H	33.93	-71.31	-3.78	0.15	-75.24	-13.00	62.24
44.74	V	37.32	-58.64	-20.14	0.12	-78.90	-13.00	65.90
3704.800	H	35.46	-61.80	10.60	1.25	-52.45	-13.00	39.45
3704.800	V	36.28	-60.95	10.60	1.25	-51.60	-13.00	38.60
5557.200	H	36.33	-56.95	11.43	1.49	-47.01	-13.00	34.01
5557.200	V	35.78	-57.35	11.43	1.49	-47.41	-13.00	34.41
WCDMA Band II, Frequency:1880 MHz								
76.51	H	33.84	-73.85	-1.75	0.16	-75.76	-13.00	62.76
45.21	V	37.15	-59.36	-19.59	0.12	-79.07	-13.00	66.07
3760.000	H	36.01	-60.40	10.66	1.24	-50.98	-13.00	37.98
3760.000	V	35.44	-60.85	10.66	1.24	-51.43	-13.00	38.43
5640.000	H	36.23	-57.22	11.33	1.54	-47.43	-13.00	34.43
5640.000	V	38.18	-55.15	11.33	1.54	-45.36	-13.00	32.36
WCDMA Band II, Frequency:1907.6MHz								
230.65	H	33.64	-78.64	0.00	0.29	-78.93	-13.00	65.93
44.58	V	37.44	-58.32	-20.35	0.12	-78.79	-13.00	65.79
3815.200	H	36.98	-58.87	10.72	1.29	-49.44	-13.00	36.44
3815.200	V	36.44	-59.25	10.72	1.29	-49.82	-13.00	36.82
5722.800	H	37.90	-55.59	11.23	1.58	-45.94	-13.00	32.94
5722.800	V	40.36	-52.99	11.23	1.58	-43.34	-13.00	30.34

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				
213.54	H	34.05	-78.57	0.00	0.27	-78.84	-13.00	65.84	
46.83	V	36.73	-61.37	-18.01	0.12	-79.50	-13.00	66.50	
3424.800	H	35.11	-62.66	10.37	1.17	-53.46	-13.00	40.46	
3424.800	V	34.85	-62.89	10.37	1.17	-53.69	-13.00	40.69	
5137.200	H	36.20	-57.42	11.28	1.46	-47.60	-13.00	34.60	
5137.200	V	35.02	-58.48	11.28	1.46	-48.66	-13.00	35.66	
Frequency:				1732.6	MHz				
74.39	H	34.47	-71.94	-2.81	0.16	-74.91	-13.00	61.91	
45.85	V	37.05	-60.09	-18.97	0.12	-79.18	-13.00	66.18	
3465.200	H	35.55	-62.26	10.39	1.15	-53.02	-13.00	40.02	
3465.200	V	36.10	-61.67	10.39	1.15	-52.43	-13.00	39.43	
5197.800	H	36.23	-57.90	11.32	1.44	-48.02	-13.00	35.02	
5197.800	V	35.74	-58.24	11.32	1.44	-48.36	-13.00	35.36	
Frequency:				1752.6	MHz				
224.58	H	33.73	-78.67	0.00	0.28	-78.95	-13.00	65.95	
46.17	V	36.90	-60.55	-18.65	0.12	-79.32	-13.00	66.32	
3505.200	H	35.44	-62.39	10.41	1.18	-53.16	-13.00	40.16	
3505.200	V	35.02	-62.75	10.41	1.18	-53.52	-13.00	40.52	
5257.800	H	34.78	-58.95	11.35	1.47	-49.07	-13.00	36.07	
5257.800	V	36.23	-57.28	11.35	1.47	-47.40	-13.00	34.40	

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								
691.64	H	21.01	-52.36	0.00	0.54	-52.90	-13.00	39.90
714.16	V	21.15	-48.46	0.00	0.50	-48.96	-13.00	35.96
1652.800	H	36.41	-67.92	8.68	0.81	-60.05	-13.00	47.05
1652.800	V	35.28	-69.13	8.68	0.81	-61.26	-13.00	48.26
2479.200	H	37.41	-63.35	9.39	1.01	-54.97	-13.00	41.97
2479.200	V	36.01	-64.72	9.39	1.01	-56.34	-13.00	43.34
3305.600	H	35.66	-61.07	10.32	1.15	-51.90	-13.00	38.90
3305.600	V	36.32	-60.18	10.32	1.15	-51.01	-13.00	38.01
WCDMA Band 5 Frequency:836.6MHz								
723.87	H	20.91	-51.93	0.00	0.51	-52.44	-13.00	39.44
724.23	V	20.94	-48.45	0.00	0.51	-48.96	-13.00	35.96
1673.200	H	35.85	-68.46	8.71	0.85	-60.60	-13.00	47.60
1673.200	V	36.60	-67.81	8.71	0.85	-59.95	-13.00	46.95
2509.800	H	36.32	-64.29	9.42	1.01	-55.88	-13.00	42.88
2509.800	V	36.23	-64.39	9.42	1.01	-55.98	-13.00	42.98
3346.400	H	35.11	-62.06	10.34	1.16	-52.88	-13.00	39.88
3346.400	V	34.23	-62.80	10.34	1.16	-53.62	-13.00	40.62
WCDMA Band 5 Frequency:846.6MHz								
704.10	H	20.86	-52.38	0.00	0.55	-52.93	-13.00	39.93
711.60	V	21.05	-48.62	0.00	0.51	-49.13	-13.00	36.13
1693.200	H	35.23	-69.07	8.73	0.89	-61.23	-13.00	48.23
1693.200	V	35.99	-68.43	8.73	0.89	-60.59	-13.00	47.59
2539.800	H	38.55	-61.83	9.46	1.01	-53.38	-13.00	40.38
2539.800	V	36.49	-63.85	9.46	1.01	-55.40	-13.00	42.40
3386.400	H	35.01	-62.58	10.35	1.18	-53.41	-13.00	40.41
3386.400	V	34.89	-62.65	10.35	1.18	-53.48	-13.00	40.48

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								
74.91	H	33.83	-72.90	-2.55	0.16	-75.61	-13.00	62.61
45.37	V	36.85	-59.81	-19.44	0.12	-79.37	-13.00	66.37
3701.400	H	35.11	-62.20	10.60	1.25	-52.85	-13.00	39.85
3701.400	V	36.55	-60.74	10.60	1.25	-51.39	-13.00	38.39
5552.100	H	36.85	-56.42	11.44	1.49	-46.47	-13.00	33.47
5552.100	V	41.15	-51.95	11.44	1.49	-42.00	-13.00	29.00
QPSK, 1.4MHz,Frequency:1880 MHz								
75.57	H	34.25	-72.87	-2.22	0.16	-75.25	-13.00	62.25
46.50	V	36.83	-60.95	-18.33	0.12	-79.40	-13.00	66.40
3760.000	H	35.77	-60.64	10.66	1.24	-51.22	-13.00	38.22
3760.000	V	36.02	-60.27	10.66	1.24	-50.85	-13.00	37.85
5640.000	H	38.47	-54.98	11.33	1.54	-45.19	-13.00	32.19
5640.000	V	40.12	-53.21	11.33	1.54	-43.42	-13.00	30.42
QPSK, 1.4MHz,Frequency:1909.3 MHz								
239.20	H	33.71	-78.40	0.00	0.29	-78.69	-13.00	65.69
45.05	V	37.16	-59.19	-19.75	0.12	-79.06	-13.00	66.06
3818.600	H	44.45	-51.41	10.72	1.29	-41.98	-13.00	28.98
3818.600	V	44.32	-51.39	10.72	1.29	-41.96	-13.00	28.96
5727.900	H	41.57	-51.91	11.23	1.59	-42.27	-13.00	29.27
5727.900	V	40.98	-52.38	11.23	1.59	-42.74	-13.00	29.74

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								
74.13	H	34.14	-72.12	-2.94	0.16	-75.22	-13.00	62.22
44.58	V	36.99	-58.77	-20.35	0.12	-79.24	-13.00	66.24
3421.400	H	35.85	-61.91	10.37	1.17	-52.71	-13.00	39.71
3421.400	V	36.03	-61.70	10.37	1.17	-52.50	-13.00	39.50
5132.100	H	37.62	-55.95	11.28	1.47	-46.14	-13.00	33.14
5132.100	V	38.22	-55.24	11.28	1.47	-45.43	-13.00	32.43
1.4MHz QPSK, Frequency: 1732.5 MHz								
73.48	H	33.75	-72.12	-3.26	0.16	-75.54	-13.00	62.54
45.21	V	37.32	-59.19	-19.59	0.12	-78.90	-13.00	65.90
3465.000	H	35.74	-62.07	10.39	1.15	-52.83	-13.00	39.83
3465.000	V	36.02	-61.75	10.39	1.15	-52.51	-13.00	39.51
5197.500	H	35.56	-58.57	11.32	1.44	-48.69	-13.00	35.69
5197.500	V	35.33	-58.65	11.32	1.44	-48.77	-13.00	35.77
1.4MHz QPSK, Frequency: 1754.3 MHz								
76.36	H	33.85	-73.75	-1.82	0.16	-75.73	-13.00	62.73
46.66	V	37.20	-60.74	-18.17	0.12	-79.03	-13.00	66.03
3508.600	H	35.66	-62.16	10.41	1.19	-52.94	-13.00	39.94
3508.600	V	36.41	-61.35	10.41	1.19	-52.13	-13.00	39.13
5262.900	H	35.85	-57.85	11.36	1.47	-47.96	-13.00	34.96
5262.900	V	37.10	-56.37	11.36	1.47	-46.48	-13.00	33.48

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								
728.96	H	21.16	-51.58	0.00	0.53	-52.11	-13.00	39.11
701.99	V	20.87	-49.01	0.00	0.55	-49.56	-13.00	36.56
1649.400	H	40.17	-64.16	8.68	0.80	-56.28	-13.00	43.28
1649.400	V	37.72	-66.69	8.68	0.80	-58.81	-13.00	45.81
2474.100	H	45.60	-55.18	9.38	1.00	-46.80	-13.00	33.80
2474.100	V	37.85	-62.88	9.38	1.00	-54.50	-13.00	41.50
3298.800	H	35.56	-61.12	10.32	1.15	-51.95	-13.00	38.95
3298.800	V	34.45	-61.99	10.32	1.15	-52.82	-13.00	39.82
QPSK, 1.4MHz, Frequency: 836.5 MHz								
708.81	H	21.09	-52.05	0.00	0.53	-52.58	-13.00	39.58
706.92	V	20.93	-48.84	0.00	0.54	-49.38	-13.00	36.38
1673.000	H	39.05	-65.26	8.71	0.85	-57.40	-13.00	44.40
1673.000	V	35.11	-69.30	8.71	0.85	-61.44	-13.00	48.44
2509.500	H	47.36	-53.25	9.42	1.01	-44.84	-13.00	31.84
2509.500	V	39.78	-60.84	9.42	1.01	-52.43	-13.00	39.43
3346.000	H	35.42	-61.74	10.34	1.16	-52.56	-13.00	39.56
3346.000	V	34.89	-62.13	10.34	1.16	-52.95	-13.00	39.95
QPSK, 1.4MHz, Frequency: 848.3 MHz								
679.63	H	21.11	-52.32	0.00	0.52	-52.84	-13.00	39.84
716.90	V	21.26	-48.29	0.00	0.50	-48.79	-13.00	35.79
1696.600	H	36.20	-68.09	8.74	0.89	-60.24	-13.00	47.24
1696.600	V	36.44	-67.98	8.74	0.89	-60.13	-13.00	47.13
2544.900	H	40.92	-59.42	9.47	1.01	-50.96	-13.00	37.96
2544.900	V	35.20	-65.10	9.47	1.01	-56.64	-13.00	43.64
3393.200	H	34.69	-62.98	10.36	1.19	-53.81	-13.00	40.81
3393.200	V	34.78	-62.85	10.36	1.19	-53.68	-13.00	40.68

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								
239.70	H	33.73	-78.37	0.00	0.29	-78.66	-25.00	53.66
45.15	V	37.18	-59.27	-19.65	0.12	-79.04	-25.00	54.04
5005.000	H	35.38	-57.58	11.20	1.47	-47.85	-25.00	22.85
5005.000	V	35.10	-57.72	11.20	1.47	-47.99	-25.00	22.99
7507.500	H	36.08	-53.71	10.90	1.95	-44.76	-25.00	19.76
7507.500	V	35.62	-54.67	10.90	1.95	-45.72	-25.00	20.72
5MHz QPSK, Frequency: 2535 MHz								
217.31	H	33.86	-78.69	0.00	0.27	-78.96	-25.00	53.96
44.53	V	36.97	-58.72	-20.42	0.12	-79.26	-25.00	54.26
5070.000	H	35.44	-57.75	11.24	1.47	-47.98	-25.00	22.98
5070.000	V	36.01	-57.08	11.24	1.47	-47.31	-25.00	22.31
7605.000	H	34.85	-54.62	10.88	2.01	-45.75	-25.00	20.75
7605.000	V	35.32	-54.87	10.88	2.01	-46.00	-25.00	21.00
5MHz QPSK, Frequency: 2567.5 MHz								
252.16	H	34.10	-77.75	0.00	0.30	-78.05	-25.00	53.05
45.00	V	36.83	-59.47	-19.80	0.12	-79.39	-25.00	54.39
5135.000	H	38.41	-55.19	11.28	1.47	-45.38	-25.00	20.38
5135.000	V	39.13	-54.36	11.28	1.47	-44.55	-25.00	19.55
7702.500	H	36.01	-53.51	10.86	1.97	-44.62	-25.00	19.62
7702.500	V	35.78	-54.40	10.86	1.97	-45.51	-25.00	20.51

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)			
1.4MHz QPSK, Frequency: 699.7 MHz								
252.16	H	34.10	-77.75	0.00	0.30	-78.05	-25.00	53.05
45.00	V	36.83	-59.47	-19.80	0.12	-79.39	-25.00	54.39
1399.400	H	34.77	-68.93	8.22	0.71	-61.42	-13.00	48.42
1399.400	V	35.26	-68.49	8.22	0.71	-60.98	-13.00	47.98
2099.100	H	36.01	-65.87	9.16	0.91	-57.62	-13.00	44.62
2099.100	V	35.85	-65.98	9.16	0.91	-57.73	-13.00	44.73
2798.800	H	35.31	-64.62	9.88	1.04	-55.78	-13.00	42.78
2798.800	V	34.59	-65.21	9.88	1.04	-56.37	-13.00	43.37
1.4MHz QPSK, Frequency: 707.5 MHz								
517.57	H	20.60	-54.88	0.00	0.42	-55.30	-13.00	42.30
566.92	V	20.71	-50.97	0.00	0.46	-51.43	-13.00	38.43
1415.000	H	35.77	-67.90	8.26	0.72	-60.36	-13.00	47.36
1415.000	V	34.67	-69.05	8.26	0.72	-61.51	-13.00	48.51
2122.500	H	35.08	-66.91	9.17	0.92	-58.66	-13.00	45.66
2122.500	V	35.01	-66.96	9.17	0.92	-58.71	-13.00	45.71
2830.000	H	34.69	-65.11	9.93	1.06	-56.24	-13.00	43.24
2830.000	V	34.78	-64.95	9.93	1.06	-56.08	-13.00	43.08
1.4MHz QPSK, Frequency: 715.3 MHz								
499.75	H	20.64	-55.20	0.00	0.45	-55.65	-13.00	42.65
523.04	V	20.69	-50.92	0.00	0.42	-51.34	-13.00	38.34
1430.600	H	35.78	-67.85	8.31	0.73	-60.27	-13.00	47.27
1430.600	V	35.20	-68.49	8.31	0.73	-60.91	-13.00	47.91
2145.900	H	36.01	-66.09	9.19	0.93	-57.83	-13.00	44.83
2145.900	V	34.55	-67.56	9.19	0.93	-59.30	-13.00	46.30
2861.200	H	34.96	-64.69	9.98	1.07	-55.78	-13.00	42.78
2861.200	V	35.24	-64.43	9.98	1.07	-55.52	-13.00	42.52

LTE Band 17(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: 706.5 MHz								
365.89	H	20.74	-57.65	0.00	0.37	-58.02	-13.00	45.02
448.32	V	20.79	-52.84	0.00	0.43	-53.27	-13.00	40.27
1413.000	H	36.58	-67.09	8.26	0.72	-59.55	-13.00	46.55
1413.000	V	37.11	-66.61	8.26	0.72	-59.07	-13.00	46.07
2119.500	H	35.45	-66.52	9.17	0.92	-58.27	-13.00	45.27
2119.500	V	34.62	-67.33	9.17	0.92	-59.08	-13.00	46.08
2826.000	H	35.11	-64.70	9.92	1.06	-55.84	-13.00	42.84
2826.000	V	34.85	-64.89	9.92	1.06	-56.03	-13.00	43.03
5MHz QPSK, Frequency: 710 MHz								
541.68	H	20.66	-54.35	0.00	0.46	-54.81	-13.00	41.81
494.53	V	20.61	-51.19	0.00	0.45	-51.64	-13.00	38.64
1420.000	H	39.93	-63.73	8.28	0.73	-56.18	-13.00	43.18
1420.000	V	39.82	-63.89	8.28	0.73	-56.34	-13.00	43.34
2130.000	H	35.23	-66.79	9.18	0.92	-58.53	-13.00	45.53
2130.000	V	34.68	-67.33	9.18	0.92	-59.07	-13.00	46.07
2840.000	H	34.69	-65.06	9.94	1.06	-56.18	-13.00	43.18
2840.000	V	35.22	-64.49	9.94	1.06	-55.61	-13.00	42.61
5MHz QPSK, Frequency: 713.5 MHz								
585.08	H	20.80	-53.35	0.00	0.46	-53.81	-13.00	40.81
553.19	V	2.67	-68.99	0.00	0.48	-69.47	-13.00	56.47
1427.000	H	39.16	-64.48	8.30	0.73	-56.91	-13.00	43.91
1427.000	V	37.89	-65.80	8.30	0.73	-58.23	-13.00	45.23
2140.500	H	35.54	-66.53	9.18	0.93	-58.28	-13.00	45.28
2140.500	V	35.44	-66.64	9.18	0.93	-58.39	-13.00	45.39
2854.000	H	34.31	-65.38	9.97	1.07	-56.48	-13.00	43.48
2854.000	V	35.08	-64.60	9.97	1.07	-55.70	-13.00	42.70

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								
214.54	H	33.81	-78.79	0.00	0.27	-79.06	-25.00	54.06
46.60	V	37.25	-60.63	-18.23	0.12	-78.98	-25.00	53.98
5145.000	H	35.22	-58.46	11.29	1.44	-48.61	-25.00	23.61
5145.000	V	34.68	-58.89	11.29	1.44	-49.04	-25.00	24.04
7717.500	H	34.32	-55.19	10.86	1.99	-46.32	-25.00	21.32
7717.500	V	35.09	-55.04	10.86	1.99	-46.17	-25.00	21.17
5MHz QPSK, Frequency: 2595 MHz								
241.64	H	33.63	-78.44	0.00	0.29	-78.73	-25.00	53.73
45.79	V	37.06	-60.02	-19.03	0.12	-79.17	-25.00	54.17
5190.000	H	34.72	-59.35	11.31	1.44	-49.48	-25.00	24.48
5190.000	V	35.85	-58.07	11.31	1.44	-48.20	-25.00	23.20
7785.000	H	35.23	-54.26	10.84	1.99	-45.41	-25.00	20.41
7785.000	V	35.06	-54.86	10.84	1.99	-46.01	-25.00	21.01
5MHz QPSK, Frequency: 2617.5 MHz								
226.08	H	33.88	-78.49	0.00	0.28	-78.77	-25.00	53.77
45.15	V	36.95	-59.50	-19.65	0.12	-79.27	-25.00	54.27
5235.000	H	35.35	-58.55	11.34	1.46	-48.67	-25.00	23.67
5235.000	V	34.96	-58.75	11.34	1.46	-48.87	-25.00	23.87
7852.500	H	36.01	-53.18	10.83	2.03	-44.38	-25.00	19.38
7852.500	V	35.78	-53.80	10.83	2.03	-45.00	-25.00	20.00

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								
72.33	H	33.77	-71.41	-3.84	0.15	-75.40	-40.00	35.40
46.66	V	37.13	-60.81	-18.17	0.12	-79.10	-40.00	39.10
4615.000	H	35.74	-59.62	10.74	1.41	-50.29	-40.00	10.29
4615.000	V	35.23	-59.99	10.74	1.41	-50.66	-40.00	10.66
6922.500	H	36.07	-54.95	11.22	1.88	-45.61	-40.00	5.61
6922.500	V	35.26	-55.63	11.22	1.88	-46.29	-40.00	6.29
5MHz QPSK, Frequency: 2312.5 MHz								
239.20	H	33.71	-78.40	0.00	0.29	-78.69	-40.00	38.69
44.74	V	36.86	-59.10	-20.14	0.12	-79.36	-40.00	39.36
4625.000	H	35.94	-59.35	10.75	1.41	-50.01	-40.00	10.01
4625.000	V	35.14	-60.03	10.75	1.41	-50.69	-40.00	10.69
6937.500	H	36.23	-54.75	11.21	1.90	-45.44	-40.00	5.44
6937.500	V	35.55	-55.29	11.21	1.90	-45.98	-40.00	5.98

LTE Band 40 Upper(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)			
5MHz QPSK, Frequency: 2352.5 MHz								
72.40	H	33.83	-71.39	-3.80	0.15	-75.34	-40.00	35.34
44.58	V	36.72	-59.04	-20.35	0.12	-79.51	-40.00	39.51
4705.000	H	35.63	-59.15	10.85	1.41	-49.71	-40.00	9.71
4705.000	V	36.11	-58.69	10.85	1.41	-49.25	-40.00	9.25
7057.500	H	35.78	-54.23	11.17	1.92	-44.98	-40.00	4.98
7057.500	V	35.96	-53.94	11.17	1.92	-44.69	-40.00	4.69
5MHz QPSK, Frequency: 2357.5 MHz								
76.34	H	33.91	-73.67	-1.83	0.16	-75.66	-40.00	35.66
45.05	V	36.82	-59.53	-19.75	0.12	-79.40	-40.00	39.40
4715.000	H	35.94	-58.77	10.86	1.41	-49.32	-40.00	9.32
4715.000	V	36.23	-58.48	10.86	1.41	-49.03	-40.00	9.03
7072.500	H	35.11	-54.69	11.16	1.91	-45.44	-40.00	5.44
7072.500	V	35.08	-54.63	11.16	1.91	-45.38	-40.00	5.38

LTE Band 41(30MHz-27GHz):

LTE Band 1 (Downlink FDD)								
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								
242.52	H	34.03	-78.02	0.00	0.30	-78.32	-25.00	53.32
44.52	V	36.77	-58.91	-20.43	0.12	-79.46	-25.00	54.46
5075.000	H	36.45	-56.76	11.25	1.48	-46.99	-25.00	21.99
5075.000	V	35.78	-57.33	11.25	1.48	-47.56	-25.00	22.56
7612.500	H	35.36	-54.12	10.88	2.02	-45.26	-25.00	20.26
7612.500	V	35.41	-54.78	10.88	2.02	-45.92	-25.00	20.92
QPSK, 5MHz, Frequency: 2595 MHz								
214.54	H	33.93	-78.67	0.00	0.27	-78.94	-25.00	53.94
46.60	V	36.92	-60.96	-18.23	0.12	-79.31	-25.00	54.31
5190.000	H	37.01	-57.06	11.31	1.44	-47.19	-25.00	22.19
5190.000	V	35.69	-58.23	11.31	1.44	-48.36	-25.00	23.36
7785.000	H	36.22	-53.27	10.84	1.99	-44.42	-25.00	19.42
7785.000	V	35.08	-54.84	10.84	1.99	-45.99	-25.00	20.99
QPSK, 5MHz, Frequency: 2652.5 MHz								
250.29	H	33.76	-78.13	0.00	0.30	-78.43	-25.00	53.43
44.99	V	36.90	-59.39	-19.81	0.12	-79.32	-25.00	54.32
5305.000	H	36.41	-57.03	11.38	1.46	-47.11	-25.00	22.11
5305.000	V	35.85	-57.33	11.38	1.46	-47.41	-25.00	22.41
7957.500	H	35.66	-52.76	10.81	2.09	-44.04	-25.00	19.04
7957.500	V	36.01	-52.86	10.81	2.09	-44.14	-25.00	19.14

5. EUT PHOTOGRAPHS

Please refer to the attachment CR230851297-EXP EUT EXTERNAL PHOTOGRAPHS and
CR230851297-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR230851297-00E-TSP TEST SETUP PHOTOGRAPHS.

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