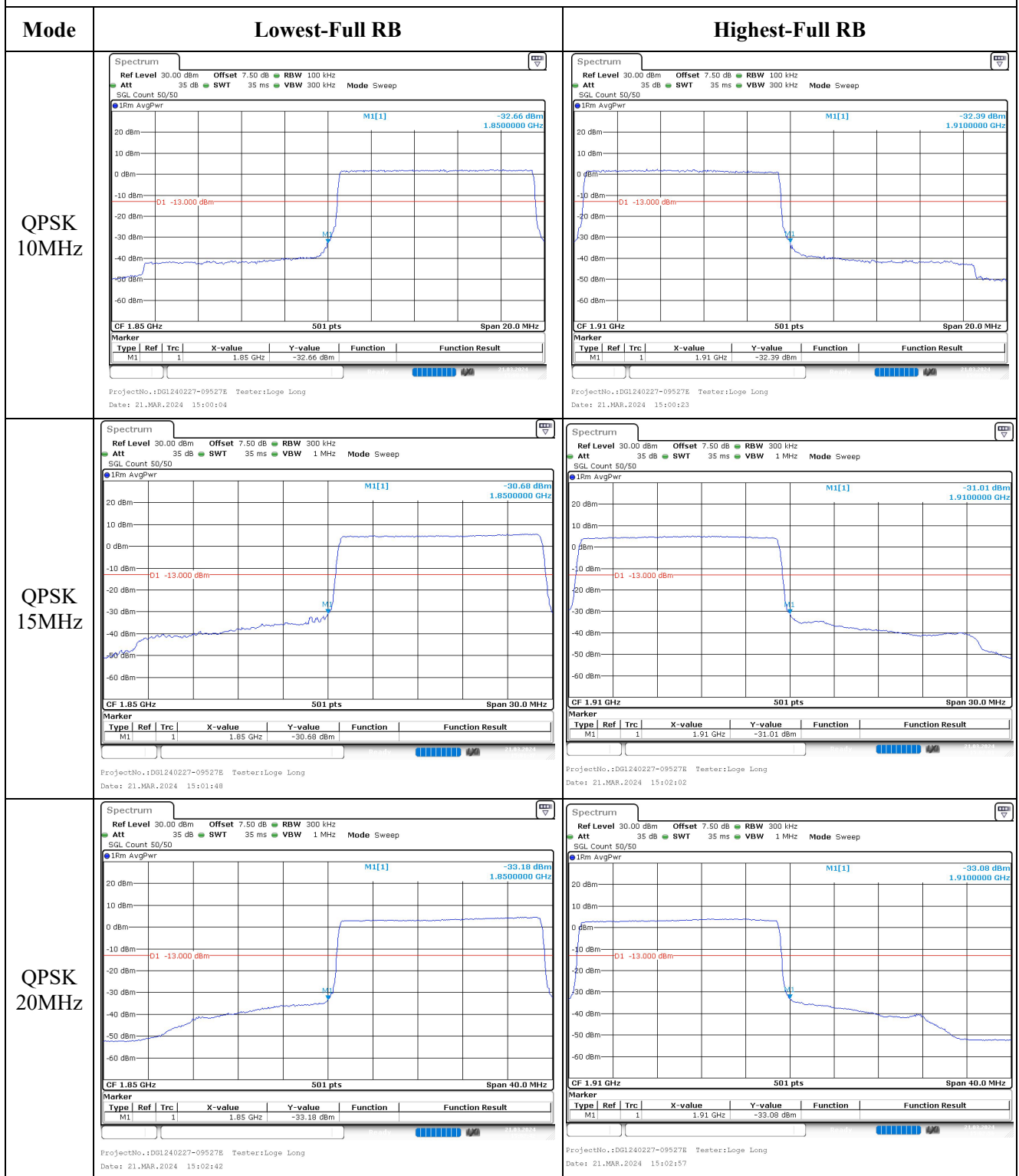
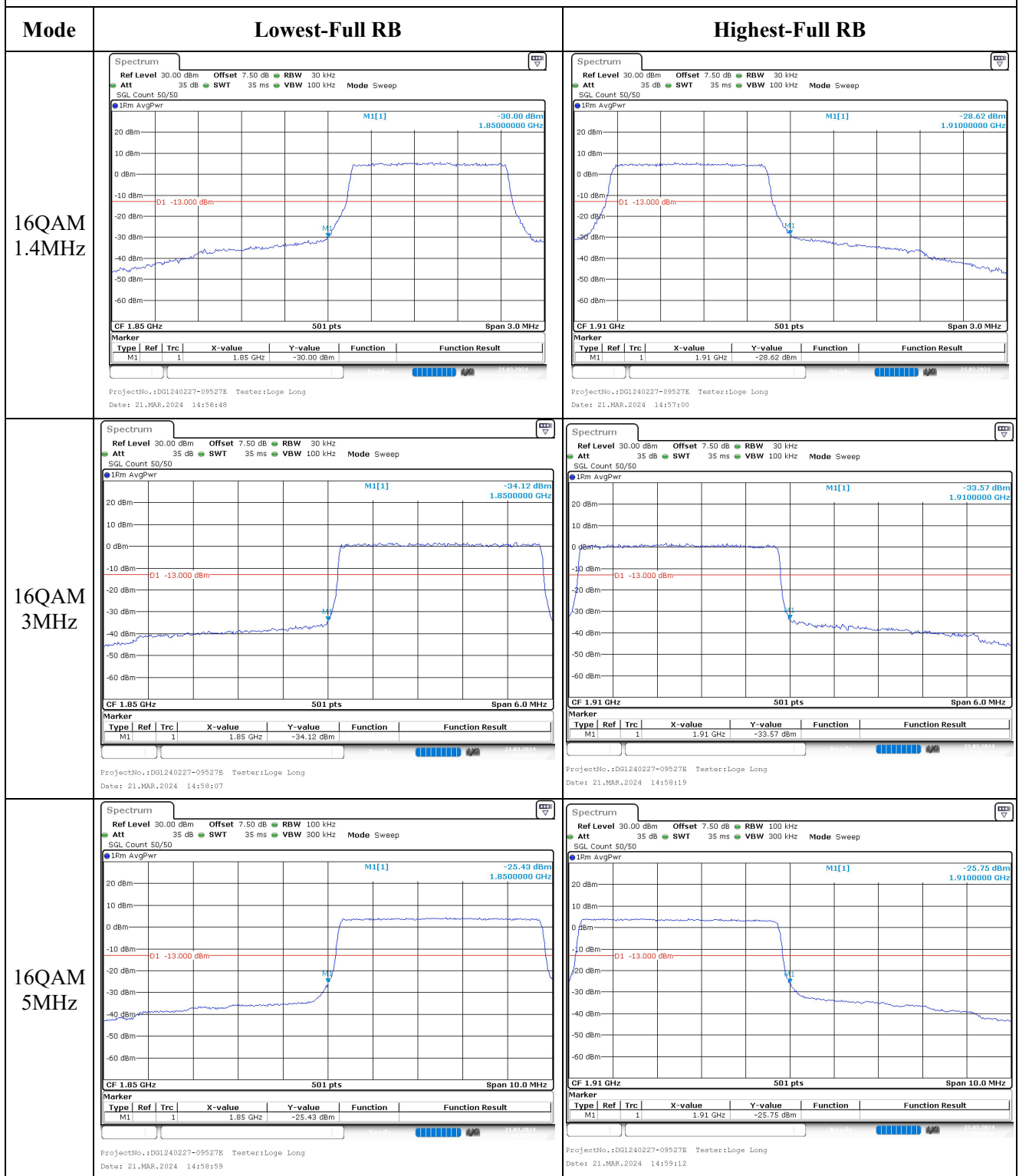


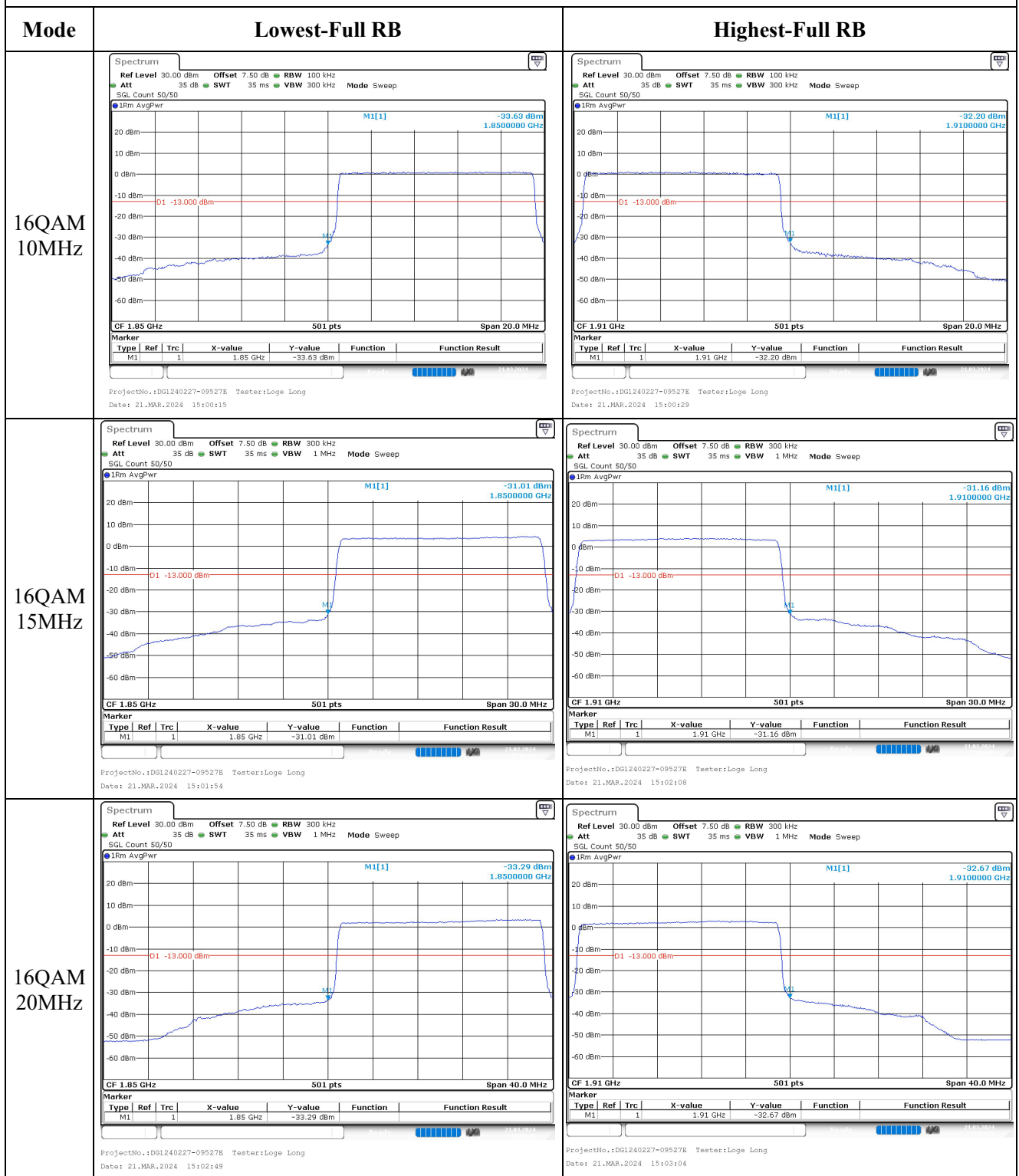
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



5.6 Antenna Port Test Data and Results for LTE Band 4

Serial Number:	2I25-7	Test Date:	2024/3/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.2	Relative Humidity: (%)	59	ATM Pressure: (kPa)	101.9
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Minl-Circuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/2/25	2025/2/24
R&S	Wideband Radio Communication Tester	CMW500	149216	2023/10/18	2024/10/17
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2023/10/18	2024/10/17
All-sun	Clamp Meter	EM305A	8348897	2023/8/3	2024/8/2
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A
yzjingcheng	Coaxial Cable	KTRFBU-141-50	41005011	2023/9/1	2024/8/31
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	2023/9/1	2024/8/31
R&S	Spectrum Analyzer	FSV40	101461	2023/11/27	2024/11/26

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1710.7	1732.5	1754.3
3MHz	1711.5	1732.5	1753.5
5MHz	1712.5	1732.5	1752.5
10MHz	1715	1732.5	1750
15MHz	1717.5	1732.5	1747.5
20MHz	1720	1732.5	1745

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	21.97	20.78	22.04	17.5	30
	RB1#3	22.04	20.99	22.23		
	RB1#5	21.85	20.81	22.12		
	RB3#0	21.95	20.9	22.15		
	RB3#3	21.92	20.88	22.21		
	RB6#0	20.96	19.88	21.17		
1.4MHz 16QAM	RB1#0	20.85	19.94	21.08	16.54	30
	RB1#3	20.98	20.14	21.27		
	RB1#5	20.81	19.98	21.15		
	RB3#0	21.17	19.92	21.23		
	RB3#3	21.04	20.02	21.24		
	RB6#0	19.87	18.96	20.08		
3MHz QPSK	RB1#0	21.95	20.89	21.96	17.43	30
	RB1#8	21.89	20.83	22.12		
	RB1#14	21.78	20.82	22.16		
	RB6#0	20.86	19.85	20.96		
	RB6#9	20.77	19.84	21.13		
	RB15#0	20.87	19.93	21.12		
3MHz 16QAM	RB1#0	20.93	20.39	21.08	16.53	30
	RB1#8	20.81	20.41	21.2		
	RB1#14	20.75	20.42	21.26		
	RB6#0	19.86	18.9	19.95		
	RB6#9	19.71	18.93	20.14		
	RB15#0	19.88	18.94	20.05		
5MHz QPSK	RB1#0	21.81	20.76	21.59	17.3	30
	RB1#13	21.8	20.87	21.96		
	RB1#24	21.53	20.79	22.03		
	RB15#0	20.8	19.84	20.83		
	RB15#10	20.73	19.8	20.95		
	RB25#0	20.72	19.79	20.88		
5MHz 16QAM	RB1#0	20.88	19.66	20.95	16.53	30
	RB1#13	20.83	19.75	21.22		
	RB1#24	20.61	19.62	21.26		
	RB15#0	19.82	18.9	19.79		
	RB15#10	19.66	18.83	19.9		
	RB25#0	19.67	18.82	19.82		
10MHz QPSK	RB1#0	21.83	20.86	21.3	17.28	30
	RB1#25	21.75	20.93	21.82		
	RB1#49	21.26	20.89	22.01		

	RB25#0	20.65	19.92	20.55		
	RB25#25	20.45	19.87	20.81		
	RB50#0	20.57	19.92	20.68		
10MHz 16QAM	RB1#0	20.83	20.36	20.4	16.36	30
	RB1#25	20.67	20.52	20.93		
	RB1#49	20.23	20.4	21.09		
	RB25#0	19.8	18.92	19.49		
	RB25#25	19.58	18.92	19.83		
	RB50#0	19.61	18.89	19.68		
15MHz QPSK	RB1#0	21.74	20.8	20.96	17.21	30
	RB1#38	21.38	20.76	21.5		
	RB1#74	20.89	20.83	21.94		
	RB36#0	20.68	19.92	20.24		
	RB36#39	20.2	19.88	20.77		
	RB75#0	20.5	19.91	20.49		
15MHz 16QAM	RB1#0	21.12	20.4	20.04	16.39	30
	RB1#38	20.78	20.35	20.62		
	RB1#74	20.28	20.37	20.99		
	RB36#0	19.62	18.92	19.88		
	RB36#39	19.15	18.98	19.95		
	RB75#0	19.4	18.89	19.89		
20MHz QPSK	RB1#0	21.61	21.62	21.61	17.39	30
	RB1#50	21.96	22.05	22.12		
	RB1#99	21.51	21.7	21.74		
	RB50#0	20.82	20.93	20.86		
	RB50#50	20.77	20.91	20.87		
	RB100#0	20.79	20.89	20.9		
20MHz 16QAM	RB1#0	21.08	20.83	20.79	16.76	30
	RB1#50	21.49	21.32	21.29		
	RB1#99	21.22	20.91	20.93		
	RB50#0	19.87	19.95	19.87		
	RB50#50	19.87	19.89	19.87		
	RB100#0	19.91	19.93	19.89		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)

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

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	4.81	5.1	4.81	13
	RB100#0	5.19	5.33	5.07	13
20MHz 16QAM	RB1#0	5.54	5.94	5.77	13
	RB100#0	6.17	6.23	6.06	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	1.09	1.096	1.102	1.296	1.314	1.29
1.4MHz 16QAM	1.096	1.096	1.096	1.32	1.296	1.296
3MHz QPSK	2.683	2.671	2.683	2.892	2.868	2.88
3MHz 16QAM	2.683	2.683	2.683	2.88	2.88	2.88
5MHz QPSK	4.511	4.551	4.511	5.18	5.24	5.2
5MHz 16QAM	4.551	4.511	4.531	5.22	5.14	5.16
10MHz QPSK	8.942	8.981	8.942	9.88	10.04	9.8
10MHz 16QAM	8.981	8.942	8.942	9.88	9.88	9.84
15MHz QPSK	13.533	13.533	13.413	14.82	14.94	14.76
15MHz 16QAM	13.533	13.533	13.473	14.82	14.76	14.82
20MHz QPSK	17.964	17.964	17.964	19.6	19.76	19.44
20MHz 16QAM	17.964	17.964	17.964	19.84	19.68	19.6

Note: Test was performed at full RB. The test plots please refer to the Plots of Occupied Bandwidth

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

Result:	Pass, Test was performed at RB1#0, 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	3.8	1711.049	1710.00	1753.915	1755
	-20	3.8	1711.043	1710.00	1753.927	1755
	-10	3.8	1711.052	1710.00	1753.930	1755
	0	3.8	1711.046	1710.00	1753.936	1755
	10	3.8	1711.052	1710.00	1753.936	1755
	20	3.8	1711.058	1710.00	1753.942	1755
	30	3.8	1711.067	1710.00	1753.969	1755
	40	3.8	1711.073	1710.00	1753.960	1755
	50	3.8	1711.085	1710.00	1753.963	1755
Frequency Stability vs. Voltage	20	3.5	1711.076	1710.00	1753.966	1755
	20	4.35	1711.082	1710.00	1753.966	1755
					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	3.8	1710.960	1710.00	1753.995	1755
	-20	3.8	1710.960	1710.00	1753.995	1755
	-10	3.8	1710.957	1710.00	1754.001	1755
	0	3.8	1710.966	1710.00	1753.995	1755
	10	3.8	1710.972	1710.00	1754.013	1755
	20	3.8	1710.978	1710.00	1754.022	1755
	30	3.8	1711.005	1710.00	1754.037	1755
	40	3.8	1710.981	1710.00	1754.031	1755
	50	3.8	1710.996	1710.00	1754.043	1755
Frequency Stability vs. Voltage	20	3.5	1710.987	1710.00	1754.031	1755
	20	4.35	1710.993	1710.00	1754.037	1755
					Result:	Pass

Test Plots:

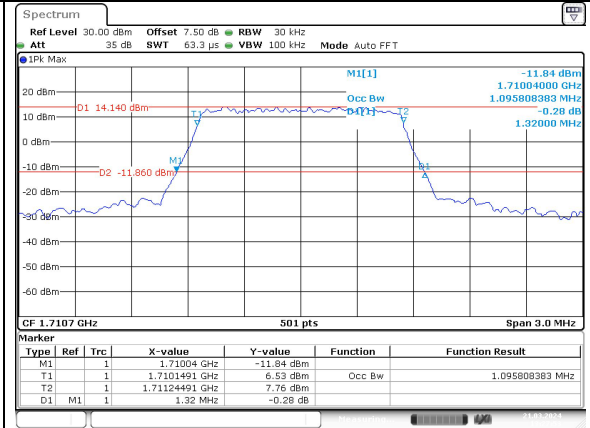
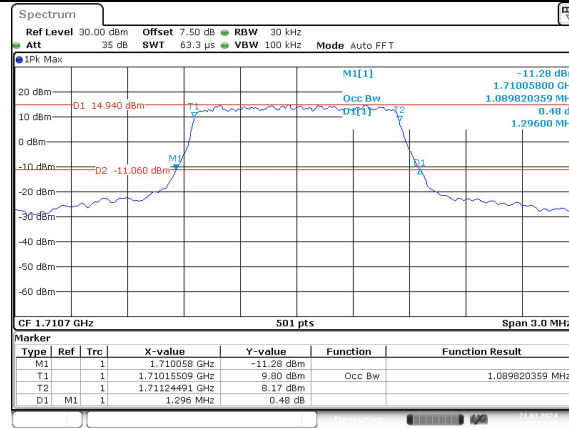
Occupied Bandwidth

Channel

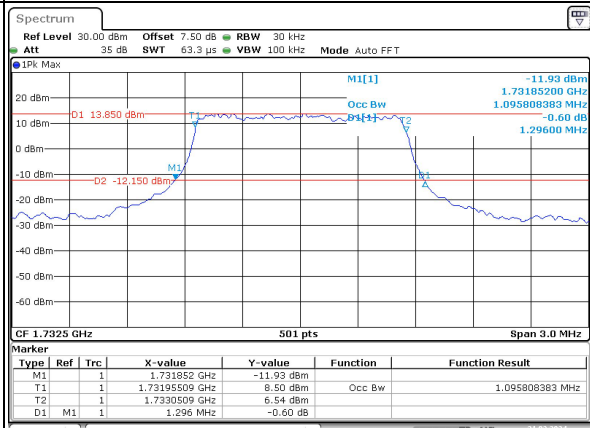
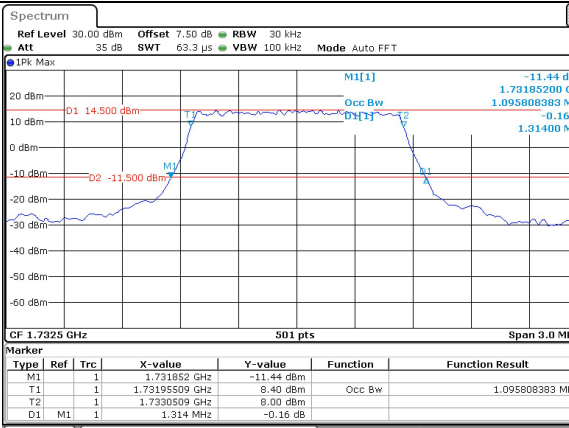
1.4MHz Bandwidth QPSK

1.4MHz Bandwidth 16QAM

Lowest



Middle



Highest

