

TEST REPORT

Report No.: MTi251010011-0104E1

Mode1 / Polarization: Vertical / CH: H

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2483.500	58.17	-4.23	53.94	74.00	-20.06	peak
2	*	2483.500	39.15	-4.23	34.92	54.00	-19.08	AVG
3		2500.000	46.15	-4.15	42.00	74.00	-32.00	peak
4		2500.000	36.83	-4.15	32.68	54.00	-21.32	AVG

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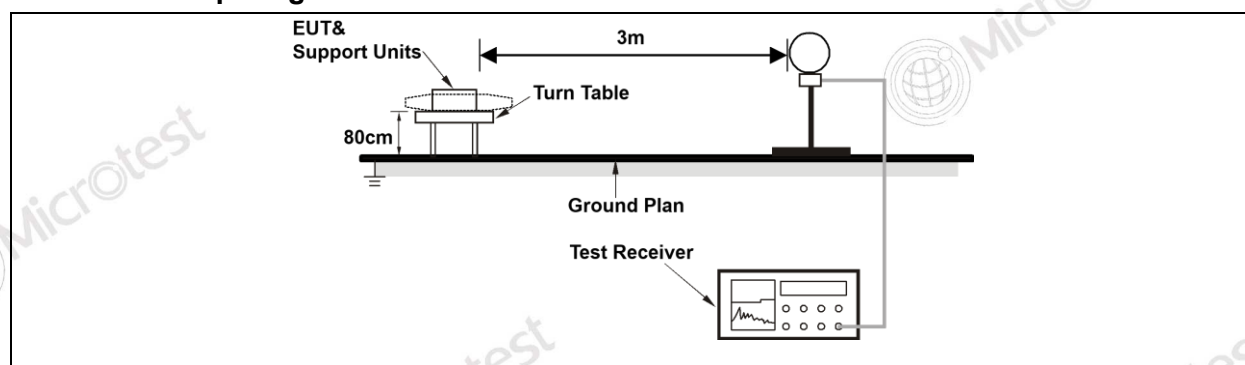
6.6 Radiated emissions (below 1GHz)

Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.			
Test Method:	ANSI C63.10-2020 section 6.6.4 KDB 558074 D01 15.247 Meas Guidance v05r02		
Procedure:	ANSI C63.10-2020 section 6.6.4		

6.6.1 E.U.T. Operation:

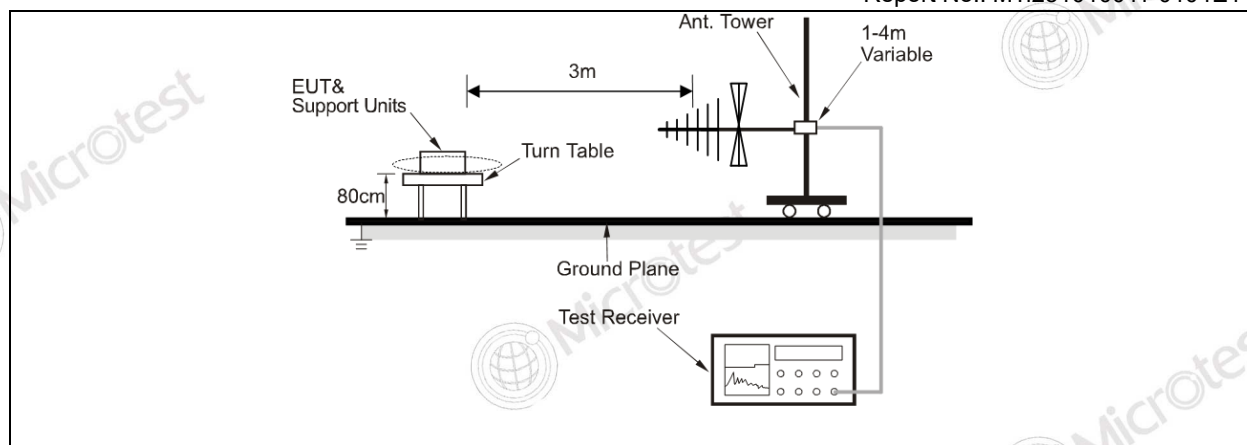
Operating Environment:					
Temperature:	23.8 °C	Humidity:	57 %	Atmospheric Pressure:	101 kPa
Pre test mode:		Mode1			
Final test mode:		Mode1			
Note: The amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported. All modes of operation of the EUT were investigated, and only the worst-case results are reported. There were no emissions found below 30MHz within 20dB of the limit.					

6.6.2 Test Setup Diagram:



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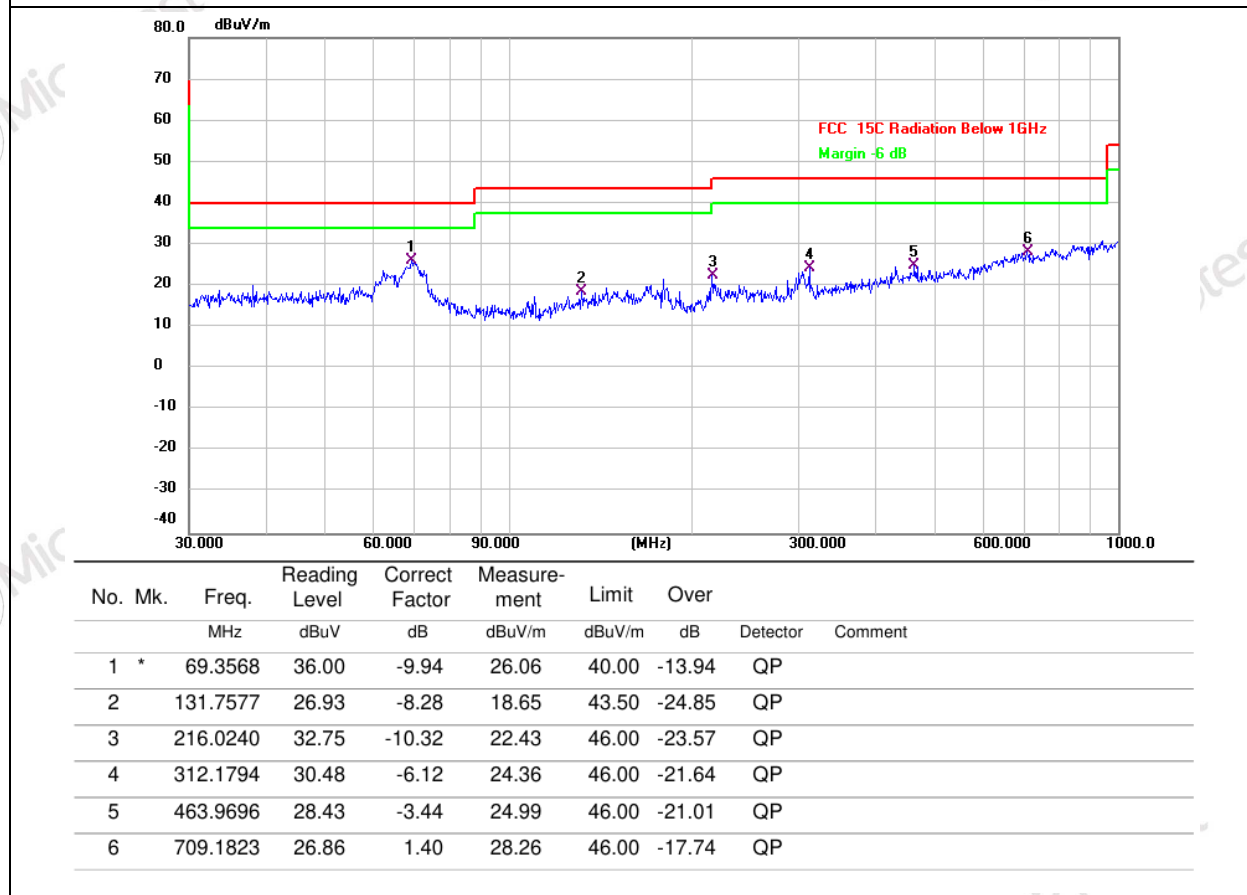


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6.6.3 Test Data:

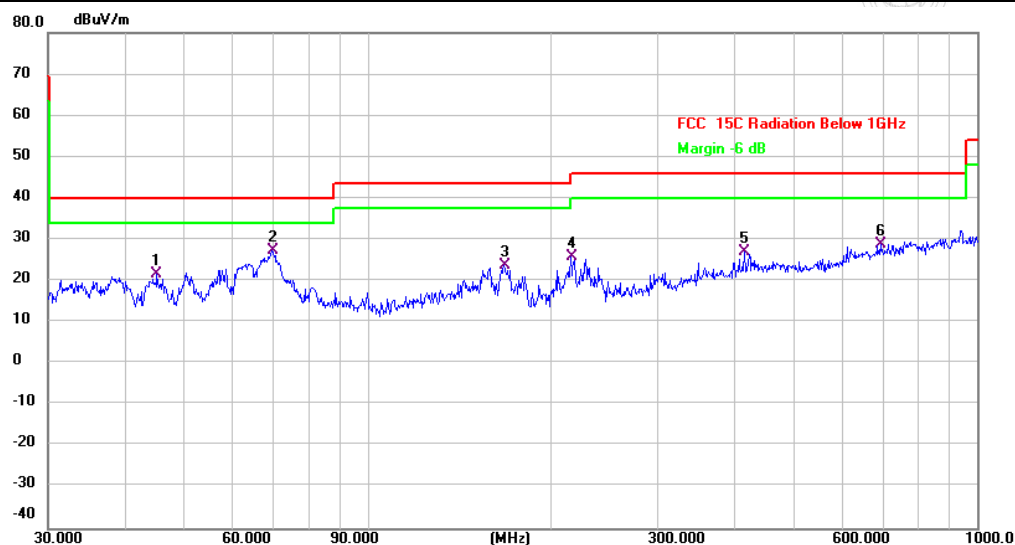
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No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	45.2166	29.42	-7.68	21.74	40.00	-18.26	QP	
2 *	69.8450	37.26	-10.04	27.22	40.00	-12.78	QP	
3	167.2368	30.75	-7.08	23.67	43.50	-19.83	QP	
4	216.0240	36.26	-10.32	25.94	46.00	-20.06	QP	
5	416.1791	31.07	-4.15	26.92	46.00	-19.08	QP	
6	694.4174	27.56	1.28	28.84	46.00	-17.16	QP	

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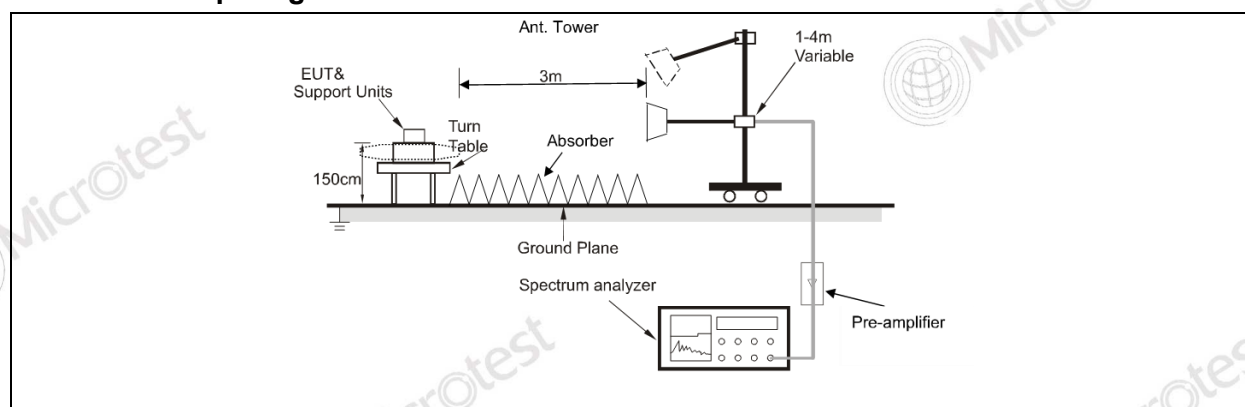
6.7 Radiated emissions (above 1GHz)

Test Requirement:	Refer to 47 CFR 15.247(d), in addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.			
Test Method:	ANSI C63.10-2020 section 6.6.4 KDB 558074 D01 15.247 Meas Guidance v05r02		
Procedure:	ANSI C63.10-2020 section 6.6.4		

6.7.1 E.U.T. Operation:

Operating Environment:			
Temperature:	23.8 °C	Humidity:	57 %
Pre test mode:		Mode1	Atmospheric Pressure: 101 kPa
Final test mode:		Mode1	
Note: Test frequency are from 1GHz to 25GHz, the amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported. All modes of operation of the EUT were investigated, and only the worst-case results are reported.			

6.7.2 Test Setup Diagram:



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6.7.3 Test Data:

Mode1 / Polarization: Horizontal / CH: L

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4804.000	54.74	1.78	56.52	74.00	-17.48	peak
2		4804.000	48.46	1.78	50.24	54.00	-3.76	AVG
3		7206.000	46.96	7.57	54.53	74.00	-19.47	peak
4		7206.000	42.72	7.57	50.29	54.00	-3.71	AVG
5		9608.000	47.92	8.79	56.71	74.00	-17.29	peak
6	*	9608.000	42.83	8.79	51.62	54.00	-2.38	AVG

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Mode1 / Polarization: Vertical / CH: L

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		4804.000	47.98	1.78	49.76	74.00	-24.24	peak
2		4804.000	43.51	1.78	45.29	54.00	-8.71	AVG
3		7206.000	41.96	7.57	49.53	74.00	-24.47	peak
4		7206.000	38.66	7.57	46.23	54.00	-7.77	AVG
5		9608.000	47.94	8.79	56.73	74.00	-17.27	peak
6	*	9608.000	41.50	8.79	50.29	54.00	-3.71	AVG

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Mode1 / Polarization: Horizontal / CH: M

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4880.000	53.36	2.09	55.45	74.00	-18.55	peak
2		4880.000	47.18	2.09	49.27	54.00	-4.73	AVG
3		7320.000	45.55	7.90	53.45	74.00	-20.55	peak
4		7320.000	41.75	7.90	49.65	54.00	-4.35	AVG
5		9760.000	46.60	9.36	55.96	74.00	-18.04	peak
6	*	9760.000	40.87	9.36	50.23	54.00	-3.77	AVG

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Mode1 / Polarization: Vertical / CH: M

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		4880.000	47.65	2.09	49.74	74.00	-24.26	peak
2		4880.000	43.17	2.09	45.26	54.00	-8.74	AVG
3		7320.000	42.72	7.90	50.62	74.00	-23.38	peak
4		7320.000	38.42	7.90	46.32	54.00	-7.68	AVG
5		9760.000	46.71	9.36	56.07	74.00	-17.93	peak
6	*	9760.000	40.83	9.36	50.19	54.00	-3.81	AVG

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Mode1 / Polarization: Horizontal / CH: H

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		4960.000	54.60	2.45	57.05	74.00	-16.95	peak
2	*	4960.000	48.91	2.45	51.36	54.00	-2.64	AVG
3		7440.000	49.07	7.79	56.86	74.00	-17.14	peak
4		7440.000	42.48	7.79	50.27	54.00	-3.73	AVG
5		9920.000	47.73	9.17	56.90	74.00	-17.10	peak
6		9920.000	40.45	9.17	49.62	54.00	-4.38	AVG

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No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		4960.000	47.34	2.45	49.79	74.00	-24.21	peak
2		4960.000	42.91	2.45	45.36	54.00	-8.64	AVG
3		7440.000	43.73	7.79	51.52	74.00	-22.48	peak
4		7440.000	39.73	7.79	47.52	54.00	-6.48	AVG
5		9920.000	47.14	9.17	56.31	74.00	-17.69	peak
6	*	9920.000	41.06	9.17	50.23	54.00	-3.77	AVG

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Photographs of the test setup

Refer to Appendix - Test Setup Photos

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Photographs of the EUT

Refer to Appendix - EUT Photos

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Appendix A: DTS Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	Limit [MHz]	Verdict
GFSK	Ant1	2402	0.712	0.5	PASS
		2440	0.680	0.5	PASS
		2480	0.668	0.5	PASS

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Test Graphs



GFSK Ant1 2480

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Appendix B: Maximum conducted output power

Test Result-Peak

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Limit [dBm]	Verdict
GFSK	Ant1	2402	3.12	≤30	PASS
		2440	3.34	≤30	PASS
		2480	3.83	≤30	PASS