

TEST REPORT

Report No.: MTi250319015-0110E1

6.3 Emissions in frequency bands (below 30MHz)

Test Requirement:	47 CFR Part 15.209		
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. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.			
Test Method:	ANSI C63.10-2013 section 6.4		
Procedure:	ANSI C63.10-2013 section 6.4		

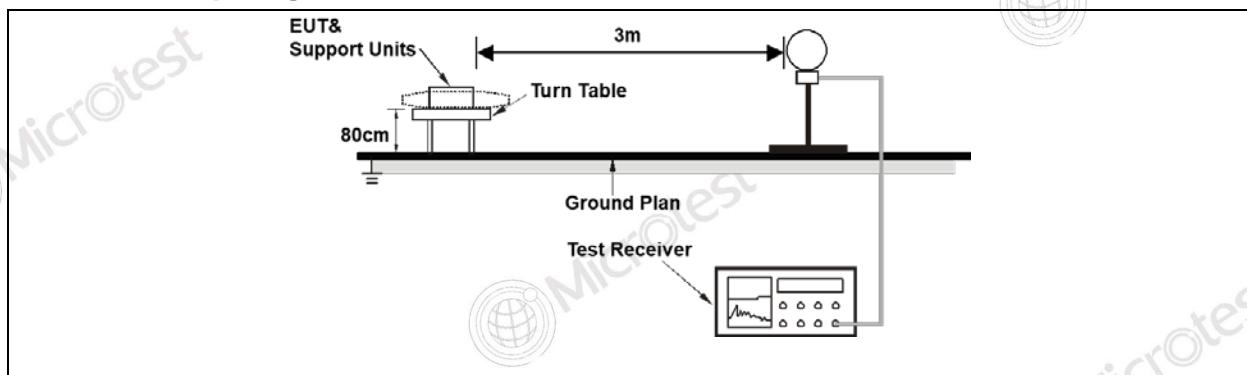
6.3.1 E.U.T. Operation:

Operating Environment:				
Temperature:	22.5 °C	Humidity:	43 %	Atmospheric Pressure: 101 kPa
Pre test mode:	Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9, Mode10, Mode11, Mode12, Mode13, Mode14, Mode15, Mode16, Mode17, Mode18, Mode19, Mode20, Mode21, Mode22, Mode23, Mode24			
Final test mode:	All of the listed pre-test mode were tested, only the data of the worst mode (Mode2, Mode6) is recorded in the report			

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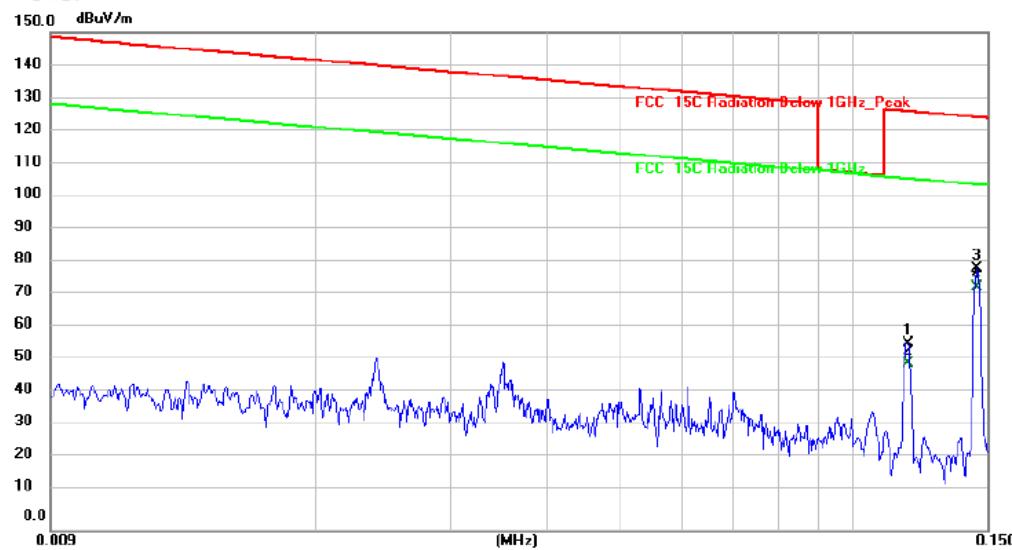
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6.3.2 Test Setup Diagram:



6.3.3 Test Data:

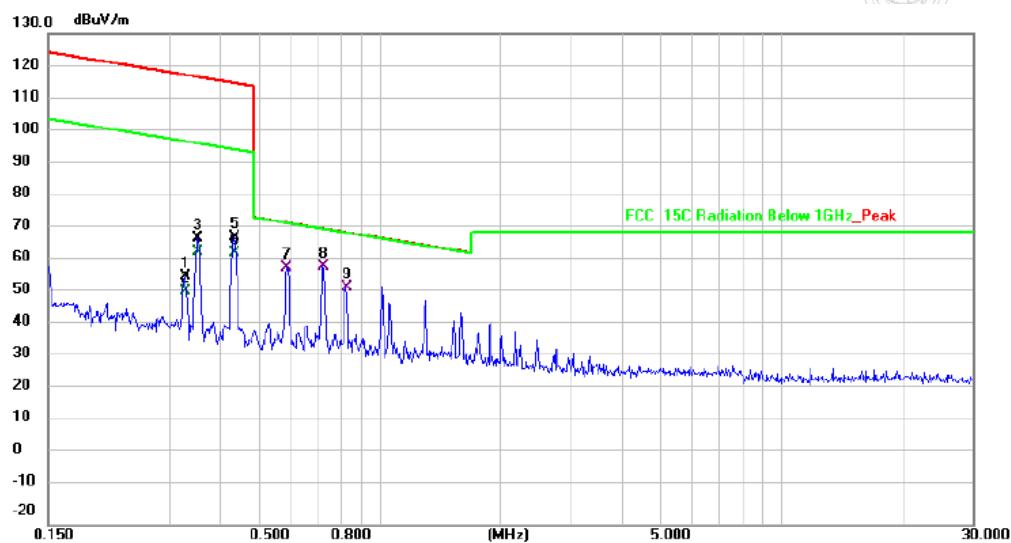
Mode2 / Polarization: Coplanar



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.1178	36.06	20.50	56.56	126.20	-69.64	peak	
2		0.1178	29.80	20.50	50.30	106.20	-55.90	AVG	
3		0.1454	58.22	20.58	78.80	124.37	-45.57	peak	
4	*	0.1454	52.62	20.58	73.20	104.37	-31.17	AVG	

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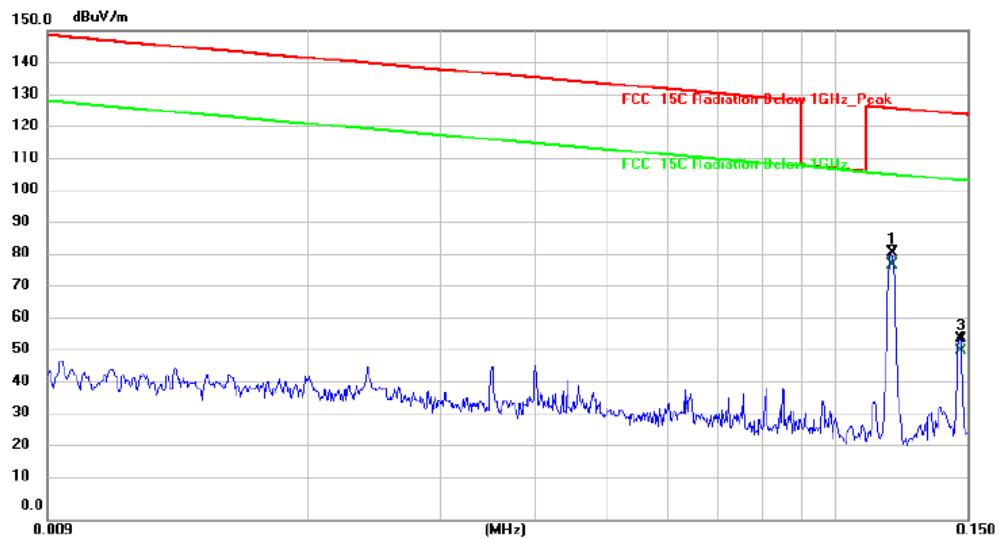
Mode2 / Polarization: Coplanar


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	0.3286	34.90	21.01	55.91	117.28	-61.37		peak	
2	0.3286	30.29	21.01	51.30	97.28	-45.98		AVG	
3	0.3520	46.49	21.06	67.55	116.68	-49.13		peak	
4	0.3520	42.34	21.06	63.40	96.68	-33.28		AVG	
5	0.4351	46.67	21.26	67.93	114.83	-46.90		peak	
6	0.4351	41.94	21.26	63.20	94.83	-31.63		AVG	
7	0.5885	37.07	21.62	58.69	72.21	-13.52		QP	
8 *	0.7236	37.10	21.93	59.03	70.42	-11.39		QP	
9	0.8261	30.38	22.19	52.57	69.28	-16.71		QP	

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Mode6 / Polarization: Coplanar

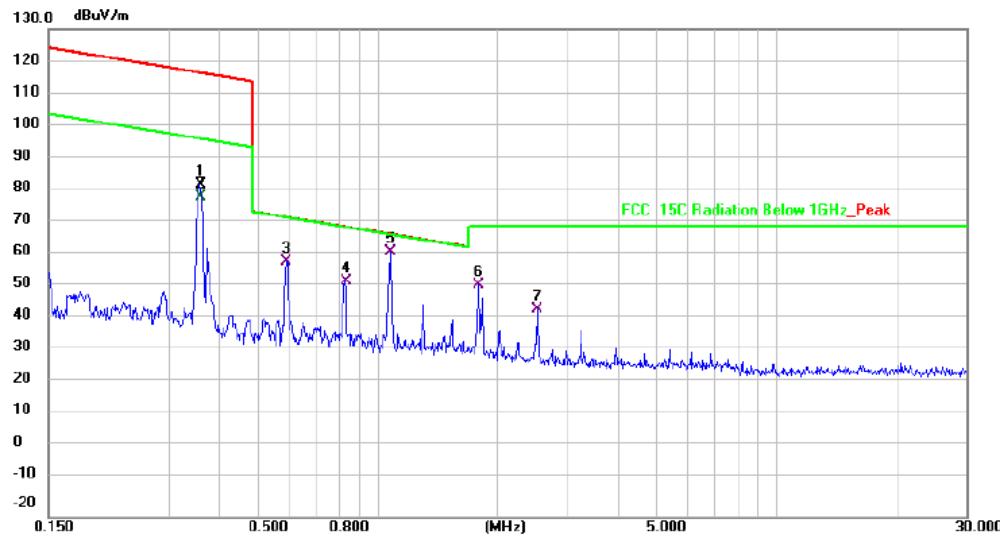


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	0.1188	61.49	20.50	81.99	126.13	-44.14	peak		
2 *	0.1188	57.80	20.50	78.30	106.13	-27.83	AVG		
3	0.1462	35.11	20.58	55.69	124.32	-68.63	peak		
4	0.1462	31.52	20.58	52.10	104.32	-52.22	AVG		

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Mode6 / Polarization: Coplanar



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Comment
			Level	Factor	ment	dBuV/m	dBuV/m	
		MHz	dBuV	dB			dB	
1	0.3596	61.01	21.08	82.09	116.49	-34.40	peak	
2	0.3596	57.52	21.08	78.60	96.49	-17.89	AVG	
3	0.5916	37.01	21.62	58.63	72.17	-13.54	QP	
4	0.8305	30.48	22.19	52.67	69.23	-16.56	QP	
5 *	1.0766	38.89	22.76	61.65	66.98	-5.33	QP	
6	1.8000	27.36	24.24	51.60	69.50	-17.90	QP	
7	2.5133	18.15	25.71	43.86	69.50	-25.64	QP	

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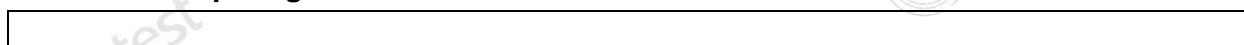
6.4 Emissions in frequency bands (30MHz - 1GHz)

Test Requirement:	47 CFR Part 15.209				
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measuremen t 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		
<p>** 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.</p> <p>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. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p>					
Test Method:	ANSI C63.10-2013 section 6.5				
Procedure:	ANSI C63.10-2013 section 6.5				

6.4.1 E.U.T. Operation:

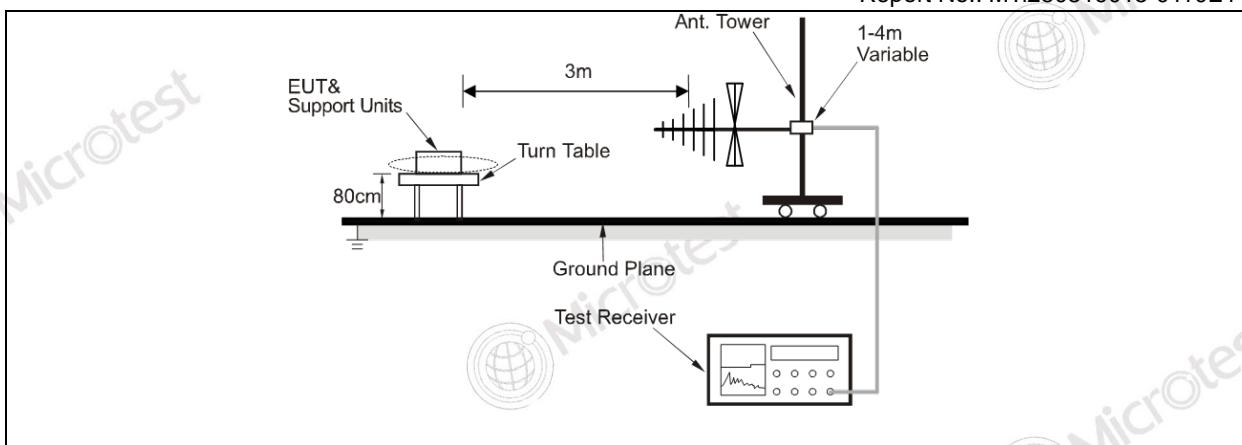
Operating Environment:				
Temperature:	22.5 °C	Humidity:	43 %	Atmospheric Pressure: 101 kPa
Pre test mode:	Mode1, Mode2, Mode3, Mode4, Mode5, Mode6, Mode7, Mode8, Mode9, Mode10, Mode11, Mode12, Mode13, Mode14, Mode15, Mode16, Mode17, Mode18, Mode19, Mode20, Mode21, Mode22, Mode23, Mode24			
Final test mode:	All of the listed pre-test mode were tested, only the data of the worst mode (Mode6) is recorded in the report			

6.4.2 Test Setup Diagram:

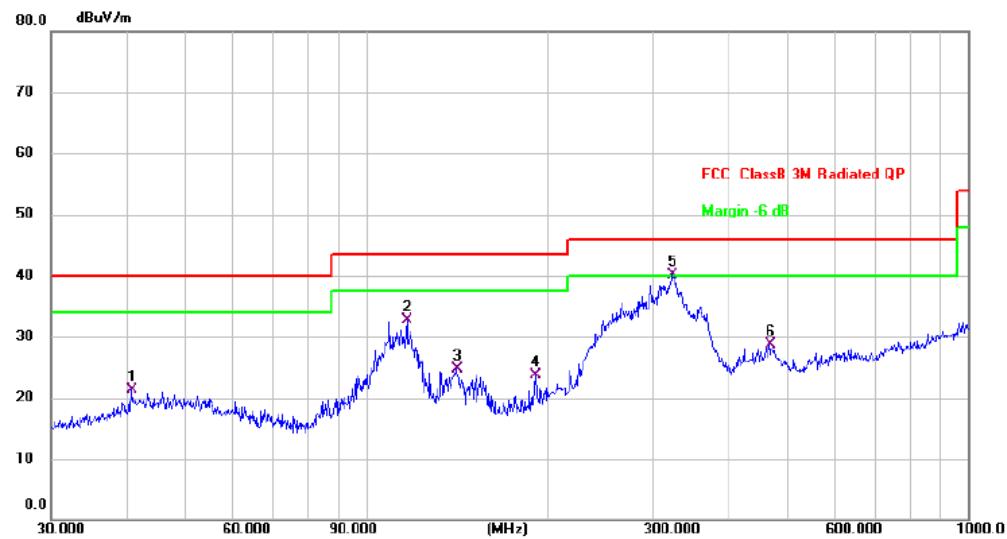


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Mode6 / Polarization: Horizontal

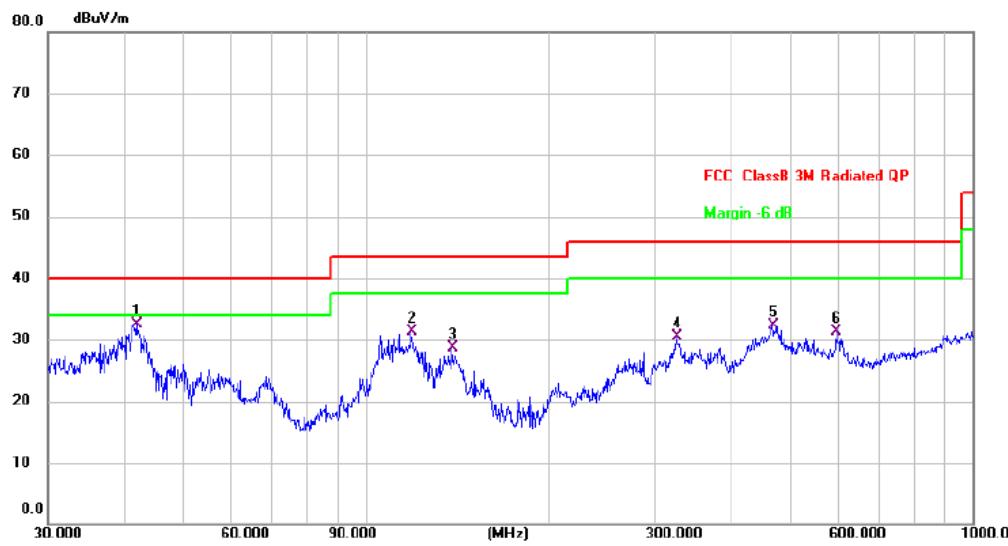


No.	Mk.	Reading	Correct	Measure-	Limit	Over		
		Freq.	Level	Factor	m	dB	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dB		
1		40.7016	28.96	-7.64	21.32	40.00	-18.68	QP
2		116.9495	41.43	-8.76	32.67	43.50	-10.83	QP
3		141.3298	33.57	-8.78	24.79	43.50	-18.71	QP
4		191.7450	32.64	-8.87	23.77	43.50	-19.73	QP
5	*	322.1886	44.51	-4.43	40.08	46.00	-5.92	QP
6		467.2349	31.20	-2.45	28.75	46.00	-17.25	QP

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Mode6 / Polarization: Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB	Detector	Comment
1	*	42.0066	39.72	-7.22	32.50	40.00	-7.50	QP
2		119.0180	40.46	-9.16	31.30	43.50	-12.20	QP
3		138.8735	37.59	-8.87	28.72	43.50	-14.78	QP
4		325.5958	34.87	-4.31	30.56	46.00	-15.44	QP
5		467.2349	34.82	-2.45	32.37	46.00	-13.63	QP
6		595.1329	31.03	0.21	31.24	46.00	-14.76	QP



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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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Statement

1. This report is invalid without the seal and signature of the laboratory.
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6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

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