

FCC Certification Test Report Addendum for FCC ID: C2DLWSH-21-SR

The following questions were raised during the review of the FCC certification filing for FCC ID: C2DLWSH-21-SR. Responses to the questions and additional data have been submitted within this addendum.

- 1) *In compliance with 15.35 of the FCC rules, data taken above 1000 MHz must be tested using an average detector utilizing a Resolution bandwidth of 1 MHz. Please provide the corresponding data using the average detector and information stating that the appropriate bandwidth for measurements above 1000 MHz were used.*

Reply: The output from the antenna was connected, via a preamplifier, to the input of the spectrum analyzer. The detector function was set to quasi-peak or peak, as appropriate. The measurement bandwidth on the spectrum analyzer system was set to at least 120 kHz, with all post-detector filtering no less than 10 times the measurement bandwidth. For measurements above 1 GHz, the measurement bandwidth was set to 1MHz. Average data, using the duty cycle correction, are listed in the original test report.

- 2) *Please also provide corresponding data demonstrating that the difference between the peak and average measurement for the restricted bands is less the 20dB above the average readings.*

Reply: Peak emissions data above 1 GHz are recorded in Table 1A of this addendum. As the emission is pulsed, peak emission levels were measured and corrected using the duty cycle correction as described in Section 4.1 of the original test report. The original test reports has data corrected using the duty cycle correction and then compared to the average limit.

Table 1A - FCC 15.247(c) 3M Radiated Emissions Data
Peak Measurements Above 1GHz

CLIENT: Intellisense
 MODEL NO: SN921-REPEATER
 TYPE/PART: Spread Spectrum TX
 DATE: 7/5/2001
 BY: Greg Snyder
 JOB #: 6395
 Tx FREQUENCY: 923.58 Mhz nf = Noise Floor

ORIENTATION: X = Flat (Ant. @90 degree)

Frequency	Polarity	Azimuth	Antenna	SA Level	AFc	E-Field	E-Field	Limit	Margin	
MHz	H/V	Degree	Height	(PEAK)						
			m	dBuV	dB/m	dBuV/m	uV/m	uV/m	dB	
1216.80	V	135.00	1.0	68.50	-10.9	57.6	756.4	5000.0	-16.4	
1216.80	H	135.00	1.0	63.0	-10.9	52.1	401.6	5000.0	-21.9	
1231.44	V	135.00	1.0	81.30	-10.8	70.5	3345.5	5000.0	-3.5	
1231.44	H	135.00	1.0	76.3	-10.8	65.5	1881.3	5000.0	-8.5	
1539.30	V	90.00	1.0	60.50	-8.7	51.8	390.0	5000.0	-22.2	
1539.30	H	180.00	1.0	59.8	-8.7	51.2	361.0	5000.0	-22.8	
2500.00	H	225.00	1.0	48.5	-5.2	43.3	145.7	5000.0	-30.7	
2770.83	V	112.50	1.0	62.83	-4.8	58.0	796.6	5000.0	-16.0	
2770.83	H	225.00	1.0	56.2	-4.8	51.4	371.3	5000.0	-22.6	
3694.44	V	180.00	1.0	56.70	-3.6	53.1	450.9	5000.0	-20.9	
3694.44	H	135.00	1.0	50.8	-3.6	47.2	228.6	5000.0	-26.8	
4603.62	V	0.00	1.0	45.50	-2.7	42.8	137.9	5000.0	-31.2	nf
4603.62	H	225.00	1.0	46.8	-2.7	44.1	160.1	5000.0	-29.9	nf
4618.05	V	180.00	1.0	47.20	-2.7	44.5	167.9	5000.0	-29.5	
4618.05	H	225.00	1.0	48.8	-2.7	46.1	201.9	5000.0	-27.9	
4926.80	V	180.00	1.0	51.20	-2.4	48.8	274.5	5000.0	-25.2	
4926.80	H	135.00	1.0	53.7	-2.4	51.3	366.0	5000.0	-22.7	
5406.00	V	0.00	1.0	45.40	-2.0	43.4	147.1	5000.0	-30.6	nf
5406.00	H	0.00	1.0	45.4	-2.0	43.4	147.1	5000.0	-30.6	
7388.64	V	0.00	1.0	45.50	2.2	47.7	242.7	5000.0	-26.3	nf
7388.64	H	180.00	1.0	46.0	2.2	48.2	257.0	5000.0	-25.8	nf
8312.22	V	0.00	1.0	45.20	2.2	47.4	234.4	5000.0	-26.6	nf
8312.22	H	0.00	1.0	45.6	2.2	47.8	245.5	5000.0	-26.2	nf
9236.40	V	0.00	1.0	46.20	2.5	48.7	272.2	5000.0	-25.3	nf
9236.40	H	180.00	1.0	46.0	2.5	48.5	266.0	5000.0	-25.5	nf

ORIENTATION: Y = Standing Up/Vertical Mount

Frequency	Polarity	Azimuth	Antenna Height	SA Level (PEAK)	AFc	E-Field	E-Field	Limit	Margin
MHz	H/V	Degree	m	dBuV	dB/m	dBuV/m	uV/m	uV/m	dB
1216.80	V	22.00	1.0	72.30	-10.9	61.4	1171.5	5000.0	-12.6
1216.80	H	90.00	1.0	62.20	-10.9	51.3	71.4	5000.0	-22.7
1231.44	V	22.00	1.0	81.20	-10.8	70.4	3307.2	5000.0	-3.6
1231.44	H	90.00	1.0	78.50	-10.8	67.7	2423.6	5000.0	-6.3
1539.30	V	0.00	1.0	54.60	-8.7	45.9	197.7	5000.0	-28.1
1539.30	H	157.50	1.0	61.20	-8.7	52.5	422.7	5000.0	-21.5
2770.83	V	180.00	1.0	62.20	-4.8	57.4	740.9	5000.0	-16.6
2770.83	H	135.00	1.0	68.30	-4.8	63.5	1495.4	5000.0	-10.5
3694.44	V	225.00	1.0	59.80	-3.6	56.2	644.3	5000.0	-17.8
3694.44	H	315.00	1.0	56.00	-3.6	52.4	416.0	5000.0	-21.6
4603.62	V	180.00	1.0	44.80	-2.7	42.1	127.2	5000.0	-31.9 nf
4603.62	H	315.00	1.0	46.00	-2.7	43.3	146.0	5000.0	-30.7 nf
4618.05	V	157.50	1.0	49.70	-2.7	47.0	223.9	5000.0	-27.0
4618.05	H	135.00	1.0	48.40	-2.7	45.7	192.8	5000.0	-28.3
4925.80	V	180.00	1.0	50.70	-2.4	48.3	259.1	5000.0	-25.7
4926.80	H	135.00	1.0	50.50	-2.4	48.1	253.2	5000.0	-25.9
5541.36	V	180.00	1.0	42.70	-1.9	40.8	109.1	5000.0	-33.2 nf
5541.36	H	315.00	1.0	45.80	-1.9	43.9	155.9	5000.0	-30.1 nf
7388.64	V	90.00	1.0	45.00	2.2	47.2	229.1	5000.0	-26.8 nf
7388.64	H	202.50	1.0	47.0	2.2	49.2	288.4	5000.0	-24.8 nf
8312.22	V	0.00	1.0	46.50	2.2	48.7	272.3	5000.0	-25.3 nf
8312.22	H	0.00	1.0	46.6	2.2	48.8	275.4	5000.0	-25.2 nf
9236.40	V	0.00	1.0	46.60	2.5	49.1	285.0	5000.0	-24.9 nf
9236.40	H	0.00	1.0	45.80	2.5	48.3	260.0	5000.0	-25.7 nf

ORIENTATION: Z = Antenna Parallel to Rx Antenna

Frequency	Polarity	Azimuth	Antenna Height	SA Level (PEAK)	AFc	E-Field	E-Field	Limit	Margin
MHz	H/V	Degree	m	dBuV	dB/m	dBuV/m	uV/m	uV/m	dB
1216.80	V	315.00	1.0	68.00	-10.9	57.1	714.1	5000.0	-16.9
1216.80	H	90.00	1.0	62.30	-10.9	51.4	370.5	5000.0	-22.6
1231.44	V	45.00	1.0	81.30	-10.8	70.5	3345.5	5000.0	-3.5
1231.44	H	90.00	1.0	76.80	-10.8	66.0	1992.8	5000.0	-8.0
1539.30	V	315.00	1.0	60.00	-8.7	51.3	368.2	5000.0	-22.7
1539.30	H	315.00	1.0	56.50	-8.7	47.8	246.1	5000.0	-26.2
2770.83	V	270.00	1.0	63.30	-4.8	58.5	840.9	5000.0	-15.5
2770.83	H	0.00	1.0	61.50	-4.8	56.7	683.5	5000.0	-17.3
3694.44	V	315.00	1.0	52.80	-3.6	49.2	287.8	5000.0	-24.8
3694.44	H	225.00	1.0	56.20	-3.6	52.6	425.7	5000.0	-21.4
4603.62	V	315.00	1.0	45.60	-2.7	42.9	139.5	5000.0	-31.1 nf
4603.62	H	338.00	1.0	45.30	-2.7	42.6	134.7	5000.0	-31.4 nf
4618.05	V	270.00	1.0	48.00	-2.7	45.3	184.1	5000.0	-28.7
4618.05	H	180.00	1.0	46.80	-2.7	44.1	160.4	5000.0	-29.9
4926.80	V	90.00	1.0	46.30	-2.4	43.9	156.1	5000.0	-30.1
4926.80	H	0.00	1.0	49.30	-2.4	46.9	220.5	5000.0	-27.1 .
5541.36	V	248.00	1.0	46.70	-1.9	44.8	172.9	5000.0	-29.2
5541.36	H	180.00	1.0	45.30	-1.9	43.4	147.1	5000.0	-30.6 nf
7388.64	V	0.00	1.0	46.50	2.2	48.7	272.3	5000.0	-25.3 nf
7388.64	H	180.00	1.0	47.0	2.2	49.2	288.4	5000.0	-24.8 nf
8312.22	V	0.00	1.0	46.20	2.2	48.4	263.0	5000.0	-25.6 nf
8312.22	H	0.00	1.0	46.8	2.2	49.0	281.8	5000.0	-25.0 nf
9236.40	V	0.00	1.0	46.30	2.5	48.8	275.4	5000.0	-25.2 nf
9236.40	H	0.00	1.0	45.80	2.5	48.3	260.0	5000.0	-25.7 nf