2.10 Minimum 6 dB Bandwidth per FCC Section 15.247(a)(2)

The minimum 6 dB bandwidth of the EUT was measured. The spectrum analyzer was set for a 50 Ω impedance with the RBW=100 kHz and VBW ≥ RBW. If the EUT incorporates different spreading codes or data rates these were each investigated, the one which produced the smallest 6 dB bandwidth was selected for test. All bandwidths measured are greater than 500 kHz minimum requirement specified by the FCC. The results of this test are given in Figure 7a through Figure 7c.

Figure 7a.
6 dB Bandwidth per FCC Section 15.247(a)(2) (low)

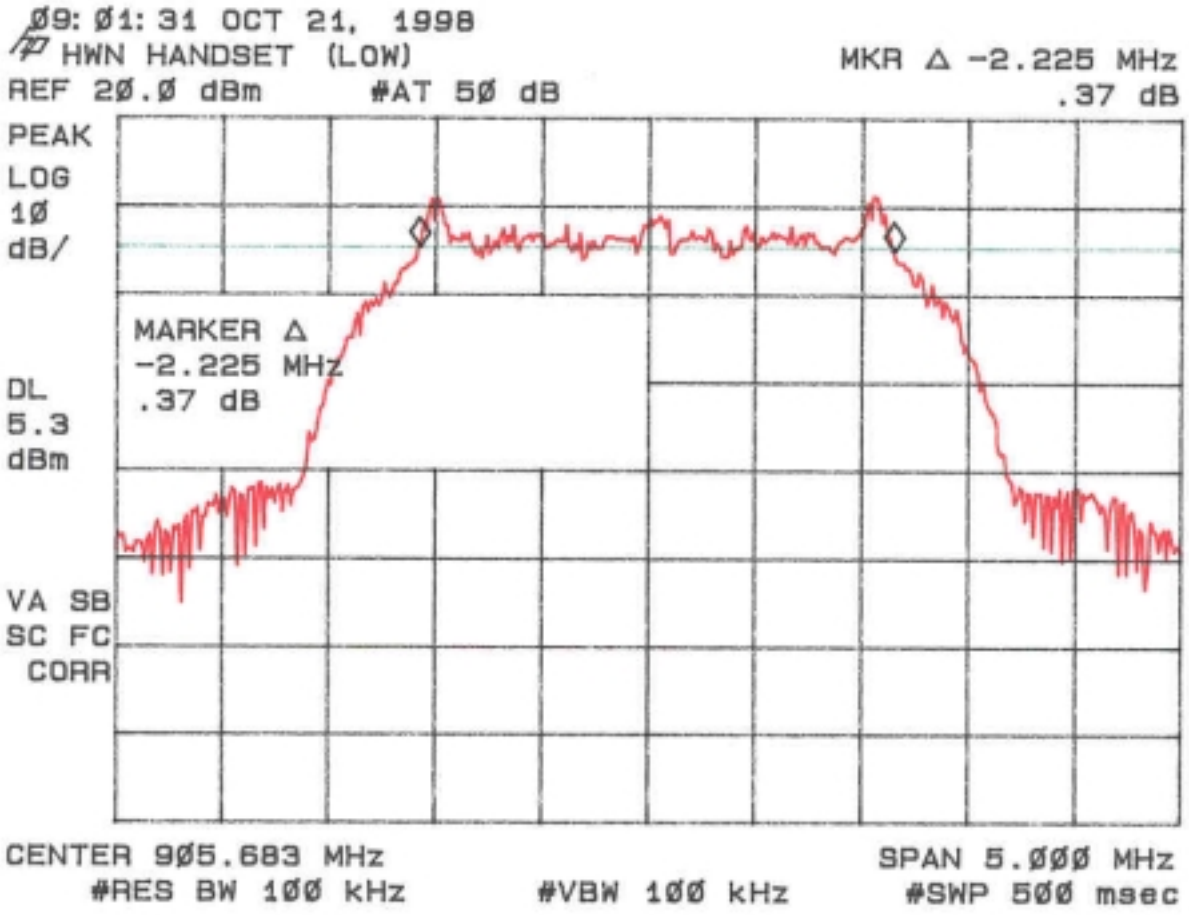


Figure 7b.
6 dB Bandwidth per FCC Section 15.247(a)(2) (Mid)

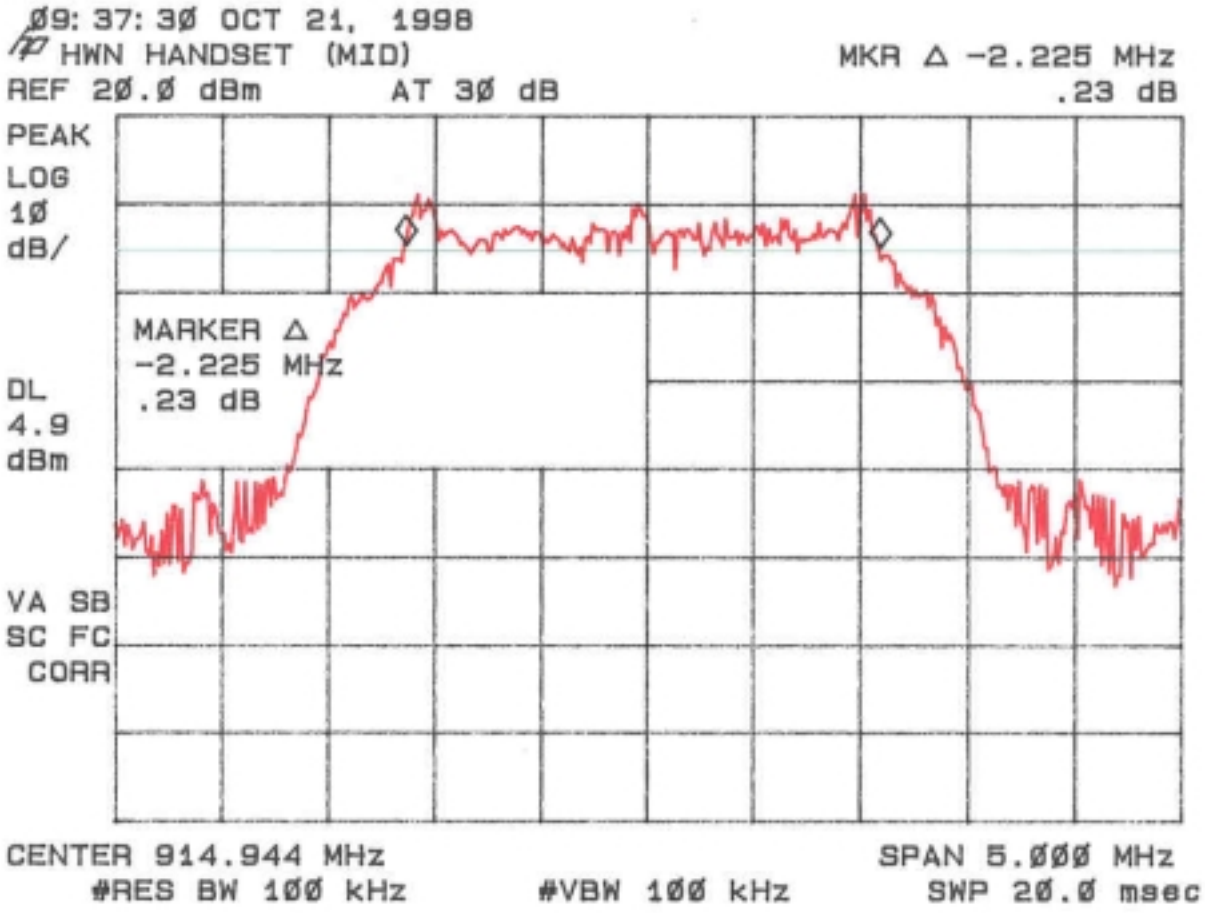
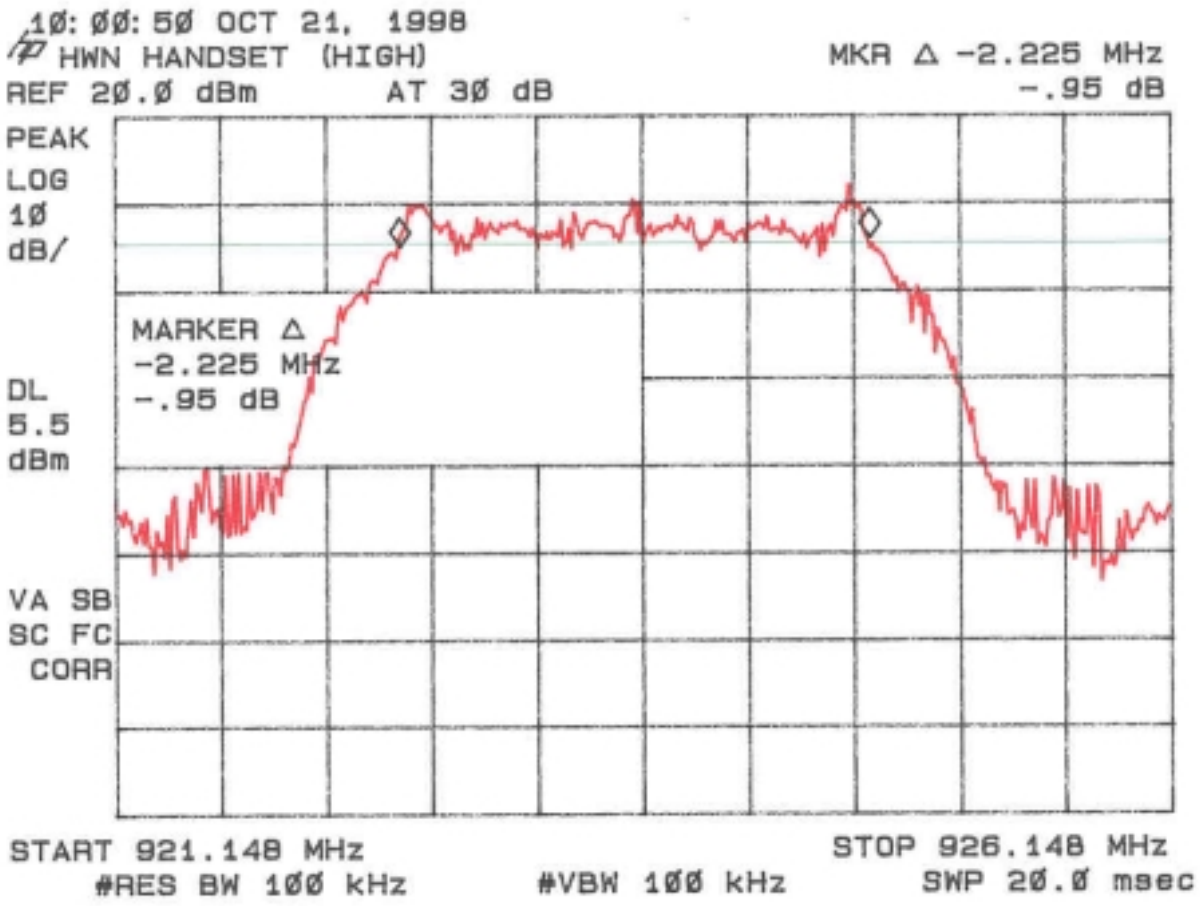


Figure 7c.
6 dB Bandwidth per FCC Section 15.247(a)(2) (High)



2.11 Power Spectral Density FCC Section 15.247(b) and 15.247(d)

The transmitter power spectral density averaged over any 1 second interval is given in Table 7a (low), Table 7b (mid), Table 7c (high) and Figure 8a through Figure 8c. If the EUT incorporates different spreading codes or data rates these were each investigated and the one which produced the highest spectral density was selected for test. The measurement was made using a spectrum analyzer utilizing noise marker mode. A 34.8 dBm adjustment has been added to the measurement to correct from 1 Hz to 3 kHz measurement.

POWER SPECTRAL DENSITY

Test Date: October 21, 1998
UST Project: 98-569
Customer: Home Wireless Networks, Inc.
Model: 95-0001-XXX

TABLE 7a POWER SPECTRAL DENSITY (Low)

Test Data (dBm) Normalized to 1 Hz	Results (dBm)	FCC Limit 7(dBm)
-46.96	-12.16	+8.0

TABLE 7a POWER SPECTRAL DENSITY (Mid)

Test Data (dBm) Normalized to 1 Hz	Results (dBm)	FCC Limit (dBm)
-43.98	-9.18	+8.0

TABLE 7a POWER SPECTRAL DENSITY (High)

Test Data (dBm) Normalized to 1 Hz	Results (dBm)	FCC Limit (dBm)
-41.92	-7.12	+8.0

Note: 34.8 dBm has been added to correct from 1 Hz to 3 kHz

Tester Signature:  **Name:** Tim R. Johnson

Figure 8a
Power Spectral Density 15.247(b) and 15.247(d) Low

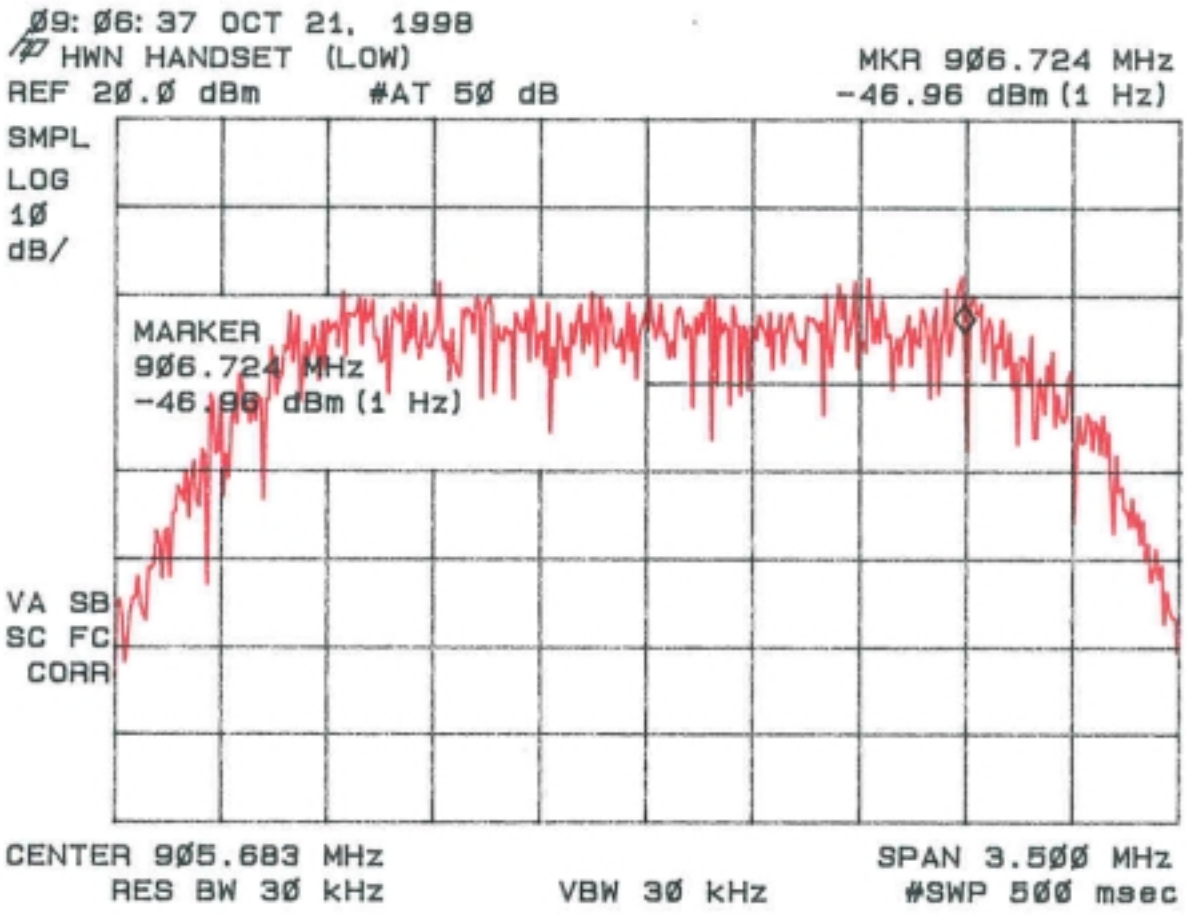


Figure 8b
Power Spectral Density 15.247(b) and 15.247(d) Mid

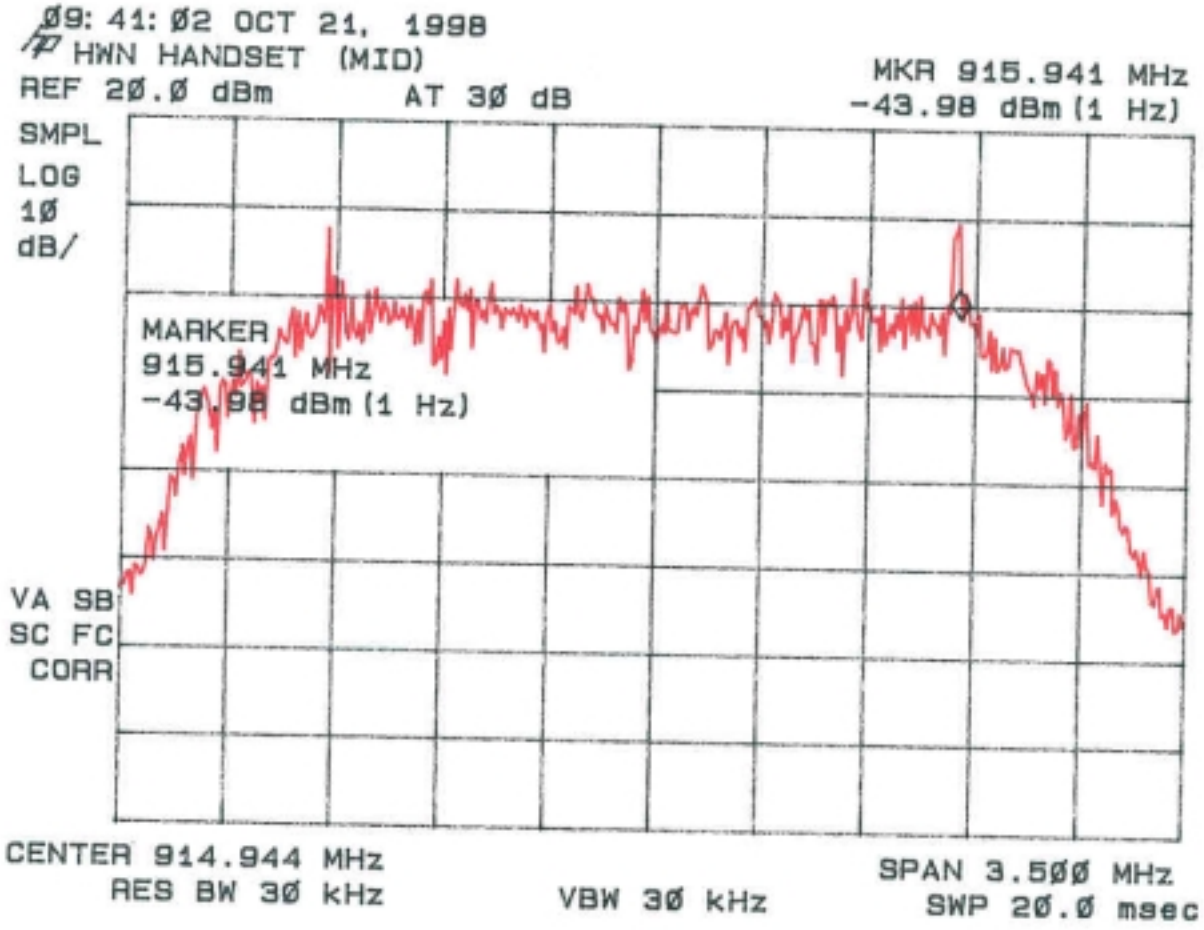
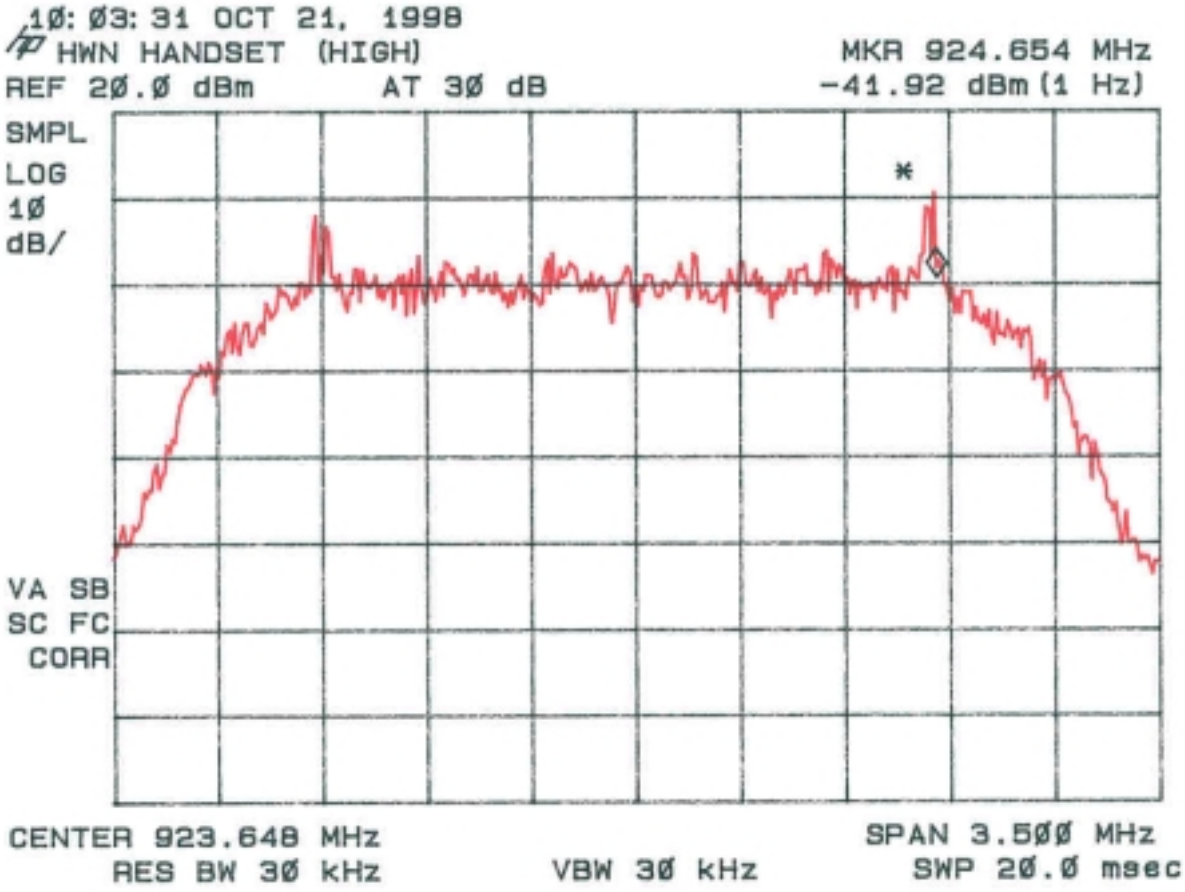


Figure 8c
Power Spectral Density 15.247(b) and 15.247(d) High



2.12 Processing Gain

Data regarding processing gain has been provided on the following page(s) from Home Wireless Networks, Inc.

This information has been provided in a separate file.

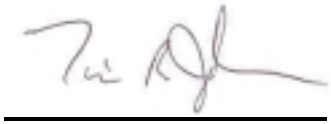
2.13 Power Line Conducted Emissions for Transmitter FCC Section 15.207

The conducted voltage measurements have been carried out in accordance with FCC Section 15.207, with a spectrum analyzer connected to a LISN and the EUT placed into a continuous mode of transmit. A preliminary scan was performed for a typical low, middle, and high channel. Final data was taken only for the worse case mode of operation determined from the preliminary scan. The results are given in Table 8.

TABLE 8. POWER LINE CONDUCTED EMISSIONS DATA (TRANSMITTER)
CLASS B

Test Date: October 20, 1998
UST Project: 98-569
Customer: Home Wireless Networks, Inc.
Product: 95-0001-XXX

FREQUENCY (MHz)	TEST DATA (dBm) PHASE NEUTRAL	LISN LOSS (dBm) PHASE NEUTRAL	CABLE FACTOR (dB)	RESULTS (uV) PHASE NEUTRAL	FCC LIMITS (uV)	MARGIN BELOW LIMIT (dB) PHASE NEUTRAL
Since the EUT is battery powered only, this test was deemed unnecessary						

Tester Signature:  **Name:** Tim R. Johnson

2.14 Radiated Emissions for Digital Device & Receiver (47 CFR 15.109a)

Radiated emissions were evaluated from 30 to 5000 MHz while the EUT was placed into a Receive mode of operation. Measurements were made with the analyzer's bandwidth set to 120 kHz for measurements made less than 1 GHz and 1 MHz for measurements made greater then or equal to 1 GHz. Data reported is for the worse case mode of operation on the middle channel.

TABLE 9a. RADIATED EMISSIONS DATA (DIGITAL DEVICE & RECEIVER)

CLASS B

Test Date: October 20, 1998
UST Project: 98-588
Customer: Home Wireless Networks, Inc.
Product: 95-0002-XXX

Frequency (MHz)	Test Data (dBm) @3m	Ant. Factor + Cable Atten. - Amp Gain	Results (uV/m)	FCC Limits (uV/m) @3m	Margin Below FCC Limit (dB)
704.5	-76.7	6.1	16.2	200.0	-21.8

Note: All other readings were at least 20 dB below the limit

***= Quasi Peak Measurement**

SAMPLE CALCULATIONS:

RESULTS uV/m @ 3m = Antilog ((-76.7 + 6.1 + 107)/20) = 16.2
CONVERSION FROM dBm TO dBuV = 107 dB

Test Results Reviewed By: _____ **Name:** Tim R. Johnson

TABLE 9b RADIATED EMISSIONS DATA (DIGITAL DEVICE & RECEIVER)

CLASS B

Test Date: October 20, 1998
UST Project: 98-588
Customer: Home Wireless Networks, Inc.
Model: 95-0002-XXX

Peak Measurements >1GHz

FREQ. (GHz)	TEST DATA (dBm) @ 3m	AMP GAIN (dB)	ANT. FACTOR (dB)	CABLE LOSS (dB)	RESULTS (uV/m) @ 3m	FCC LIMITS (uV/m) @ 3m
1.04	-57.0	36.0	26.9	2.2	144.4	500.0

* Since Peak measurements met with the average limits, average measurements were deemed unnecessary.

SAMPLE CALCULATIONS:
Results uV/m @3m = Antilog ((-57.0 - 36.0 + 26.9 + 2.2 + 107)(20) = 144.4
Conversion from dB to dBuV = 107 dB

Tested Results
Reviewed By: _____ **Name:** Tim R. Johnson

2.15 Power Line Conducted Emissions for Digital Device and Receiver FCC Section 15.107

The conducted voltage measurements have been carried out in accordance with FCC Section 15.107, with a spectrum analyzer connected to a LISN and the EUT placed into a continuous mode of transmit.

TABLE 10. POWER LINE CONDUCTED EMISSIONS DATA (RECIVER & DIGITAL DEVICE)
CLASS B

Test Date: October 20, 1998
UST Project: 98-569
Customer: Home Wireless Networks, Inc.
Product: 95-0001-XXX

FREQUENCY (MHz)	TEST DATA (dBm) PHASE NEUTRAL	LISN LOSS (dBm) PHASE NEUTRAL	CABLE FACTOR (dB)	RESULTS (uV) PHASE NEUTRAL	FCC LIMITS (uV)	MARGIN BELOW LIMIT (dB) PHASE NEUTRAL
Since the EUT is battery powered only, this test was deemed unnecessary						

Tester Signature: _____ **Name:** Tim R. Johnson

SECTION 3

LABELING INFORMATION

This information has been provided in a separate file

SECTION 4

BLOCK DIAGRAM(S) / SCHEMATIC(S)

This information has been provided in a separate files

SECTION 5

PHOTOGRAPHS

PHOTOS OF THE TESTED EUT

The following photos are attached:

Photo 1. EUT, Front View
Photo 2. EUT, Rear View
Photo 3. EUT, Side View
Photo 4. Internal View Showing Antenna (Cover Opened & Battery Removed)
Photo 5. EUT, Top View of Main Board (Shields Installed)
Photo 6. EUT, Top View of Main Board (Shields Removed)
Photo 7. EUT, Bottom View of Main Board with LCD Still in Place
Photo 8. EUT, Bottom View of Main Board with LCD Removed

These have been provided in separate files

SECTION 6

USER'S MANUAL

This information has been provided in a separate file