



ADDENDUM TO FC01-029

FOR THE

WIRELESS PC LAN CARD, 802CI2

FCC PART 15 SUBPART B SECTIONS 15.107 & 15.109 CLASS B

FCC PART 15 SUBPART C SECTIONS 15.207, 15.209 & 15.247

COMPLIANCE

DATE OF ISSUE: MAY 10, 2001

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A2LA (USA); DATech (Germany); BSMI (Taiwan); Nemko (Norway); and GOST (Russia).

CKC Laboratories, Inc. has received test site Registration Acceptance from the following agencies:

FCC (USA); VCCI (Japan); and Industry Canada.

CKC Laboratories, Inc. has received Letters of Acceptance through an MRA for the following agencies:

ACA/NATA (Australia); SABS (South Africa); SWEDAC (Sweden); Radio Communications Agency (RA); HOKLAS (Hong Kong); Bakom (Swiss); BIPT (Belgium); Denmark Telestyrelsen; RvA (Netherlands); SEE (Luxembourg) SITTEL (Bolivia); and UKAS (UK).

ADMINISTRATIVE INFORMATION

DATE OF TEST:

March 9 through April 11, 2001

DATE OF RECEIPT:

March 9, 2001

PURPOSE OF TEST:

To demonstrate the compliance of the Wireless PC LAN Card, 802CI2, with the requirements for FCC Part 15 Subpart B Sections 15.107 & 15.109 Class B and FCC Part 15 Subpart C Sections 15.207, 15.209 & 15.247 devices. This addendum has corrected pages to reflect compliance from 30MHz – 24.83GHz.

TEST METHOD:

ANSI C63.4 1992

MANUFACTURER:

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REPRESENTATIVE:

Angela Yao

TEST LOCATION:

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SUMMARY OF RESULTS

The Actiontec Electronics, Inc. Wireless PC LAN Card, 802CI2 was found to be fully compliant with the following limits:

United States

- FCC Part 15 Subpart B Sections 15.107 & 15.109 Class B
- FCC Part 15 Subpart C Sections 15.207, 15.209 & 15.247
- ANSI C63.4 (1992) method

The results in this report apply only to the items tested, as identified herein.

Test Overview

Section	Test Type	Results
15.33	Frequency Ranges	Pass
15.35	Bandwidth Settings	Pass
15.203	Antenna Requirement	Pass
15.205	Restricted Bands	Pass
15.215	Additional Provisions	Pass
15.247(a)(2)	Bandwidth Measurements	Pass
15.247(b)(1)	Peak Output Power	Pass
15.247(c)/15.107/15.207	Spurious - Mains Conducted Emissions	Pass
15.247(c)15.209	Spurious - Radiated Emissions	Pass
15.247(d)	Peak Power Spectral Density	Pass
15.247(e)	Processing Gain	Pass

MODIFICATIONS REQUIRED FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

QUALITY ASSURANCE:

Dennis Ward, Quality Manager

Christine Nicklas, EMC/Lab Manager

TEST PERSONNEL:

Conan T. Boyle, EMC Engineer

Art Rice, Test Engineer



EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was a production unit.

Wireless PC LAN Card (Transceiver).

EQUIPMENT UNDER TEST

Wireless PC LAN Card

Manuf: Actiontec Electronics, Inc.
Model: 802CI2
Serial: 1080044
FCC ID: Pending

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Host Laptop PC

Manuf: Dell
Model: Inspiron 3700
Serial: PTB105
FCC ID: Self DoC

AC Adapter

Manuf: Dell
Model: ADP-70EB
Serial: TH-09364U-17971-06U-98TD
FCC ID: Self DoC

Remote PC

Manuf: Gateway
Model: CA1
Serial: 00210065
FCC ID: Self DoC

Wireless PC LAN Card Transceiver

Manuf: Actiontec
Model: 802CI2
Serial: MAC 00-20-E0-SS-03-57
FCC ID: Pending

Remote AC Adapter

Manuf: Delta Electronics
Model: ADP-35EB
Serial: 99363002
FCC ID: Self DoC

Spread Spectrum Method:	Direct Sequence
Tx/Rx Frequency Range:	2400 – 2483.5 MHz
Number of Channels:	11
Channel Separation:	5 MHz
Max RF Output Power:	15 dBm \pm 2.0 dBm
Type of Antenna:	Integral patch antenna, non-removable
Modulation Type:	Phase

MODE OF OPERATION

The transmitter is in the continuous mode.

15.33 FREQUENCY RANGE TESTED

15.247 Radiated:	30 MHz – 24.83 GHz
15.207 Conducted:	450 kHz – 30 MHz
15.109 Radiated	30–1000 MHz
15.107 Conducted	450 kHz – 30 MHz

EUT OPERATING FREQUENCY

The EUT was operating at 2400 – 2483.5 MHz.

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

REPORT OF MEASUREMENTS

The following tables report the six highest worst case levels recorded during the tests performed on the Wireless PC LAN Card, 802CI2. All readings taken are peak readings unless otherwise noted. The data sheets from which these tables were compiled are contained in Appendix B.

Table 1: 15.247(b)(1) Peak Power Output Levels									
FREQUENCY MHz	METER READING dBμV	CORRECTION FACTORS				CORRECTED READING dBμV/m	SPEC LIMIT dBμV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
2412.130	76.0	29.2		2.0		107.2	137.0	-29.8	H
2412.200	74.1	29.2		2.0		105.3	137.0	-31.7	V
2437.250	74.1	29.3		2.0		105.4	137.0	-31.6	H
2439.230	76.1	29.3		2.0		107.4	137.0	-29.6	V
2462.150	76.3	29.5		2.1		107.9	137.0	-29.1	V
2462.480	72.7	29.5		2.1		104.3	137.0	-32.7	H

Test Method: ANSI C63.4 1992
Spec Limit: FCC Part 15 Section 15.247(b)(1)/15209
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW=3 MHz.

Table 2: 15.247(c)/15.209 Six Highest Radiated Emission Levels - Transmitter

FREQUENCY MHz	METER READING dBμV	CORRECTION FACTORS				CORRECTED READING dBμV/m	SPEC LIMIT dBμV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
500.075	44.7	19.0	-28.0	6.8		42.5	46.0	-3.5	V
1694.500	60.5	25.9	-39.9	2.5		49.0	54.0	-5.0	V
2351.300	52.2	28.8	-37.7	5.1		48.4	54.0	-5.6	V
2512.500	50.7	29.8	-37.1	5.6		49.0	54.0	-5.0	V
2578.380	51.8	30.2	-37.4	5.4		50.0	54.0	-4.0	V
4075.486	43.9	39.1	-38.5	5.3		49.8	54.0	-4.2	VA

Test Method: ANSI C63.4 1992
Spec Limit: FCC Part 15 Section 15.247(c)/15.209
Test Distance: 3 Meters

NOTES: V = Vertical Polarization
A = Average Reading

COMMENTS: Table is comprised of data from multiple data sheets. For details and specific test notes see data sequences 7, 5, 4, 8, 9 & 10 in Appendix C.

Table 3: 15.247(c)/15.109 Six Highest Radiated Emission Levels - Receiver

FREQUENCY MHz	METER READING dBμV	CORRECTION FACTORS				CORRECTED READING dBμV/m	SPEC LIMIT dBμV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
483.998	40.0	18.7	-28.0	6.7		37.4	46.0	-8.6	V
500.073	38.5	19.0	-28.0	6.8		36.3	46.0	-9.7	V
2278.330	49.1	28.4	-38.1	4.6		44.0	54.0	-10.0	H
2340.747	50.6	28.8	-37.8	4.9		46.5	54.0	-7.5	HA
2603.550	46.6	30.4	-37.5	5.3		44.8	54.0	-9.2	V
3250.700	48.5	33.9	-39.0	5.0		48.4	54.0	-5.6	V

Test Method: ANSI C63.4 1992
Spec Limit: FCC Part 15 Section 15.247(c)/15.109
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
A = Average Reading

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. Note 1) Receiving at 2462 MHz on channel 11 for this scan for spurious emissions. Note 2) Scanned 30-1000 MHz and maximized as needed. See sequences 13 & 14 in Appendix C for more details.

Table 4: 15.247 Bandedge Signal Calculations

Channel 1:					
Signals were measured at resolution BW=1 MHz.					
Fundamental Frequency	Peak level	Average level	Comments		
2410.7 MHz	104.4	97.4	dBuV/m		
Band Edge Frequency					
2399 MHz	66.9			dBuV/m	
104.4-69.9=34.5 dB below the fundamental level, therefore it passes the −20 dBc specification.					
Channel 11:					
Fundamental was measured at resolution BW=1 MHz.					
Fundamental Frequency	Peak level	Average level	Comments		
2462.8 MHz	109.0	102.2	dBuV/m		
Fundamental and band edge signals were measured using resolution BW=300 kHz.					
Band Edge	Peak	Delta	Fund Peak-Delta	Fund Avg-Delta	Comments
2462.9	113.2	0			Fund.
2483.9	63.7	49.7	59.3	52.5	
2485.0	59.3	53.9	55.1	48.3	

Test Method: ANSI C63.4 1992
Spec Limit: FCC Part 15 Section 15.247
Test Distance: 3 Meters

NOTES: Both band edge signals were below the 54.0 dBuV/m specification for the 15.209 limit in the restricted band that starts at 2483.5 MHz.

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW as noted below. 20 dB attenuator used, preamp is used. Note: See sequence 3 in Appendix C for the raw data used to calculate the actual band edge signal levels.

Table 5: 15.247(d) Peak Power Spectral Density Emission Levels

Corrected Reading (dBuV/m)	Volts	$P=(E_d)^2/30G$	dBm	Limit (dBm)	Margin (dB)	Channel Freq.
79.5	0.009440609	2.67375E-05	-15.7288	8	-23.7288	2412 MHz
83.4	0.014791084	6.56328E-05	-11.8288	8	-19.8288	2437 MHz
81	0.011220185	3.77678E-05	-14.2288	8	-22.2288	2462 MHz

Test Method: ANSI C63.4 1992
 Spec Limit: FCC Part 15 Section 15.247(d)
 Test Distance: 3 Meters
 Antenna Gain: 1 dBi

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Measuring power spectral density. Spectrum analyzer RBW=3 kHz, VBW=10 kHz, span=300 kHz, sweep=100 sec. See sequence 2 in Appendix C for the raw data used to calculate the actual power spectral density levels.

Table 6: 15.107/15.207 Six Highest Conducted Emission Levels

FREQUENCY MHz	METER READING dBμV	CORRECTION FACTORS				CORRECTED READING dBμV	SPEC LIMIT dBμV	MARGIN dB	NOTES
		Lisn DB		Cable dB					
0.455572	39.7	0.2		0.0		39.9	48.0	-8.1	W
0.456965	40.7	1.0		0.0		41.7	48.0	-6.3	B
0.462538	38.0	0.2		0.0		38.2	48.0	-9.8	W
0.512689	38.7	0.2		0.0		38.9	48.0	-9.1	W
0.516868	39.3	1.0		0.0		40.3	48.0	-7.7	B
2.631306	36.8	1.2		0.3		38.3	48.0	-9.7	B

Test Method: ANSI C63.4 1992
Spec Limit: FCC Part 15 Section 15.107/15.207

NOTES: B = Black Lead
W = White Lead

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Transmitting at 2412 MHz on channel 1 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode which transmits with 78% duty cycle. The Host PC AC adapter (ADP-70EB) is connected to the LISN at 120V, 60 Hz. See sequences 11 & 12 in Appendix C for more details.



MEASUREMENT UNCERTAINTY

Associated with data in this report is a ± 4 dB measurement uncertainty.

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the Wireless PC LAN Card, 802CI2, was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS		
	Meter reading	(dB μ V)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dB μ V/m)



A typical data sheet will display the following in column format:

#	Freq	Rdng	HP-84	80317	Chase	Cable	Corr	Spec	Margin	Polar
	Dist	3.5G	hol-h	Horn	LISN	GHz C	FC-00	Cond_		

means reading number.

Freq is the frequency in MHz of the obtained reading.

Rdng is the reading obtained on the spectrum analyzer in dBμV.

HP-84, 80317 are the preamplifier factors or gain in dB.

3.5G is the high pass filter.

Chase is the bilog antenna factor in dB.

Horn is the horn antenna factor in dB.

Cable, rad-c, hol-h, cond_ & FC-00 are the cable losses in dB of the coaxial cable on the OATS.

GHz C is the cable loss in dB of the high frequency coaxial cable on the OATS.

Dist is the distance factor in dB used when testing at a different test distance than the one stated in the spec.

Corr is the corrected reading in dBμV/m (field strength).

Spec is the specification limit (dB) stated in the FCC regulations.

Margin is the closeness to the specified limit in dB; + is over and - is under the limit.

Polar is the polarity of the antenna with respect to earth.

LISN is the line impedance stabilization network factor in dB for conducted emissions.

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect both the radiated and conducted emissions data for the Wireless PC LAN Card, 802CI2. For radiated measurements between 30-1000 MHz, the bilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dB μ V, and a vertical scale of 10 dB per division.

FCC SECTION 15.35: TABLE B: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	450 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	24.83 GHz	1 MHz

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data for the Wireless PC LAN Card, 802CI2.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.



Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters.

During the preliminary radiated scan, the host PC was powered up and operating in its defined FCC test mode. The frequency range of 30 MHz to 1000 MHz was scanned with the bilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The bilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable as needed. The test engineer maximized the readings with respect to the table rotation and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor. Photographs showing the final worst case configuration of the EUT are contained in Appendix A.

Mains Conducted Emissions

During conducted emissions testing, the EUT was located on a wooden table measuring approximately 80 cm high, 1 meter deep, and 1.5 meters in length. One wall of the room where the EUT was located has a minimum 2 meter by 2 meter conductive plane. The EUT was mounted on the wooden table 40 cm away from the conductive plane, and 80 cm from any other conductive surface.

The vertical metal plane used for conducted emissions was grounded to the earth. Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

For conducted emissions testing, a 30 to 50 second sweep time was used for automated measurements in the frequency bands of 450 kHz to 1.705 MHz, 1.705 MHz to 3 MHz, and 3 MHz to 30 MHz. All readings within 20 dB of the limit were recorded. At frequencies where the recorded emissions were close to the limit, further investigation was performed manually at a slower sweep rate.

TRANSMITTER CHARACTERISTICS

15.203 Antenna Requirements

The antenna is an integral antenna located on the PCB board.

15.205 Restricted Bands

Operating frequency: 2400 – 2483.5 MHz

The Fundamental operating frequency lies outside the restricted bands and therefore complies with the requirements of Section 15.205 of the FCC rules.

Any spurious emission coming from the EUT was investigated to determine if any portion lies inside the restricted band. If any portion of a spurious emissions signal was found to be within a restricted band, investigation was performed to ensure compliance with Section 15.209.

15.215 Additional Provisions To The General Radiated Emission Limitations

The fundamental frequency was kept within at least the central 80% of the permitted band.

15.247(a)(2) Bandwidth Measurements (Direct Sequence)

The fundamental frequency was kept within the permitted band 2400-2483.5 MHz. The minimum 6dB bandwidth shall be at least 500 kHz. Refer to the following occupied bandwidth plots.

15.247(b) Peak Output Power

Frequency of Transmitter: 2400-2483.5 MHz

The RF conducted test was measured using a direct connection between the antenna port of the transmitter and the spectrum analyzer, through suitable attenuation. The resolution bandwidth was adjusted to greater than the 6 dB bandwidth of the emissions.

- ♦ **15.247(b)(1)** The maximum peak output power of frequency hopping systems operating in the 2400-2483.5 band and for all direct sequences, shall not exceed 1 watt.

15.247(d) Peak Power Spectral Density

The peak power spectral density conducted from the EUT to the antenna was not greater than 8 dm in any 3 kHz band during any time interval of continuous transmission.



APPENDIX A

INFORMATION ABOUT THE EQUIPMENT UNDER TEST



Not provided by customer at this time.

INFORMATION ABOUT THE EQUIPMENT UNDER TEST	
Test Software/Firmware: CRT was displaying: Power Supply Manufacturer: Power Supply Part Number: AC Line Filter Manufacturer: AC Line Filter Part Number:	
The AC power cord is removable and is NOT shielded	
Line voltage used during testing: 120V 60Hz	

I/O PORTS	
Type	#

CRYSTAL OSCILLATORS	
Type	Freq. In MHz

PRINTED CIRCUIT BOARDS				
Function	Model & Rev	Clocks, MHz	Layers	Location

CABLE INFORMATION

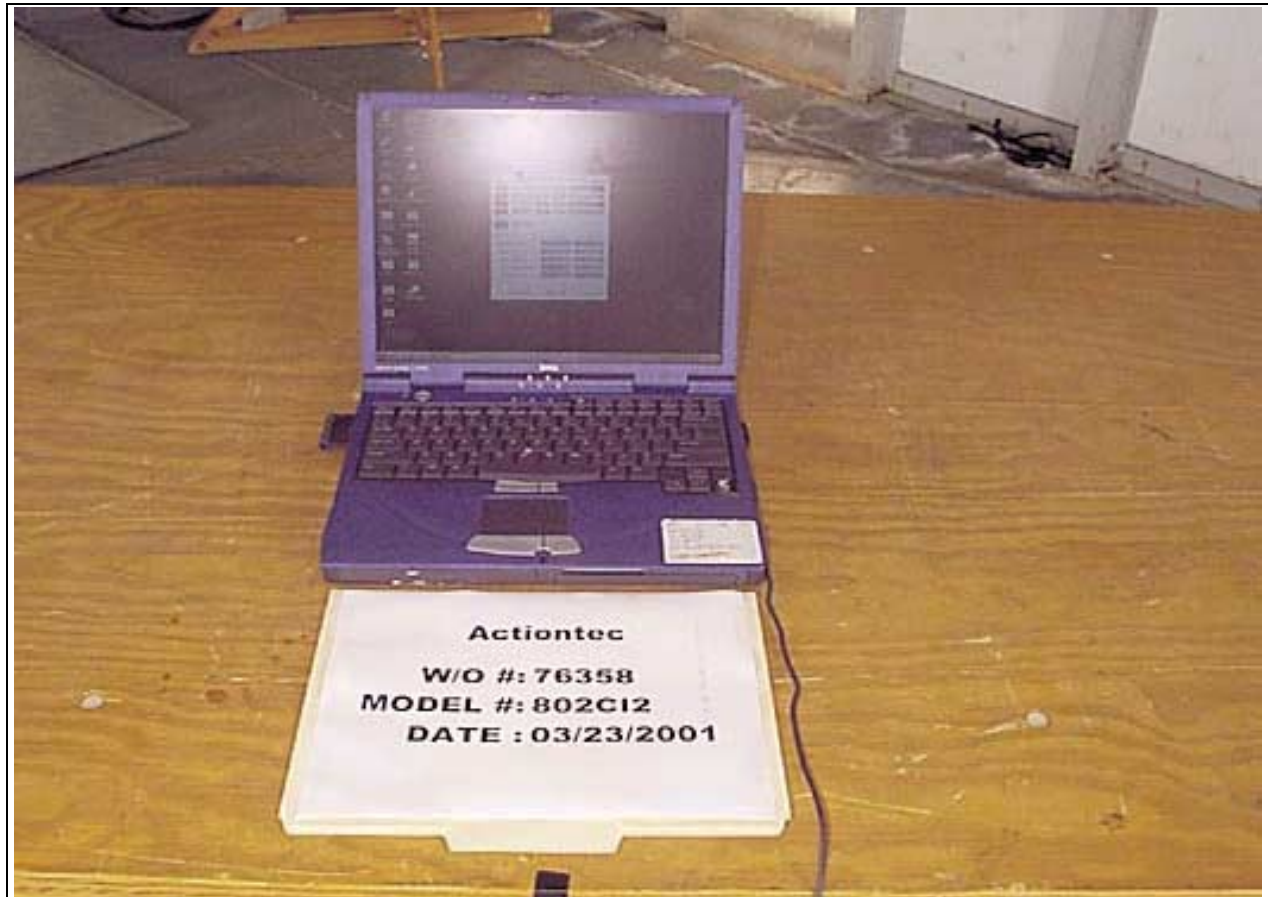
Cable #:		Cable(s) of this type:	
Cable Type:		Shield Type:	
Construction:		Length In Meters:	
Connected To End (1):		Connected To End (2):	
Connector At End (1):		Connector At End (2):	
Shield Grounded At (1):		Shield Grounded At (2):	
Part Number:		Number of Conductors:	
Notes:			

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS 15.247(c)



Mains Conducted Emissions - Front View

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



Mains Conducted Emissions - Side View



APPENDIX B

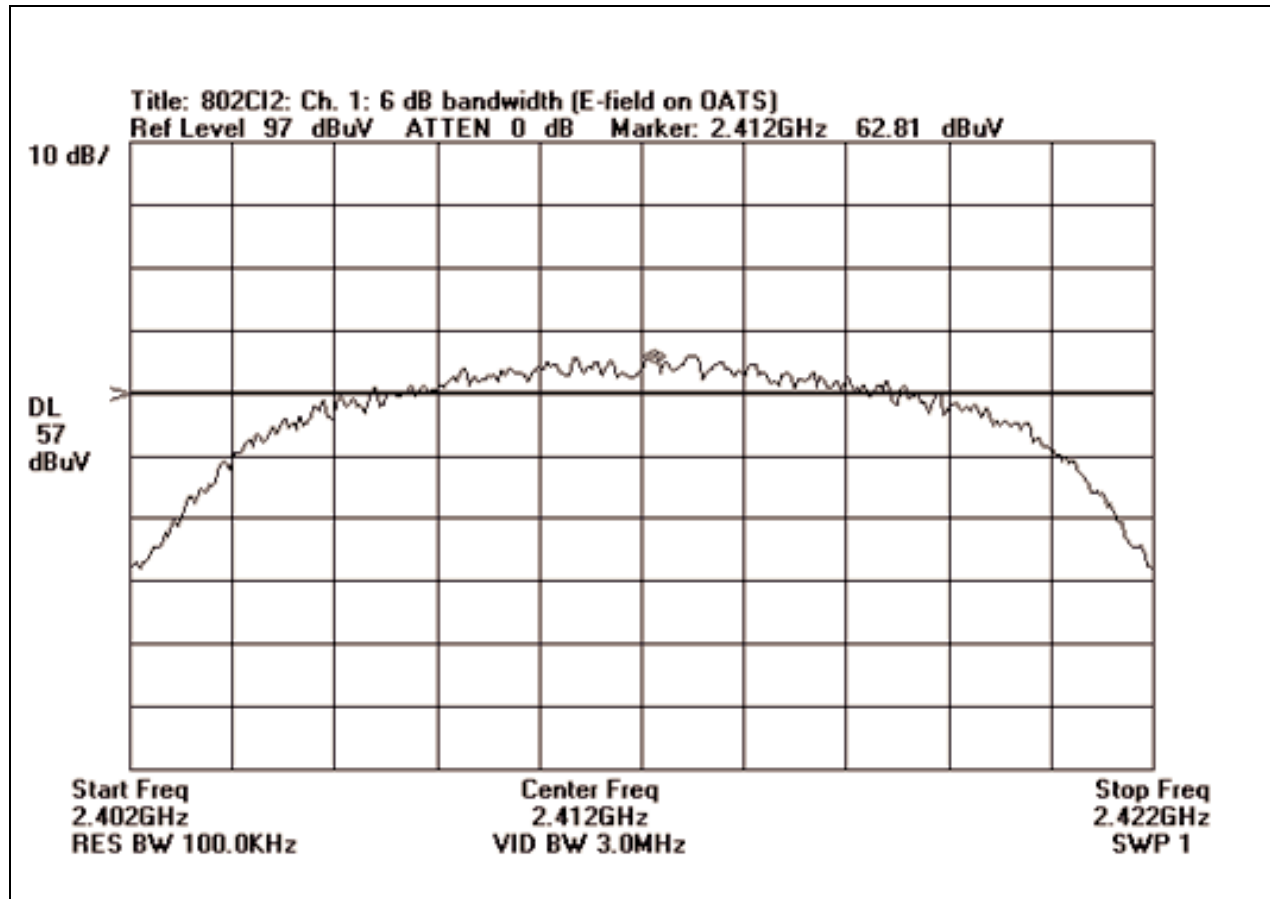
TEST EQUIPMENT LIST

Function	S/N	Calibration Date	Cal Due Date	Asset #
Horn Ant., Emco 3115	9602-4660	10/20/2000	10/20/2001	2113
S.A. HP8564E	3623A00539	12/12/2000	12/12/2001	783
Preamp, HP83017A	3123A0283	05/09/2000	05/09/2001	785
rad cable_10M	None	08/11/2000	08/11/2001	0
Bilog Antenna	2451	10/12/2000	10/12/2001	1995
Pre Amplifier	2944A06379	12/15/2000	12/15/2001	705
LISN, Solar 9252-50-R-24-BNC	927109	03/07/2001	03/07/2002	612

APPENDIX C

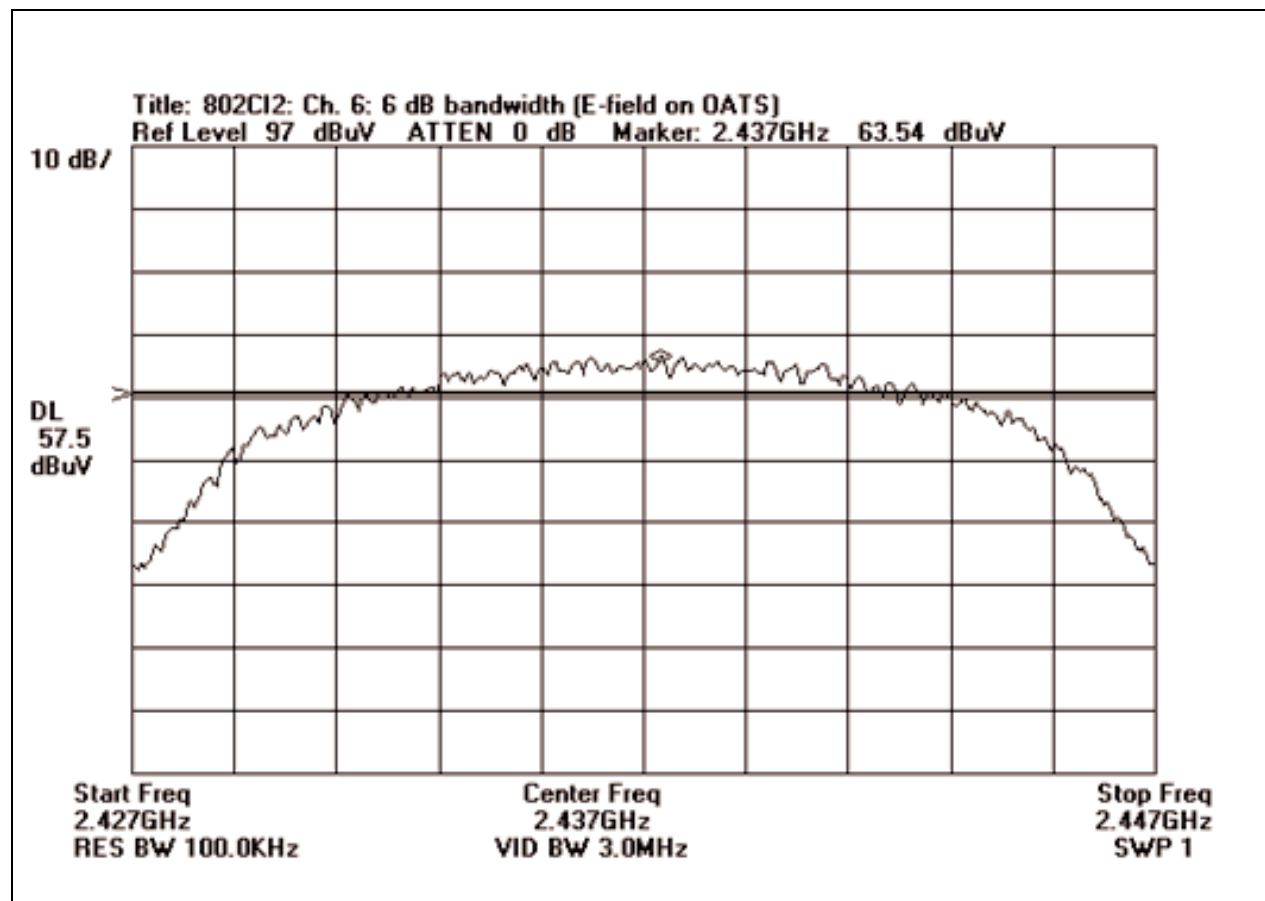
MEASUREMENT DATA SHEETS

FCC PART 15.247(a)(2) BANDWIDTH PLOT DIRECT SEQUENCE - CHANNEL 1



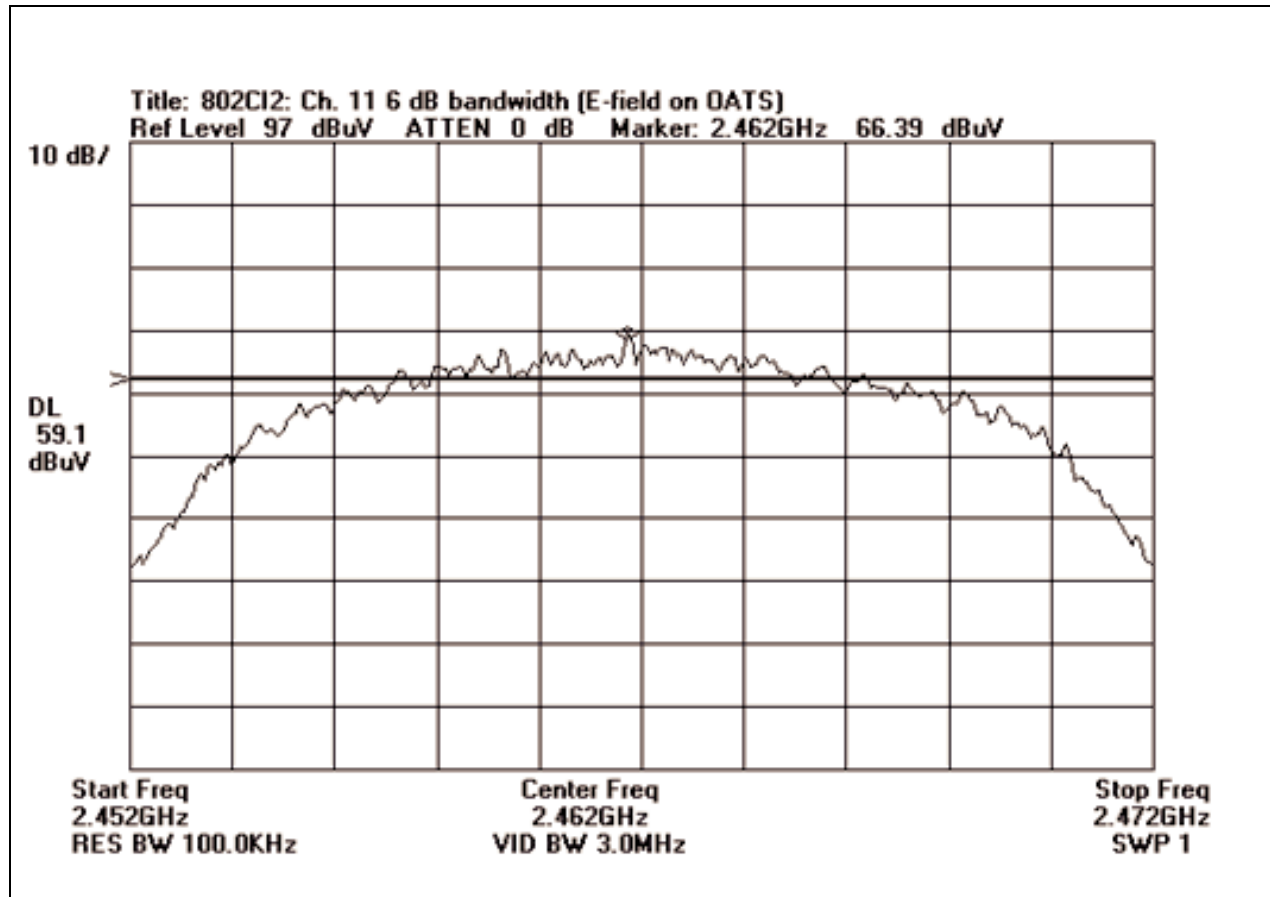
6 dB Bandwidth Plot Direct Sequence - Channel 1

FCC PART 15.247(a)(2) BANDWIDTH PLOT DIRECT SEQUENCE - CHANNEL 6



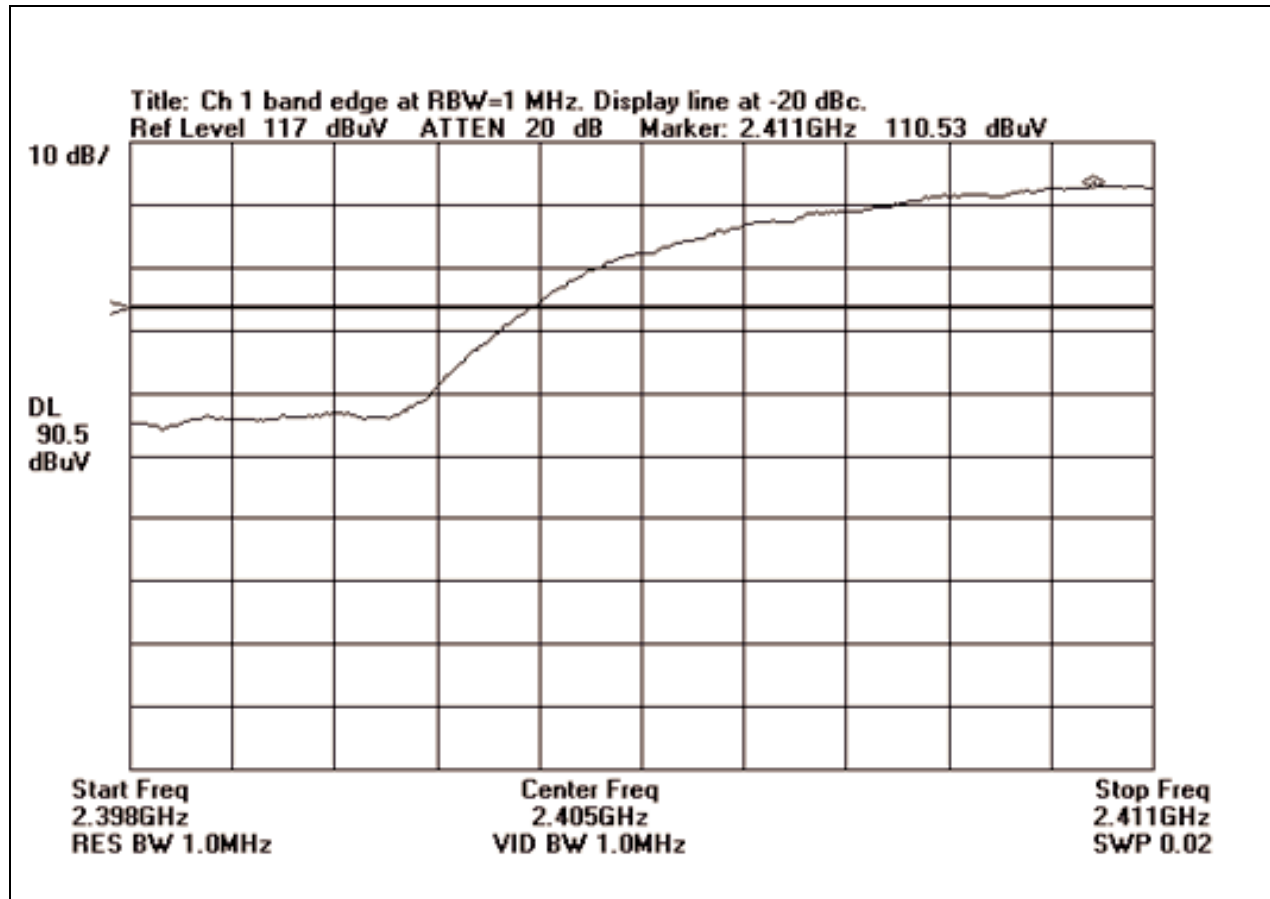
6 dB Bandwidth Plot Direct Sequence - Channel 6

FCC PART 15.247(a)(2) BANDWIDTH PLOT DIRECT SEQUENCE - CHANNEL 11



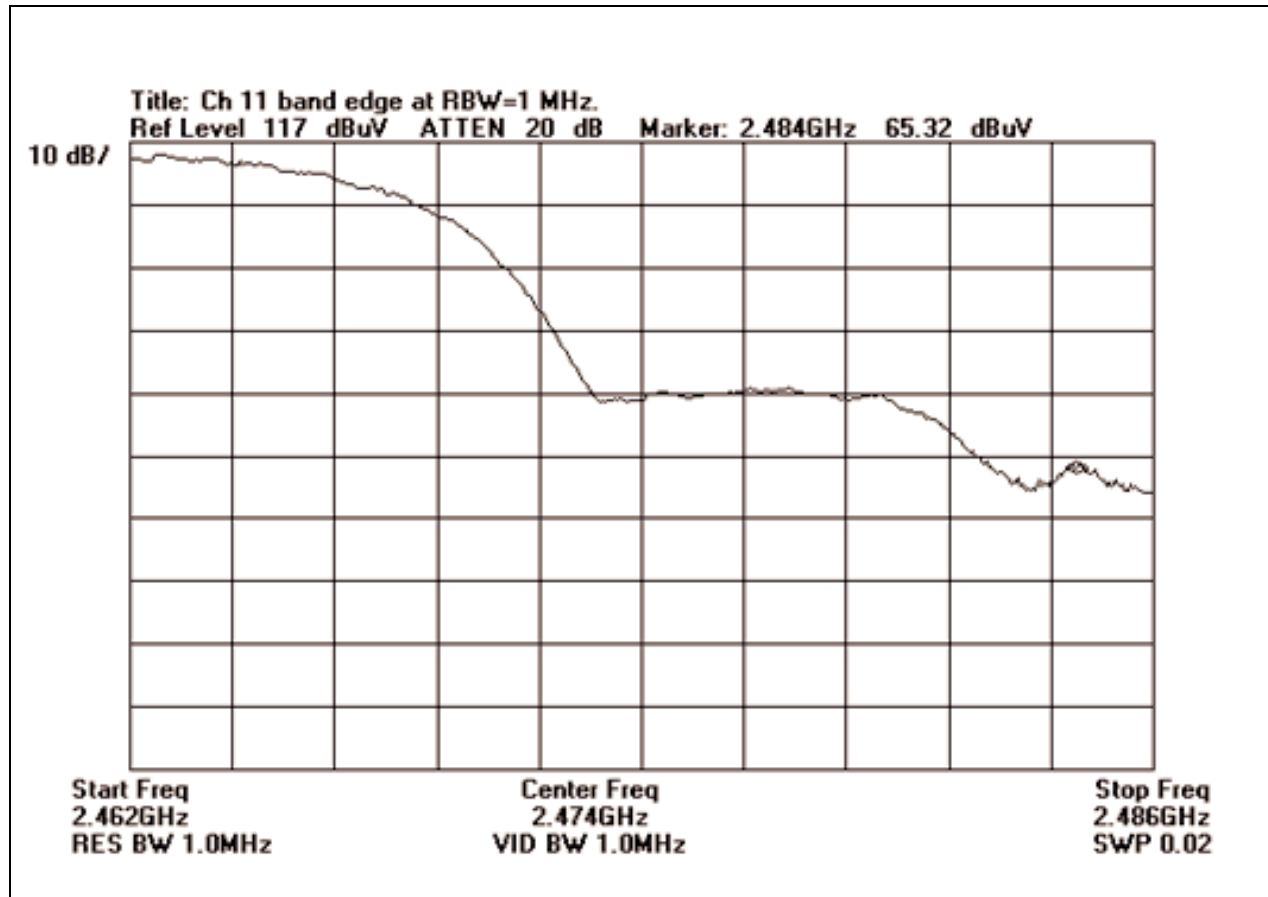
6 dB Bandwidth Plot Direct Sequence - Channel 11

FCC PART 15.247(c) BANDEDGE PLOT - CHANNEL 1



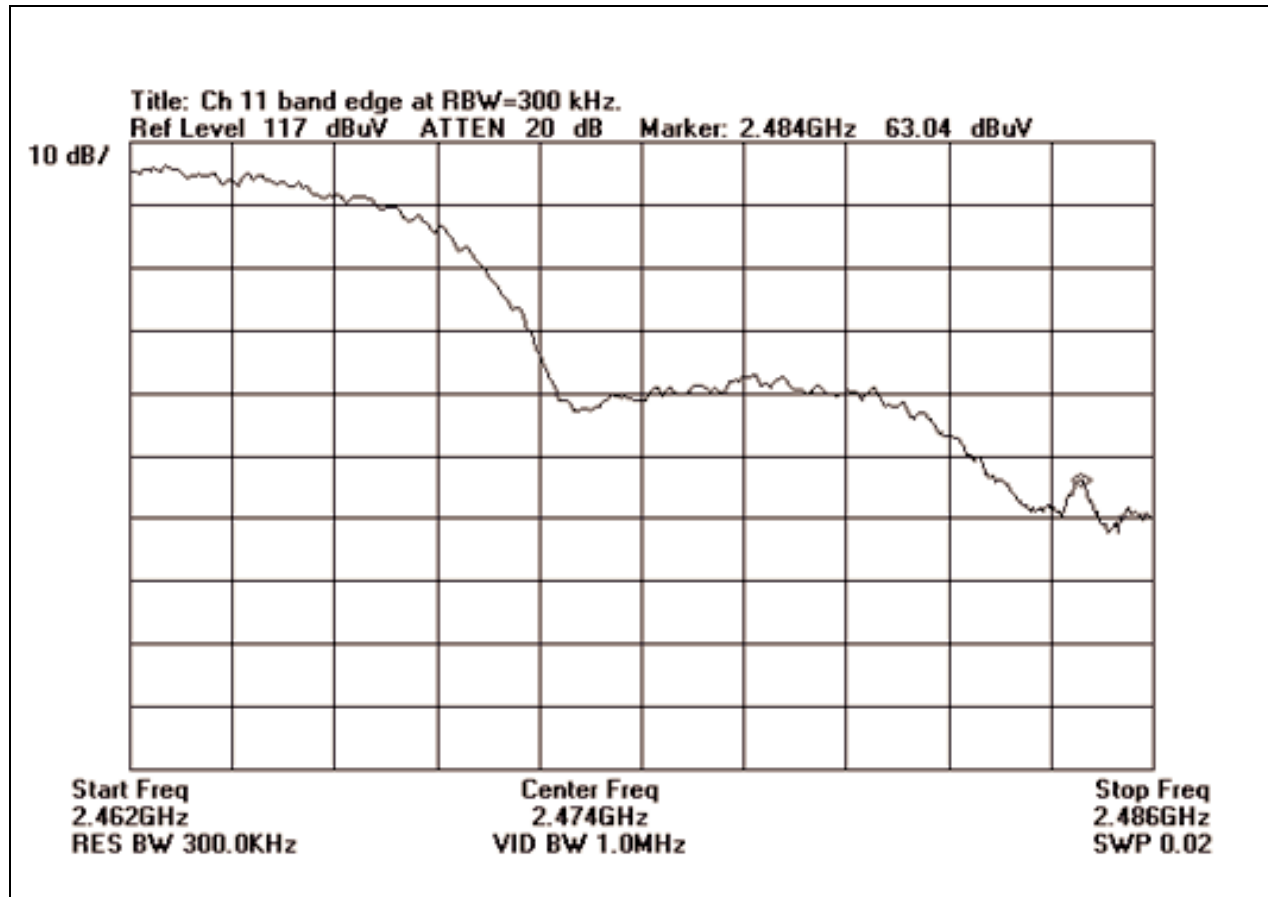
Bandedge at RBW=1 MHz - Channel 1

FCC Part 15.247(c) BANDEDGE PLOT - CHANNEL 11



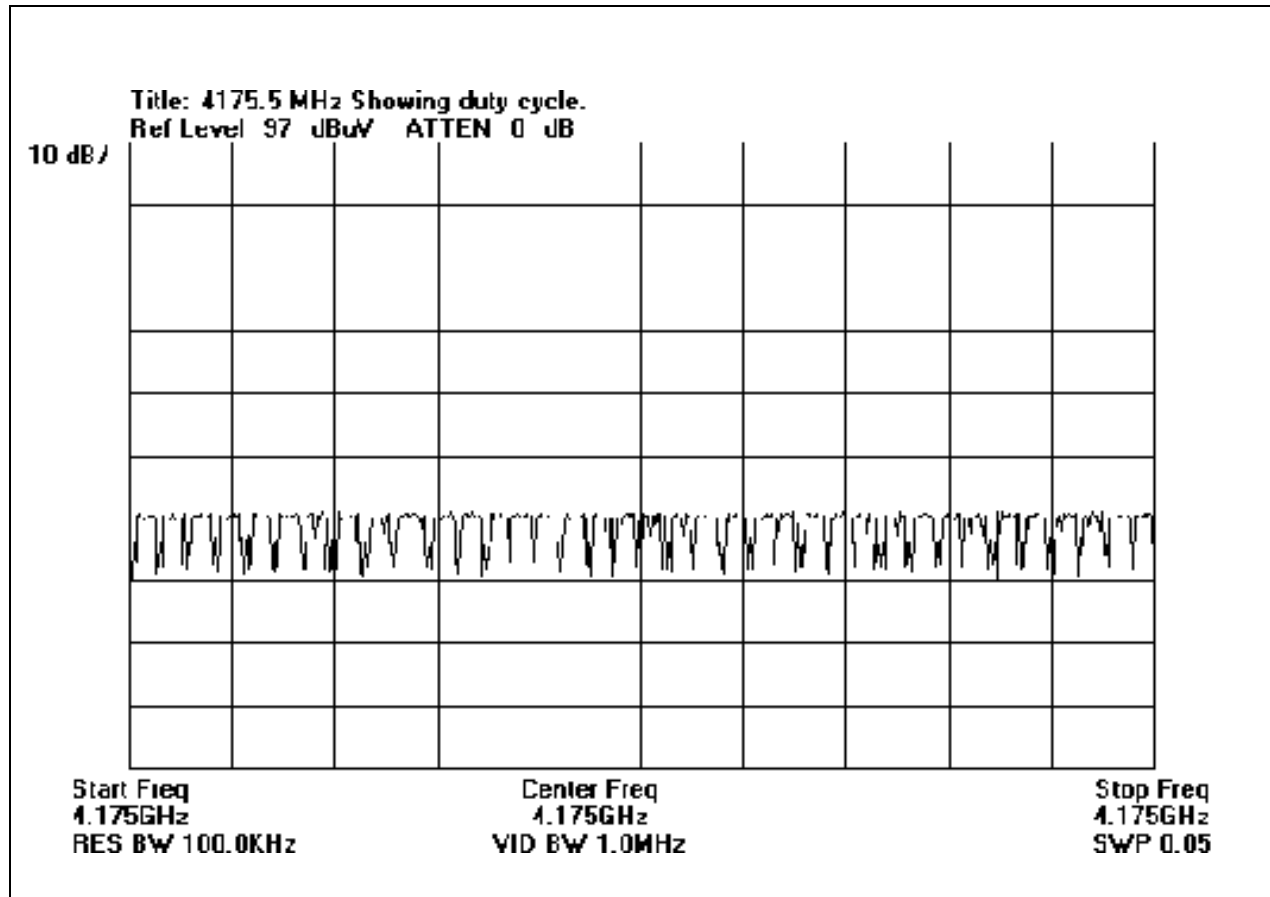
Bandedge at RBW=1 MHz - Channel 11

FCC Part 15.247(c) BANDEDGE PLOT - CHANNEL 11



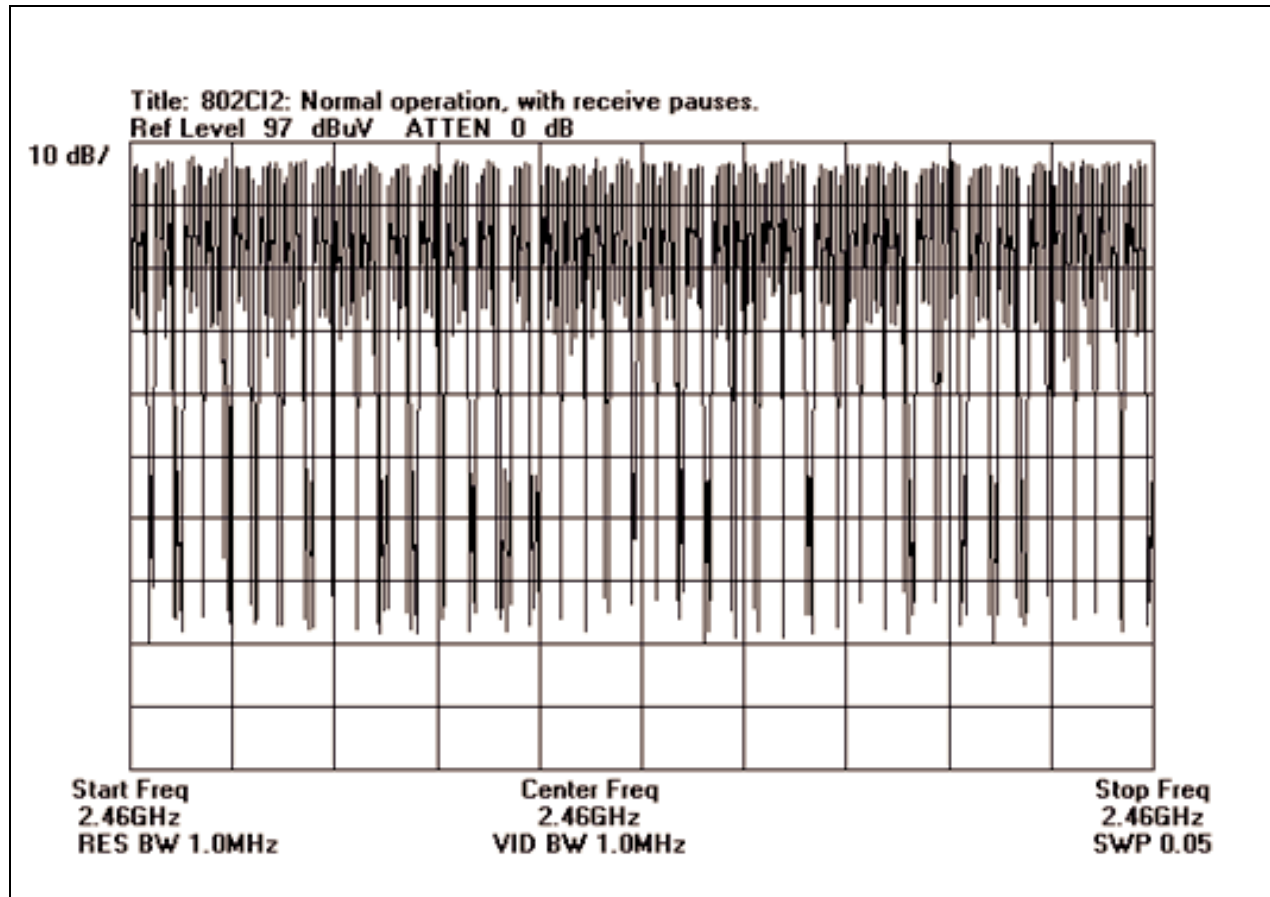
Bandedge at RBW=300 kHz - Channel 11

DUTY CYCLE PLOT - 4175.5 MHz



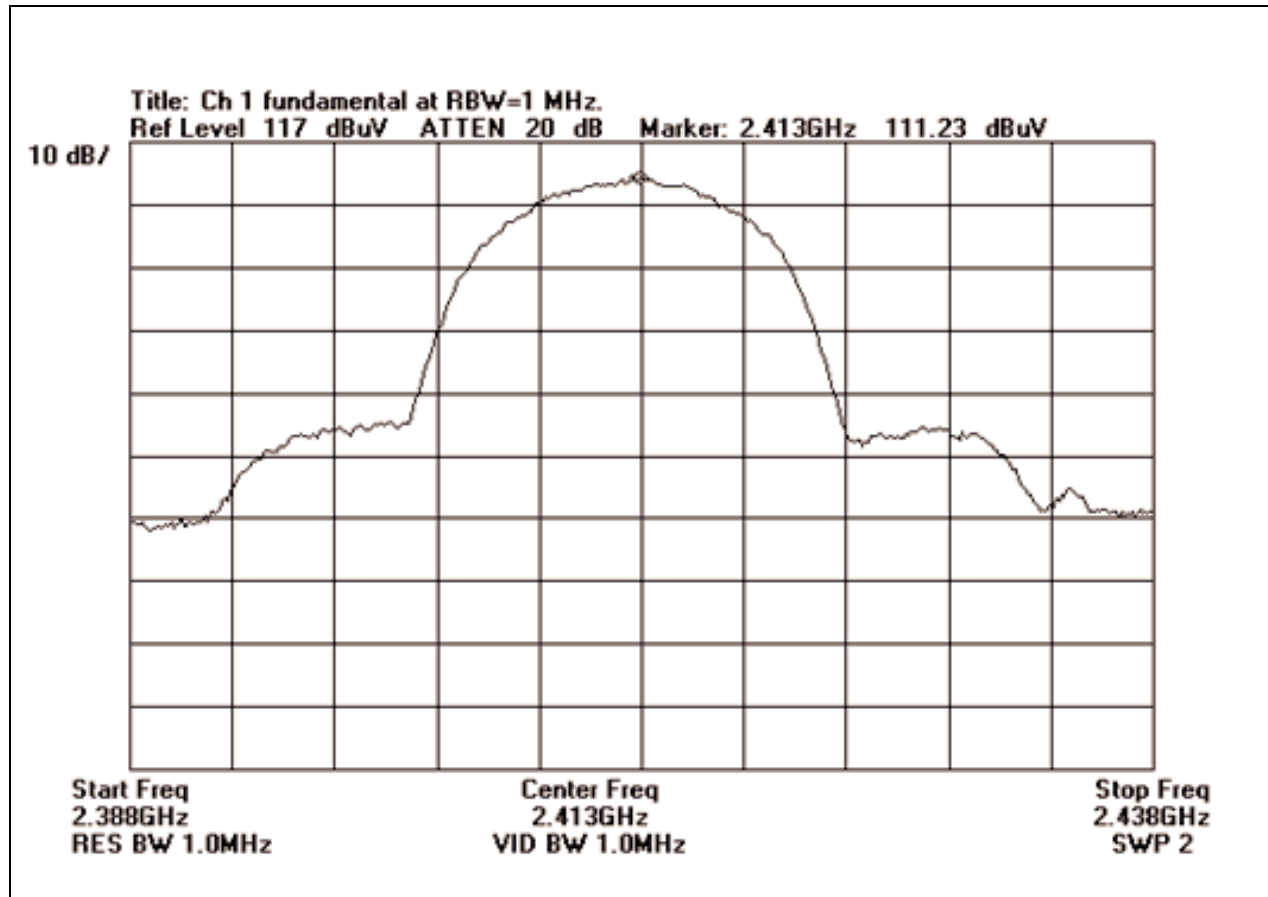
Duty Cycle - 4175.5 MHz

DUTY CYCLE PLOT



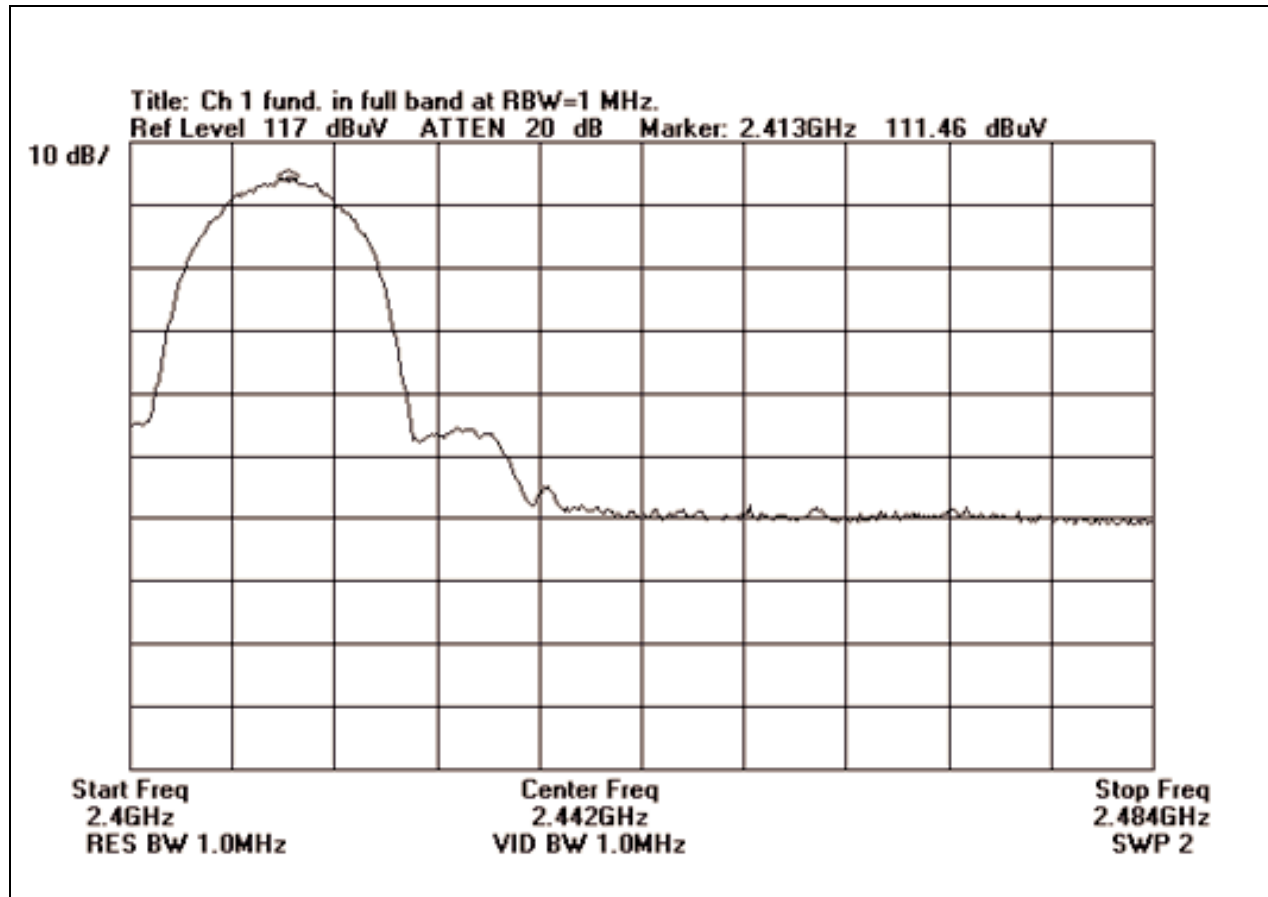
Duty Cycle - Normal operation, with receive pauses

FUNDAMENTAL PLOT - CHANNEL 1



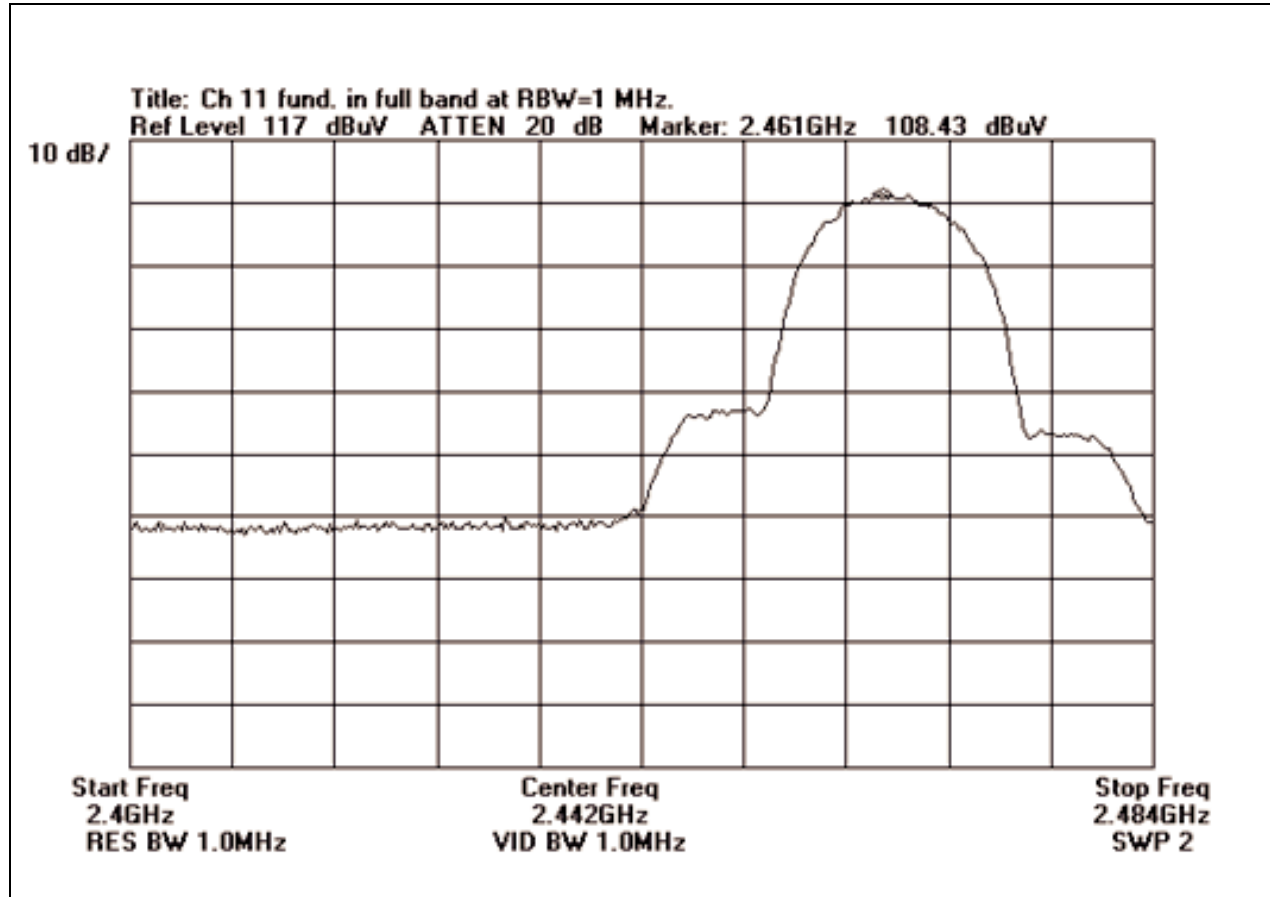
Fundamental - Channel 1

FUNDAMENTAL IN FULL BAND - CHANNEL 1



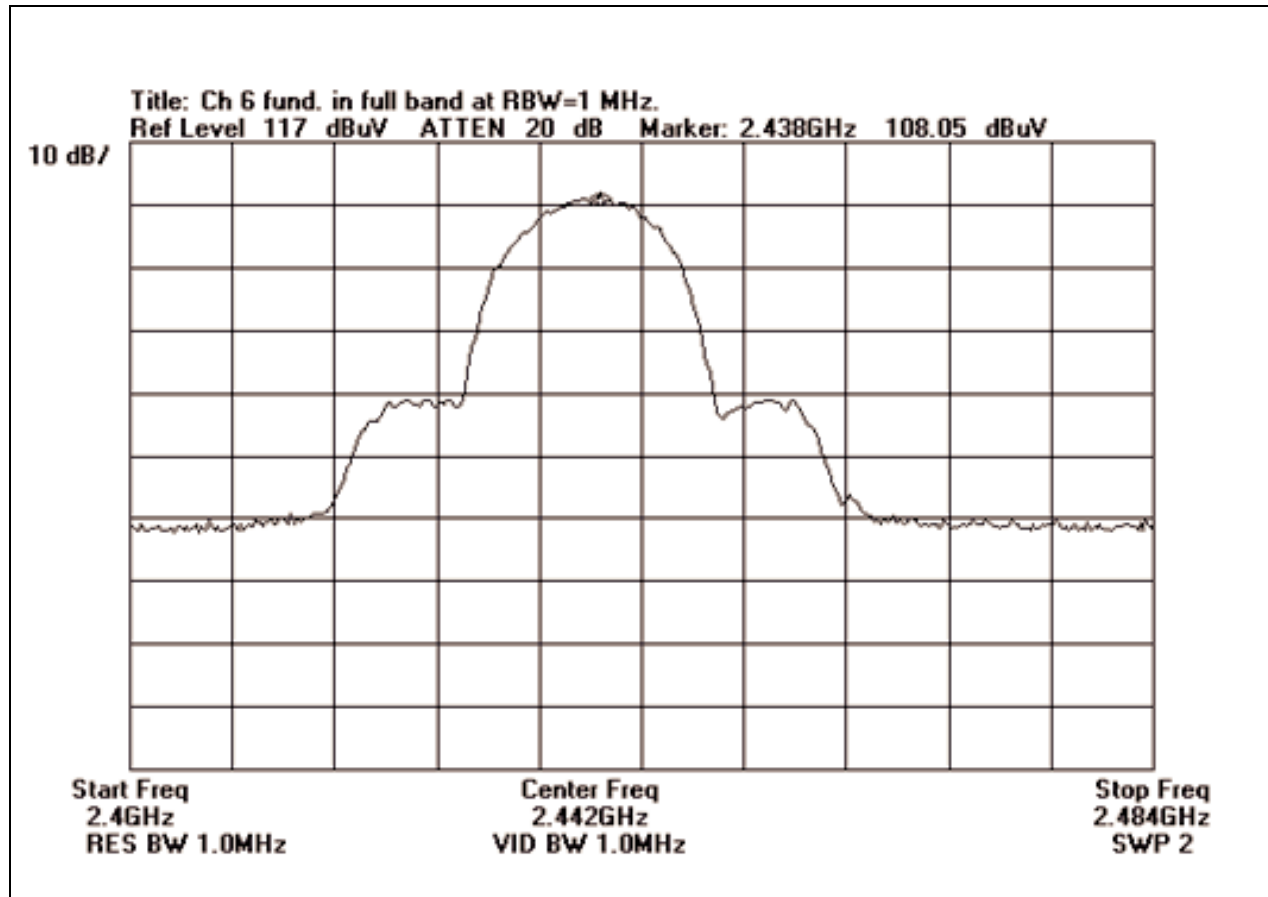
Fundamental in Full Band - Channel 1

FUNDAMENTAL IN FULL BAND - CHANNEL 11



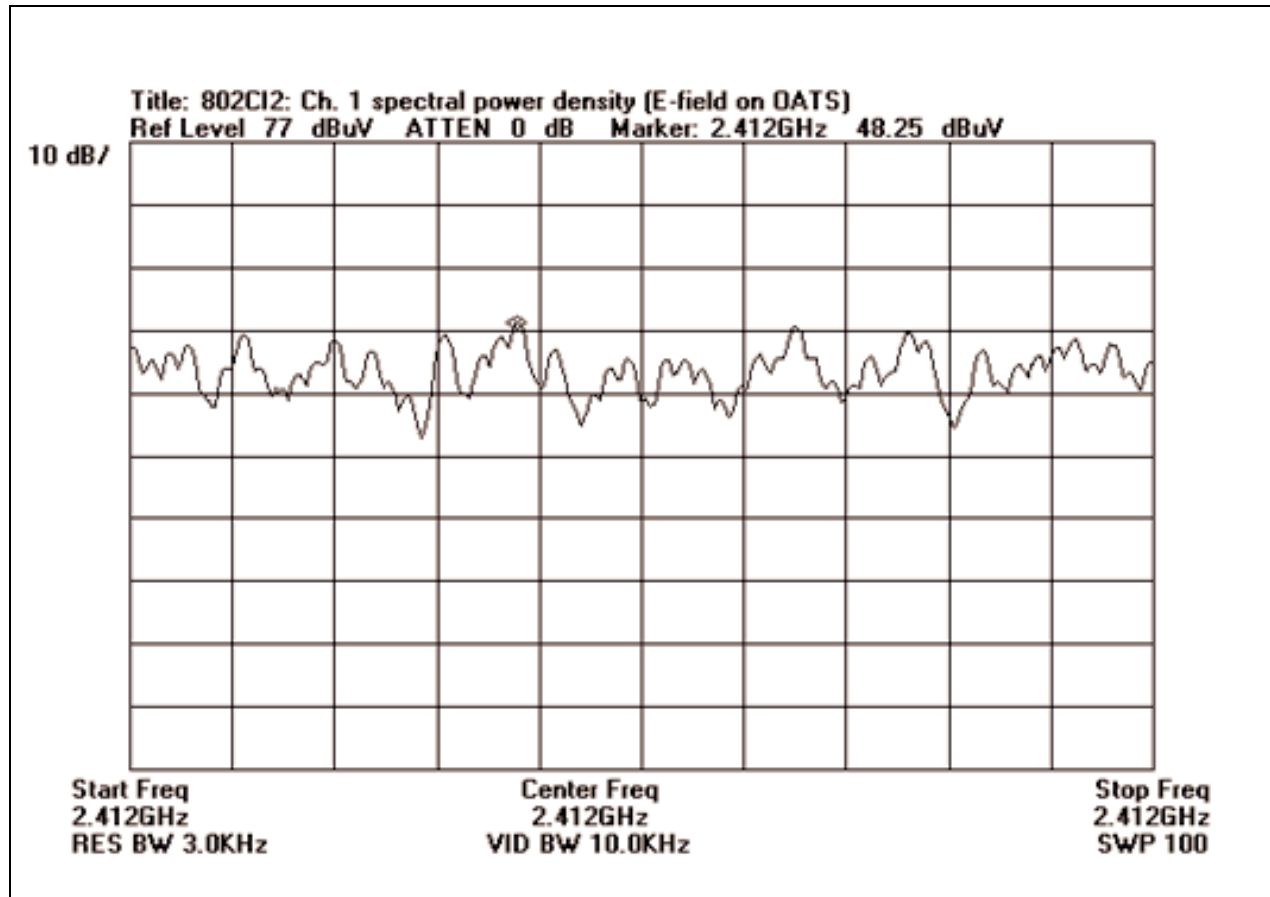
Fundamental in Full Band - Channel 11

FUNDAMENTAL IN FULL BAND - CHANNEL 6



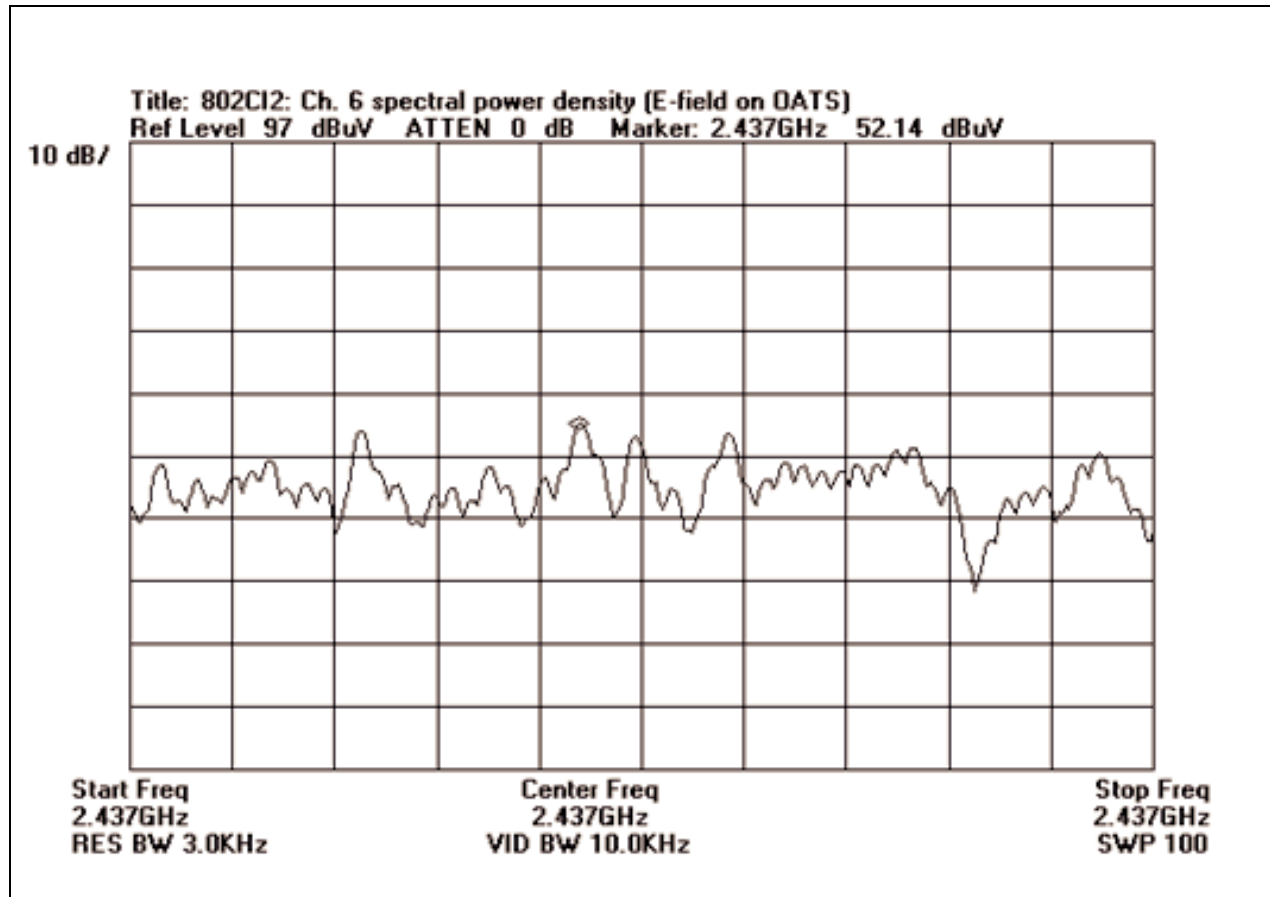
Fundamental in Full Band - Channel 6

FCC Part 15.247 (d) PEAK POWER SPECTRAL DENSITY - CHANNEL 1



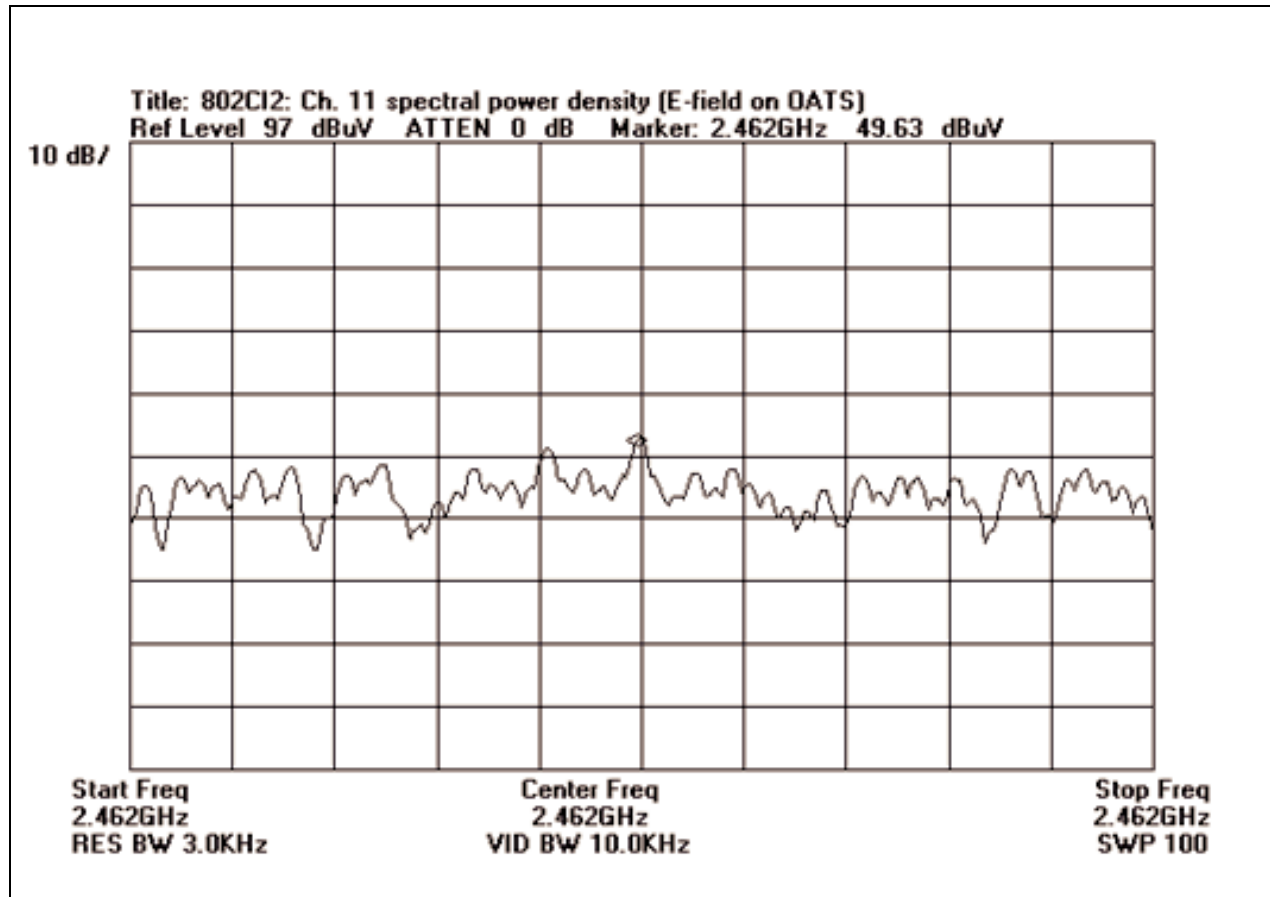
Peak Power Spectral Density - Channel 1

FCC Part 15.247 (d) PEAK POWER SPECTRAL DENSITY - CHANNEL 6



Peak Power Spectral Density - Channel 6

FCC Part 15.247(d) PEAK POWER SPECTRAL DENSITY - CHANNEL 11



Peak Power Spectral Density - Channel 11



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/13/2001
 Test Type: **Transmit Power** Time: 09:52:49
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 1
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW=3 MHz.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	hol-h dB	Horn dB	FC- 00973 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2462.150M	76.3	+0.2	+29.5	+1.9	+0.0	107.9	137.0	-29.1	Vert
								360 deg, 1m		
2	2439.230M	76.1	+0.2	+29.3	+1.8	+0.0	107.4	137.0	-29.6	Vert
								360 degrees		
3	2412.130M	76.0	+0.2	+29.2	+1.8	+0.0	107.2	137.0	-29.8	Horiz
								270 degrees		
4	2437.250M	74.1	+0.2	+29.3	+1.8	+0.0	105.4	137.0	-31.6	Horiz
								110 degrees		
5	2412.200M	74.1	+0.2	+29.2	+1.8	+0.0	105.3	137.0	-31.7	Vert
6	2462.480M	72.7	+0.2	+29.5	+1.9	+0.0	104.3	137.0	-32.7	Horiz



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/22/2001
 Test Type: **Radiated Scan/maximized** Time: 16:01:45
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 7
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW= 1 MHz. 20 dB attenuator used in spectrum analyzer. Preamp is used. Note 1) Transmitting at 2462 MHz on channel 11 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode, which transmits with 78% duty cycle. A 2.2 dB correction factor was added to the readings measured in this mode.

Measurement Data:			Reading listed by margin.				Test Distance: 3 Meters				
#	Freq MHz	Rdng dBμV	83017 FC- 00974 dB	Horn GHz C dB	3.5 G Horn dB	GHz C dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	3250.700M	48.5	-39.0 +1.1	+33.9 +3.0	+0.0 +0.0	+0.9	+0.0	48.4	54.0	-5.6	Vert
2	2340.747M Ave	50.6	-37.8 +0.9	+28.8 +2.0	+0.0 +0.0	+2.0	+0.0	46.5	54.0	-7.5	Horiz
^	2340.747M	51.5	-37.8 +0.9	+28.8 +2.0	+0.0 +0.0	+2.0	+0.0	47.4	54.0	-6.6	Horiz
4	4175.500M Ave	39.6	-38.4 +1.9	+38.2 +3.0	+0.4 +0.0	+1.3	+0.0	46.0	54.0 Corrected for 78% duty cycle.	-8.0	Horiz
^	4175.500M	45.1	-38.4 +1.9	+38.2 +3.0	+0.4 +0.0	+1.3	+0.0	51.5	54.0 Corrected for 78% duty cycle.	-2.5	Horiz
6	2603.550M	46.6	-37.5 +0.9	+30.4 +2.2	+0.0 +0.0	+2.2	+0.0	44.8	54.0	-9.2	Vert

7	4175.500M Ave	47.1	-38.4 +1.9	+0.0 +3.0	+0.4 +29.3	+1.3	+0.0	44.6	54.0 Corrected for 78% duty cycle.	-9.4	Vert
^	4175.500M	51.3	-38.4 +1.9	+0.0 +3.0	+0.4 +29.3	+1.3	+0.0	48.8	54.0 Corrected for 78% duty cycle.	-5.2	Vert
9	2278.330M	49.1	-38.1 +0.9	+28.4 +2.0	+0.0 +0.0	+1.7	+0.0	44.0	54.0	-10.0	Horiz
10	3059.720M	42.9	-39.2 +1.1	+33.2 +2.3	+0.0 +0.0	+0.6	+0.0	40.9	54.0	-13.1	Horiz
11	3239.988M Ave	39.2	-39.1 +1.1	+33.9 +3.0	+0.0 +0.0	+0.8	+0.0	38.9	54.0	-15.1	Horiz
^	3239.990M	52.7	-39.1 +1.1	+33.9 +3.0	+0.0 +0.0	+0.8	+0.0	52.4	54.0	-1.6	Horiz
13	1865.850M	49.0	-39.8 +0.8	+26.2 +1.5	+0.0 +0.0	+0.4	+0.0	38.1	54.0	-16.0	Horiz
14	1685.725M Ave	49.2	-39.9 +0.8	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	37.6	54.0	-16.4	Horiz
^	1685.730M	59.6	-39.9 +0.8	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	48.0	54.0	-6.0	Horiz
16	3250.450M Ave	37.3	-39.0 +1.1	+33.9 +3.0	+0.0 +0.0	+0.9	+0.0	37.2	54.0	-16.8	Vert
17	1532.700M	49.4	-40.0 +0.8	+25.5 +1.1	+0.0 +0.0	+0.4	+0.0	37.2	54.0	-16.8	Vert
18	6057.125M Ave	27.9	-37.6 +1.4	+40.7 +1.6	+0.8 +0.0	+2.1	+0.0	36.9	54.0 Outside restricted band.	-17.1	Horiz
^	6057.130M	40.8	-37.6 +1.4	+40.7 +1.6	+0.8 +0.0	+2.1	+0.0	49.8	54.0 Outside restricted band.	-4.2	Horiz
20	1732.030M	48.0	-39.9 +0.8	+25.9 +1.3	+0.0 +0.0	+0.4	+0.0	36.5	54.0	-17.5	Horiz
21	1673.100M	46.6	-39.9 +0.8	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	35.0	54.0	-19.0	Vert
22	2642.720M Ave	34.9	-37.7 +0.9	+30.7 +2.1	+0.0 +0.0	+2.0	+0.0	32.9	54.0	-21.1	Horiz
^	2642.720M	51.9	-37.7 +0.9	+30.7 +2.1	+0.0 +0.0	+2.0	+0.0	49.9	54.0	-4.1	Horiz



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/22/2001
 Test Type: **Radiated Scan/maximized** Time: 10:11:54
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 5
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW= 1 MHz. 20 dB attenuator used in spectrum analyzer. Preamp is used. Note 1) Transmitting at 2437 MHz on channel 6 for this scan for spurious emissions.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	83017 FC-00 dB	Horn GHz C dB	3.5 G Horn dB	GHz C dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2578.380M	51.8	-37.4 +0.9	+30.2 +2.2	+0.0 +0.0	+2.3	+0.0	50.0	54.0	-4.0	Vert
2	1694.500M	60.5	-39.9 +0.8	+25.9 +1.3	+0.0 +0.0	+0.4	+0.0	49.0	54.0	-5.0	Vert
3	2512.500M	50.7	-37.1 +0.8	+29.8 +2.2	+0.0 +0.0	+2.6	+0.0	49.0	54.0	-5.0	Vert
4	2351.300M	52.2	-37.7 +1.0	+28.8 +2.0	+0.0 +0.0	+2.1	+0.0	48.4	54.0	-5.6	Vert
5	2576.300M	49.6	-37.4 +0.9	+30.2 +2.2	+0.0 +0.0	+2.3	+0.0	47.8	54.0	-6.2	Vert
6	2337.745M Ave	50.9	-37.8 +0.9	+28.7 +2.0	+0.0 +0.0	+2.0	+0.0	46.7	54.0	-7.3	Horiz
7	1285.963M	60.2	-40.8 +0.6	+24.8 +1.1	+0.0 +0.0	+0.4	+0.0	46.3	54.0	-7.7	Vert
8	1507.230M	57.3	-40.0 +0.8	+25.4 +1.1	+0.0 +0.0	+0.4	+0.0	45.0	54.0	-9.0	Vert
9	2348.638M Ave	48.2	-37.8 +0.9	+28.8 +2.0	+0.0 +0.0	+2.1	+0.0	44.2	54.0	-9.8	Vert
^	2348.638M	52.6	-37.8 +0.9	+28.8 +2.0	+0.0 +0.0	+2.1	+0.0	48.6	54.0	-5.4	Vert
11	2337.745M Ave	47.7	-37.8 +0.9	+28.7 +2.0	+0.0 +0.0	+2.0	+0.0	43.5	54.0	-10.5	Horiz

12	4125.490M Ave	46.3	-38.4 +1.5	+0.0 +2.8	+0.5 +29.4	+1.3	+0.0	43.4	54.0	-10.6	Vert
^	4125.480M	48.5	-38.4 +1.5	+0.0 +2.8	+0.5 +29.4	+1.3	+0.0	45.6	54.0	-8.4	Vert
14	1648.650M	54.8	-39.9 +0.9	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	43.3	54.0	-10.7	Vert
15	1648.180M Ave	54.7	-39.9 +0.9	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	43.2	54.0	-10.8	Horiz
16	1694.750M Ave	53.7	-39.9 +0.8	+25.9 +1.3	+0.0 +0.0	+0.4	+0.0	42.2	54.0	-11.9	Vert
17	4125.492M Ave	44.2	-38.4 +1.5	+0.0 +2.8	+0.5 +29.4	+1.3	+0.0	41.3	54.0	-12.7	Horiz
^	4125.485M	47.0	-38.4 +1.5	+0.0 +2.8	+0.5 +29.4	+1.3	+0.0	44.1	54.0	-9.9	Horiz
19	3226.638M Ave	41.1	-39.1 +1.1	+33.8 +2.9	+0.0 +0.0	+0.8	+0.0	40.6	54.0	-13.4	Vert
^	3226.640M	48.4	-39.1 +1.1	+33.8 +2.9	+0.0 +0.0	+0.8	+0.0	47.9	54.0	-6.1	Vert
21	2248.750M Ave	45.2	-38.3 +0.9	+28.2 +1.9	+0.0 +0.0	+1.6	+0.0	39.5	54.0	-14.6	Horiz
22	3366.760M	54.8	-38.9 +1.0	+34.4 +3.5	+0.0 +0.0	+1.0	+0.0	55.8	71.9 Outside restricted band.	-16.1	Vert
23	3214.095M Ave	36.9	-39.1 +1.1	+33.8 +2.9	+0.0 +0.0	+0.8	+0.0	36.4	54.0	-17.6	Horiz
^	3214.100M	50.3	-39.1 +1.1	+33.8 +2.9	+0.0 +0.0	+0.8	+0.0	49.8	54.0	-4.2	Horiz
25	3367.354M Ave	47.5	-38.9 +1.0	+34.4 +3.5	+0.0 +0.0	+1.0	+0.0	48.5	71.9 Outside restricted band.	-23.4	Vert



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/22/2001
 Test Type: **Radiated Scan/maximized** Time: 10:07:39
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 4
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW= 1 MHz. 20 dB attenuator used in spectrum analyzer. Preamp is used. Note 1) Transmitting at 2412 MHz on channel 1 for this scan for spurious emissions.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	83017 3.5 G dB	hol-h GHz C dB	Horn FC-00 dB	FC-00 GHz C dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4075.486M	43.9	-38.5	+0.0	+38.5	+0.0	+0.0	49.8	54.0	-4.2	Vert
	Ave		+0.6	+1.3	+1.3	+2.7					
^	4075.494M	46.8	-38.5	+0.0	+38.5	+0.0	+0.0	52.7	54.0	-1.3	Vert
			+0.6	+1.3	+1.3	+2.7					
3	4075.482M	41.7	-38.5	+0.0	+38.5	+0.0	+0.0	47.6	54.0	-6.4	Horiz
	Ave		+0.6	+1.3	+1.3	+2.7					
^	4075.481M	45.6	-38.5	+0.0	+38.5	+0.0	+0.0	51.5	54.0	-2.5	Horiz
			+0.6	+1.3	+1.3	+2.7					
5	1496.963M	59.8	-40.0	+0.2	+25.4	+1.3	+0.0	46.7	54.0	-7.3	Vert
			+0.0	+0.0	+0.0	+0.0					
6	1623.535M	52.1	-39.9	+0.2	+25.7	+1.5	+0.0	39.6	54.0	-14.4	Horiz
	Ave		+0.0	+0.0	+0.0	+0.0					
^	1623.580M	62.7	-39.9	+0.2	+25.7	+1.5	+0.0	50.2	54.0	-3.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
8	3343.800M	54.3	-38.9	+0.3	+34.3	+2.2	+0.0	52.2	71.9	-19.7	Vert
			+0.0	+0.0	+0.0	+0.0					
9	6056.485M	25.0	-37.6	+0.0	+40.7	+0.0	+0.0	34.0	54.0	-20.0	Vert
	Ave		+0.8	+2.1	+1.4	+1.6					
^	6056.490M	37.1	-37.6	+0.0	+40.7	+0.0	+0.0	46.1	54.0	-7.9	Vert
			+0.8	+2.1	+1.4	+1.6					
11	3188.630M	59.1	-39.1	+0.3	+33.7	+2.7	+0.0	56.7	77.4	-20.7	Horiz
			+0.0	+0.0	+0.0	+0.0					

12	2037.625M	61.9	-39.5 +0.0	+0.2 +0.0	+26.8 +0.0	+1.7 +0.0	+0.0	51.1	71.9	-20.8	Vert
13	3202.380M	58.1	-39.1 +0.0	+0.3 +0.0	+33.7 +0.0	+2.5 +0.0	+0.0	55.5	77.4	-21.9	Horiz
14	1622.876M Ave	43.1	-39.9 +0.0	+0.2 +0.0	+25.7 +0.0	+1.5 +0.0	+0.0	30.6	54.0	-23.4	Vert
^	1622.870M	57.8	-39.9 +0.0	+0.2 +0.0	+25.7 +0.0	+1.5 +0.0	+0.0	45.3	54.0	-8.7	Vert
16	2037.730M	64.7	-39.5 +0.0	+0.2 +0.0	+26.8 +0.0	+1.7 +0.0	+0.0	53.9	77.4	-23.5	Horiz
17	2087.663M	62.4	-39.2 +0.0	+0.2 +0.0	+27.1 +0.0	+1.8 +0.0	+0.0	52.3	77.4	-25.1	Horiz
18	2172.200M	55.8	-38.7 +0.0	+0.2 +0.0	+27.7 +0.0	+1.7 +0.0	+0.0	46.7	71.9	-25.2	Vert
19	2412.073M Ave	98.1	-37.4 +0.0	+0.2 +0.0	+29.2 +0.0	+1.8 +0.0	+0.0	91.9	137.0 Maximized fundamental at RBW=1 MHz.	-45.1	Vert
^	2412.050M	105.2	-37.4 +0.0	+0.2 +0.0	+29.2 +0.0	+1.8 +0.0	+0.0	99.0	137.0 Maximized fundamental at RBW=1 MHz.	-38.0	Vert



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Rd. • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/22/2001
 Test Type: **Radiated Scan/maximized** Time: 17:41:01
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 8
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Transmitting at 2462 MHz on channel 11 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode, which transmits with 78% duty cycle. Note 3) Scanned 30-1000 MHz and maximized as needed.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	HP-84 dB	Chase dB	rad_c dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	483.998M	40.0	-28.0	+18.7	+6.7	+0.0	37.4	46.0	-8.6	Vert
2	500.073M	38.5	-28.0	+19.0	+6.8	+0.0	36.3	46.0	-9.7	Vert
3	166.648M	45.3	-27.4	+9.6	+3.6	+0.0	31.1	43.5	-12.4	Horiz
4	400.082M	36.5	-27.5	+16.4	+6.1	+0.0	31.5	46.0	-14.5	Horiz
5	299.998M	39.2	-26.9	+13.3	+5.2	+0.0	30.8	46.0	-15.2	Vert
6	350.802M	36.8	-27.2	+14.6	+5.4	+0.0	29.6	46.0	-16.4	Vert
7	300.048M	37.3	-26.9	+13.3	+5.2	+0.0	28.9	46.0	-17.1	Horiz
8	133.337M	38.7	-27.6	+11.0	+3.2	+0.0	25.3	43.5	-18.2	Horiz
9	133.307M	37.7	-27.6	+11.0	+3.2	+0.0	24.3	43.5	-19.2	Vert



10	166.647M	38.0	-27.4	+9.6	+3.6	+0.0	23.8	43.5	-19.7	Vert
11	230.565M	37.7	-27.0	+11.3	+4.2	+0.0	26.2	46.0	-19.8	Vert
12	329.310M	33.5	-27.1	+14.1	+5.3	+0.0	25.8	46.0	-20.2	Vert



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Rd. • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/23/2001
 Test Type: **Radiated Scan/maximized** Time: 09:54:49
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 9
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Transmitting at 2437 MHz on channel 6 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode, which transmits with 78% duty cycle. Note 3) Scanned 30-1000 MHz and maximized as needed.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	HP-84 dB	Chase dB	rad_c dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	500.075M	44.7	-28.0	+19.0	+6.8	+0.0	42.5	46.0	-3.5	Vert
2	483.988M	42.2	-28.0	+18.7	+6.7	+0.0	39.6	46.0	-6.4	Vert
3	300.038M	45.7	-26.9	+13.3	+5.2	+0.0	37.3	46.0	-8.7	Horiz
4	400.068M	41.0	-27.5	+16.4	+6.1	+0.0	36.0	46.0	-10.0	Horiz
5	166.673M	43.7	-27.4	+9.6	+3.6	+0.0	29.5	43.5	-14.0	Horiz
6	133.318M	42.0	-27.6	+11.0	+3.2	+0.0	28.6	43.5	-14.9	Horiz
7	166.685M	41.0	-27.4	+9.6	+3.6	+0.0	26.8	43.5	-16.7	Vert
8	350.650M	35.2	-27.2	+14.6	+5.4	+0.0	28.0	46.0	-18.0	Vert
9	299.520M	35.8	-26.9	+13.3	+5.2	+0.0	27.4	46.0	-18.6	Vert

10	133.300M	37.3	-27.6	+11.0	+3.2	+0.0	23.9	43.5	-19.6	Vert
11	329.284M	33.5	-27.1	+14.1	+5.3	+0.0	25.8	46.0	-20.2	Vert
12	230.525M	34.0	-27.0	+11.3	+4.2	+0.0	22.5	46.0	-23.5	Vert



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/23/2001
 Test Type: **Radiated Scan/maximized** Time: 11:10:40
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 10
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Transmitting at 2412 MHz on channel 1 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode, which transmits with 78% duty cycle. Note 3) Scanned 30-1000 MHz and maximized as needed.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	HP-84 dB	Chase dB	rad_c dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	500.103M	43.2	-28.0	+19.0	+6.8	+0.0	41.0	46.0	-5.0	Vert
2	483.992M	43.0	-28.0	+18.7	+6.7	+0.0	40.4	46.0	-5.6	Vert
3	400.068M	41.5	-27.5	+16.4	+6.1	+0.0	36.5	46.0	-9.5	Horiz
4	300.057M	43.8	-26.9	+13.3	+5.2	+0.0	35.4	46.0	-10.6	Horiz
5	329.295M	41.5	-27.1	+14.1	+5.3	+0.0	33.8	46.0	-12.2	Vert
6	350.798M	40.7	-27.2	+14.6	+5.4	+0.0	33.5	46.0	-12.5	Vert
7	166.679M	44.2	-27.4	+9.6	+3.6	+0.0	30.0	43.5	-13.5	Horiz
8	133.338M	41.7	-27.6	+11.0	+3.2	+0.0	28.3	43.5	-15.2	Horiz
9	166.676M	42.0	-27.4	+9.6	+3.6	+0.0	27.8	43.5	-15.7	Vert

10	230.517M	41.0	-27.0	+11.3	+4.2	+0.0	29.5	46.0	-16.5	Vert
11	299.281M	37.5	-26.9	+13.3	+5.2	+0.0	29.1	46.0	-16.9	Vert
12	133.329M	37.7	-27.6	+11.0	+3.2	+0.0	24.3	43.5	-19.2	Vert



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Customer: **Actiontec**
 Specification: **FCC15.247(2.4 GHz) & 15.209**
 Work Order #: **76358** Date: 03/13/2001
 Test Type: **Band edge measurements** Time: 14:23:32
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 3
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Spectrum analyzer resolution BW as noted below. 20 dB attenuator used, preamp is used. Note: The readings below are raw data. This data is used to calculate the actual band edge signal levels.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	83017 dB	hol-h dB	Horn dB	FC-00 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2483.870M	63.7	-37.1	+0.2	+29.6	+1.9	+0.0	58.3	*	*	Horiz
Ch 11 band edge signal at RBW=300 kHz *Refer to page 11 for justification of passing data.											
2	2485.030M	59.3	-37.1	+0.2	+29.6	+1.9	+0.0	53.9	*	*	Horiz
Ch 11 band edge signal at RBW=300 kHz *Refer to page 11 for justification of passing data.											
3	2399.080M	73.3	-37.5	+0.2	+29.1	+1.8	+0.0	66.9	90.5	-23.6	Horiz
Ch 1 Band edge signal at RBW=1 MHz.											
4	2462.830M	114.6	-37.2	+0.2	+29.5	+1.9	+0.0	109.0	137.0	-28.0	Horiz
RBW=1 MHz, Channel 11 fundamental.											
5	2462.940M	113.2	-37.2	+0.2	+29.5	+1.9	+0.0	107.6	137.0	-29.4	Horiz
Ch 11 fundamental at RBW=300 kHz.											

6	2410.700M	110.6	-37.4	+0.2	+29.2	+1.8	+0.0	104.4	137.0	-32.6	Horiz
									Ch 1 fundamental at RBW=1 MHz.		
7	2462.651M Ave	107.8	-37.2	+0.2	+29.5	+1.9	+0.0	102.2	137.0	-34.8	Horiz
									RBW=1 MHz, Channel 11 fundamental.		
8	2412.625M Ave	104.5	-37.4	+0.2	+29.2	+1.8	+0.0	98.3	137.0	-38.7	Horiz
									RBW=1 MHz, Channel 1 fundamental.		
^	2412.630M	111.5	-37.4	+0.2	+29.2	+1.8	+0.0	105.3	137.0	-31.7	Horiz
									RBW=1 MHz, Channel 1 fundamental.		
10	2412.113M Ave	103.6	-37.4	+0.2	+29.2	+1.8	+0.0	97.4	137.0	-39.6	Horiz
									Ch 1 fundamental at RBW=1 MHz.		



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Customer: **Actiontec**
 Specification: **15.247 power spectral density**
 Work Order #: **76358** Date: 03/09/2001
 Test Type: **Power spectral density** Time: 14:58:07
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 2
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Measuring power spectral density. Spectrum analyzer RBW=3 kHz, VBW=10 kHz, span=300 kHz, sweep=100 sec.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	hol-h dB	Horn dB	FC-00 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2437.131M	52.1	+0.2	+29.3	+1.8	+0.0	83.4	103.2 Ch. 6	-19.8	Vert
2	2461.999M	49.4	+0.2	+29.5	+1.9	+0.0	81.0	103.2 Ch. 11	-22.2	Vert
3	2412.213M	48.3	+0.2	+29.2	+1.8	+0.0	79.5	103.2 Ch.1	-23.7	Horiz



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Customer: **Actiontec**
 Specification: **FCC B COND**
 Work Order #: **76358** Date: 03/23/2001
 Test Type: **Conducted Emissions** Time: 12:26:29 PM
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 11
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

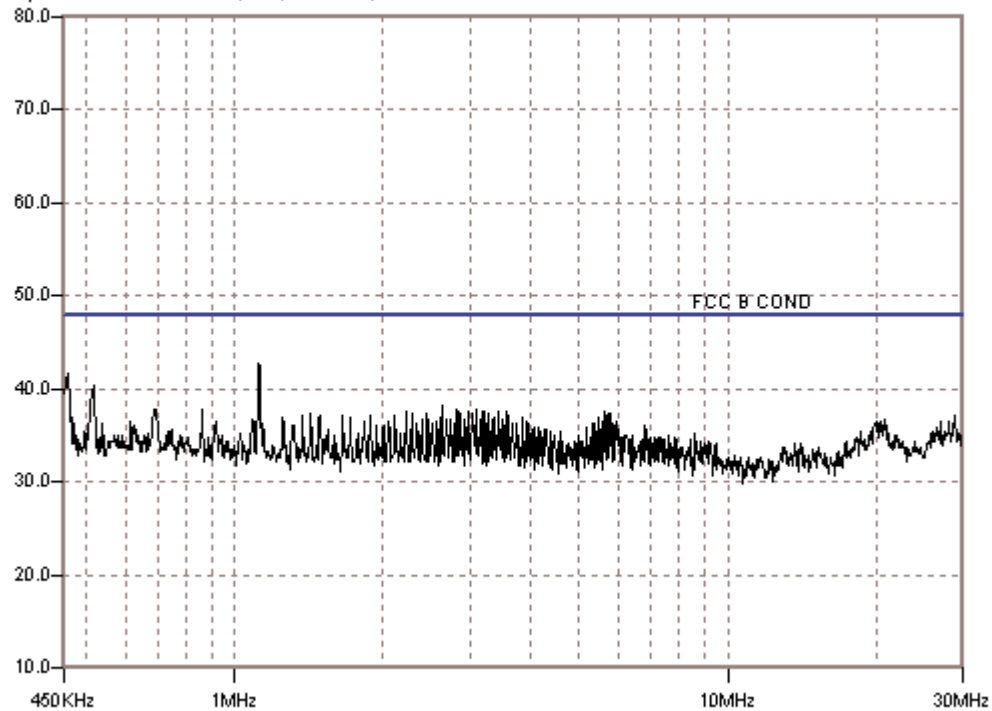
The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Transmitting at 2412 MHz on channel 1 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode, which transmits with 78% duty cycle. The Host PC AC adapter (ADP-70EB) is connected to the LISN at 120V, 60 Hz.

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBμV	cond_ LISN		LISN		Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
			dB	dB	dB	dB					
1	1.121M Ambient	41.5	+0.1	+0.4		+0.7	+0.0	42.7	48.0	-5.3	Black
2	456.965k	40.7	+0.0	+0.4		+0.6	+0.0	41.7	48.0	-6.3	Black
3	516.868k	39.3	+0.0	+0.4		+0.6	+0.0	40.3	48.0	-7.7	Black
4	2.631M	36.8	+0.3	+0.3		+0.9	+0.0	38.3	48.0	-9.7	Black
5	859.566k	36.7	+0.1	+0.4		+0.7	+0.0	37.9	48.0	-10.1	Black
6	692.396k	36.7	+0.2	+0.4		+0.6	+0.0	37.9	48.0	-10.1	Black
7	685.431k	36.7	+0.2	+0.4		+0.6	+0.0	37.9	48.0	-10.1	Black
8	3.093M	36.3	+0.3	+0.3		+0.9	+0.0	37.8	48.0	-10.2	Black
9	2.806M	36.3	+0.3	+0.3		+0.9	+0.0	37.8	48.0	-10.2	Black

10	2.233M	36.2	+0.2	+0.4	+0.8	+0.0	37.6	48.0	-10.4	Black
11	5.619M	35.8	+0.4	+0.3	+1.0	+0.0	37.5	48.0	-10.5	Black
12	3.551M	36.0	+0.3	+0.3	+0.9	+0.0	37.5	48.0	-10.5	Black
13	3.435M	36.0	+0.3	+0.3	+0.9	+0.0	37.5	48.0	-10.5	Black
14	3.205M	36.0	+0.3	+0.3	+0.9	+0.0	37.5	48.0	-10.5	Black
15	2.978M	36.0	+0.3	+0.3	+0.9	+0.0	37.5	48.0	-10.5	Black
16	2.858M	36.0	+0.3	+0.3	+0.9	+0.0	37.5	48.0	-10.5	Black
17	5.790M	35.7	+0.4	+0.3	+1.0	+0.0	37.4	48.0	-10.6	Black
18	5.744M	35.7	+0.4	+0.3	+1.0	+0.0	37.4	48.0	-10.6	Black
19	1.429M	36.0	+0.2	+0.4	+0.8	+0.0	37.4	48.0	-10.6	Black
20	3.268M	35.8	+0.3	+0.3	+0.9	+0.0	37.3	48.0	-10.7	Black
21	3.037M	35.8	+0.3	+0.3	+0.9	+0.0	37.3	48.0	-10.7	Black
22	2.460M	35.8	+0.3	+0.3	+0.9	+0.0	37.3	48.0	-10.7	Black
23	2.289M	35.8	+0.3	+0.3	+0.9	+0.0	37.3	48.0	-10.7	Black
24	2.118M	35.8	+0.2	+0.4	+0.8	+0.0	37.2	48.0	-10.8	Black
25	1.887M	35.8	+0.2	+0.4	+0.8	+0.0	37.2	48.0	-10.8	Black

CKC Laboratories, Inc. Date: 03/23/2001 Time: 12:26:29 PM W/O#: 76358
 FCC B COND Test Lead: Black Sequence#: 11
 dBµV The Host PC AC adapter (ADP-70EB) is connected to the LISN at 120V, 60 Hz.





Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC B COND**
 Work Order #: **76358** Date: 03/23/2001
 Test Type: **Conducted Emissions** Time: 12:35:29 PM
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 12
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

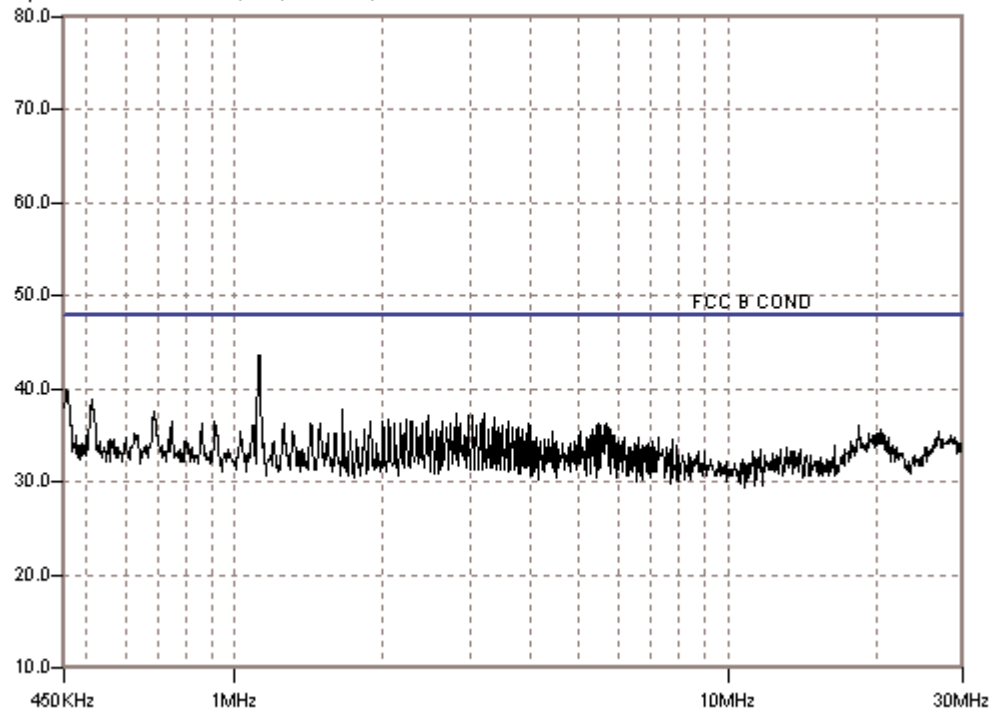
The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. The transmitter is in the continuous mode. Note 1) Transmitting at 2412 MHz on channel 1 for this scan for spurious emissions. Note 2) The EUT was put in the normal mode, which transmits with 78% duty cycle. The Host PC AC adapter (ADP-70EB) is connected to the LISN at 120V, 60 Hz.

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBμV	cond_ LISN dB	LISN dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	1.121M Ambient	43.3	+0.1 -0.2	+0.4	+0.0	43.6	48.0	-4.4	White
2	455.572k	39.7	+0.0 -0.2	+0.4	+0.0	39.9	48.0	-8.1	White
3	512.689k	38.7	+0.0 -0.2	+0.4	+0.0	38.9	48.0	-9.1	White
4	462.538k	38.0	+0.0 -0.2	+0.4	+0.0	38.2	48.0	-9.8	White
5	1.656M	37.2	+0.2 -0.1	+0.4	+0.0	37.7	48.0	-10.3	White
6	688.217k	37.2	+0.2 -0.2	+0.4	+0.0	37.6	48.0	-10.4	White
7	3.209M	36.7	+0.3 +0.0	+0.3	+0.0	37.3	48.0	-10.7	White
8	2.806M	36.7	+0.3 +0.0	+0.3	+0.0	37.3	48.0	-10.7	White

9	3.037M	36.5	+0.3 +0.0	+0.3	+0.0	37.1	48.0	-10.9	White
10	2.978M	36.5	+0.3 +0.0	+0.3	+0.0	37.1	48.0	-10.9	White
11	2.464M	36.5	+0.3 +0.0	+0.3	+0.0	37.1	48.0	-10.9	White
12	3.380M	36.3	+0.3 +0.0	+0.3	+0.0	36.9	48.0	-11.1	White
13	2.062M	36.3	+0.2 -0.1	+0.4	+0.0	36.8	48.0	-11.2	White
14	2.233M	36.2	+0.2 -0.1	+0.4	+0.0	36.7	48.0	-11.3	White
15	912.503k	36.3	+0.1 -0.1	+0.3	+0.0	36.6	48.0	-11.4	White
16	745.333k	36.2	+0.2 -0.2	+0.4	+0.0	36.6	48.0	-11.4	White
17	2.002M	36.0	+0.2 -0.1	+0.4	+0.0	36.5	48.0	-11.5	White
18	1.891M	36.0	+0.2 -0.1	+0.4	+0.0	36.5	48.0	-11.5	White
19	3.611M	35.8	+0.3 +0.0	+0.3	+0.0	36.4	48.0	-11.6	White
20	2.631M	35.8	+0.3 +0.0	+0.3	+0.0	36.4	48.0	-11.6	White
21	2.293M	35.8	+0.3 +0.0	+0.3	+0.0	36.4	48.0	-11.6	White
22	2.281M	35.8	+0.3 +0.0	+0.3	+0.0	36.4	48.0	-11.6	White
23	1.429M	35.8	+0.2 -0.1	+0.4	+0.0	36.3	48.0	-11.7	White
24	1.258M	36.0	+0.1 -0.2	+0.4	+0.0	36.3	48.0	-11.7	White
25	859.566k	36.0	+0.1 -0.1	+0.3	+0.0	36.3	48.0	-11.7	White

CKC Laboratories, Inc. Date: 03/23/2001 Time: 12:35:29 PM W/O#: 76358
 FCC B COND Test Lead: White Sequence#: 12
 dBµV The Host PC AC adapter (ADP-70EB) is connected to the LISN at 120V, 60 Hz.





Test Location: CKC Laboratories, Inc. • 480 Los Viboras Road • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC B RADIATED**
 Work Order #: **76358** Date: 03/22/2001
 Test Type: **Radiated Scan/maximized** Time: 16:01:45
 Equipment: **Wireless PC LAN card transceiver** Sequence#: 13
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card transceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card transceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. Spectrum analyzer resolution BW= 1 MHz. 10 dB attenuator used in spectrum analyzer. Preamp is used. Note 1) Receiving at 2462 MHz on channel 11 for this scan for spurious emissions.

Measurement Data:		Reading listed by margin.				Test Distance: 3 Meters					
#	Freq MHz	Rdng dBμV	83017 FC-00 dB	Horn GHz C dB	3.5 G Horn dB	GHz C dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	3250.700M	48.5	-39.0 +1.1	+33.9 +3.0	+0.0 +0.0	+0.9	+0.0	48.4	54.0	-5.6	Vert
2	2340.747M	50.6	-37.8 +0.9	+28.8 +2.0	+0.0 +0.0	+2.0	+0.0	46.5	54.0	-7.5	Horiz
^	2340.747M	51.5	-37.8 +0.9	+28.8 +2.0	+0.0 +0.0	+2.0	+0.0	47.4	54.0	-6.6	Horiz
4	2603.550M	46.6	-37.5 +0.9	+30.4 +2.2	+0.0 +0.0	+2.2	+0.0	44.8	54.0	-9.2	Vert
5	2278.330M	49.1	-38.1 +0.9	+28.4 +2.0	+0.0 +0.0	+1.7	+0.0	44.0	54.0	-10.0	Horiz
6	3059.720M	42.9	-39.2 +1.1	+33.2 +2.3	+0.0 +0.0	+0.6	+0.0	40.9	54.0	-13.1	Horiz
7	3239.988M	39.2	-39.1 +1.1	+33.9 +3.0	+0.0 +0.0	+0.8	+0.0	38.9	54.0	-15.1	Horiz
^	3239.990M	52.7	-39.1 +1.1	+33.9 +3.0	+0.0 +0.0	+0.8	+0.0	52.4	54.0	-1.6	Horiz
9	1865.850M	49.0	-39.8 +0.8	+26.2 +1.5	+0.0 +0.0	+0.4	+0.0	38.1	54.0	-16.0	Horiz

10	1685.725M Ave	49.2	-39.9 +0.8	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	37.6	54.0	-16.4	Horiz
^	1685.730M	59.6	-39.9 +0.8	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	48.0	54.0	-6.0	Horiz
12	3250.450M Ave	37.3	-39.0 +1.1	+33.9 +3.0	+0.0 +0.0	+0.9	+0.0	37.2	54.0	-16.8	Vert
13	1532.700M	49.4	-40.0 +0.8	+25.5 +1.1	+0.0 +0.0	+0.4	+0.0	37.2	54.0	-16.8	Vert
14	6057.125M Ave	27.9	-37.6 +1.4	+40.7 +1.6	+0.8 +0.0	+2.1	+0.0	36.9	54.0 Outside restricted band.	-17.1	Horiz
^	6057.130M	40.8	-37.6 +1.4	+40.7 +1.6	+0.8 +0.0	+2.1	+0.0	49.8	54.0 Outside restricted band.	-4.2	Horiz
16	1732.030M	48.0	-39.9 +0.8	+25.9 +1.3	+0.0 +0.0	+0.4	+0.0	36.5	54.0	-17.5	Horiz
17	1673.100M	46.6	-39.9 +0.8	+25.8 +1.3	+0.0 +0.0	+0.4	+0.0	35.0	54.0	-19.0	Vert
18	2642.720M Ave	34.9	-37.7 +0.9	+30.7 +2.1	+0.0 +0.0	+2.0	+0.0	32.9	54.0	-21.1	Horiz
^	2642.720M	51.9	-37.7 +0.9	+30.7 +2.1	+0.0 +0.0	+2.0	+0.0	49.9	54.0	-4.1	Horiz



Test Location: CKC Laboratories, Inc. • 480 Los Viboras Rd. • Hollister, CA 95023 • 831-637-8176

Customer: **Actiontec**
 Specification: **FCC B RADIATED**
 Work Order #: **76358** Date: 03/22/2001
 Test Type: **Radiated Scan/maximized** Time: 17:41:01
 Equipment: **Wireless PC LAN card tranceiver** Sequence#: 14
 Manufacturer: Actiontec Tested By: Art Rice
 Model: 802CI2
 S/N: 1080044

EMI Meters:

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A. HP8564E	3623A00539	12/12/2000	12/12/2001	783
rad cable_10M	None	08/11/2000	08/11/2001	0
Bilog Antenna	2451	10/12/2000	10/12/2001	1995
Pre Amplifier	2944A06379	12/15/2000	12/15/2001	705

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Wireless PC LAN card tranceiver*	Actiontec	802CI2	1080044

Support Devices:

Function	Manufacturer	Model #	S/N
Host Laptop PC	Dell	Inspiron 3700	PTB105
AC adapter	Dell	ADP-70EB	TH-09364U-17971-06U-98TD
Wireless PC LAN card tranceiver	Actiontec	802CI2	MAC 00-20-E0-SS-03-57
Remote PC	Gateway	CA1	00210065
Remote AC adapter	Delta Electronics	ADP-35EB	99363002

Test Conditions / Notes:

The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797. (CKC Training Procedure LP042007). The EUT is a wireless LAN transceiver operating for this test on 2412 (Ch 1), 2437 (Ch 6), or 2462 (Ch 11) MHz. It is powered by 3.3 Volts from the host PC. It uses one integral microstrip antenna with 1.0 dBi gain for the transmitter. Note 1) Receiving at 2462 MHz on channel 11 for this scan for spurious emissions. Note 2) Scanned 30-1000 MHz and maximized as needed.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	HP-84 dB	Chase dB	rad_c dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	483.998M	40.0	-28.0	+18.7	+6.7	+0.0	37.4	46.0	-8.6	Vert
2	500.073M	38.5	-28.0	+19.0	+6.8	+0.0	36.3	46.0	-9.7	Vert
3	166.648M	45.3	-27.4	+9.6	+3.6	+0.0	31.1	43.5	-12.4	Horiz
4	400.082M	36.5	-27.5	+16.4	+6.1	+0.0	31.5	46.0	-14.5	Horiz
5	299.998M	39.2	-26.9	+13.3	+5.2	+0.0	30.8	46.0	-15.2	Vert
6	350.802M	36.8	-27.2	+14.6	+5.4	+0.0	29.6	46.0	-16.4	Vert

7	300.048M	37.3	-26.9	+13.3	+5.2	+0.0	28.9	46.0	-17.1	Horiz
8	133.337M	38.7	-27.6	+11.0	+3.2	+0.0	25.3	43.5	-18.2	Horiz
9	133.307M	37.7	-27.6	+11.0	+3.2	+0.0	24.3	43.5	-19.2	Vert
10	166.647M	38.0	-27.4	+9.6	+3.6	+0.0	23.8	43.5	-19.7	Vert
11	230.565M	37.7	-27.0	+11.3	+4.2	+0.0	26.2	46.0	-19.8	Vert
12	329.310M	33.5	-27.1	+14.1	+5.3	+0.0	25.8	46.0	-20.2	Vert