



ADDENDUM TO FC03-035

FOR THE

CREATIVE WIRELESS MP3 RECEIVER, DAP-WL0001/DAA-RF0001

FCC PART 15 SUBPART C SECTIONS 15.207, 15.209, 15.247 & 15.249 AND RSS 210

COMPLIANCE

DATE OF ISSUE: AUGUST 21, 2003

PREPARED FOR:

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W.O. No.: 80429

Date of test: June 3-23, 2003

Report No.: FC03-035A

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ADMINISTRATIVE INFORMATION

DATE OF TEST: June 3-23, 2003

DATE OF RECEIPT: June 3, 2003

PURPOSE OF TEST: To demonstrate the compliance of the Creative Wireless MP3 Receiver, DAP-WL0001/ DAP-RF0001, with the requirements for FCC Part 15 Subpart C Sections 15.207, 15.209, 15.247 & 15.249 and RSS 210 devices.
Addendum A is to change the remote model number to DAA-RF0001.

TEST METHOD: ANSI C63.4 (1992) and RSS 210

MANUFACTURER: Creative Technology Ltd.
31 International Business Park
Creative Resources
Singapore 609921

REPRESENTATIVE: Alvin Auyeung

TEST LOCATION: CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

SUMMARY OF RESULTS

As received, the Creative Labs Inc. Creative Wireless MP3 Receiver, DAP-WL0001/DAA-RF0001 was found to be fully compliant with the following standards and specifications:

United States	Canada
PART 15.247/15.249	RSS 210
15.209	6.2.1
15.247(a)(1)	6.2.2(o)(a1)
15.247(a)(1)(i)	6.2.2(o)(a2)
15.247(b)(2)	
15.247(a)(1)(ii)	6.2.2(o)(a3)
15.247(a)(1)(iii)	
15.247(b)(1)	
15.247(b)(3)	
15.247(b)(3)(i)	
15.247(b)(3)(ii)	
15.247(b)(3)(iii)	
15.247(d)	
15.247(b)(1)	6.2.2(o)(b)
15.247(b)(3)	
15.247(b)(3)(i)	
15.247(b)(3)(ii)	
15.247(b)(3)(iii)	
15.247(d)	
15.247(e)	
15.247(f)	6.2.2(o)(c)
15.247(c)	6.2.2(o)(e)(1)
15.203	6.2.2(o)(e)(2)
15.247(a)(2)	NA
15.247(b)(4)	NA
15.249(a)	6.2.2(m2)(1)
15.249(b)	NA
15.249(c)	6.2.2(m2)(2)
15.249(d)	6.2.2(m2)(3)
15.249(e)	6.2.2(m2)(4)
15.249(f)	NA
15.207	6.6
ANSI C63.4 (1992) method	RSS 212 test method
	Industry of Canada File No. IC 3082-B

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

QUALITY ASSURANCE:

A handwritten signature in black ink that reads "Steve Behm".

Steve Behm, Director of Engineering Services
and Quality Assurance

A handwritten signature in black ink that reads "Joyce Walker".

Joyce Walker, Quality Assurance Administrative
Manager

A handwritten signature in black ink that reads "Mike Wilkinson".

Mike Wilkinson, Lab Manager

TEST PERSONNEL:

A handwritten signature in black ink that reads "Monika Brandle".

Monika Brandle, EMC Test Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was a production unit. The EUT is a radio frequency remote control unit.

FCC 15.31(e) Voltage Variations

Customer: Creative Technology
WO#: 80429
Date: 17-Jun-03
Test Engineer: Monika Brandle

Device Model #: DAP-WL0001/DAP-RF0001
Operating Voltage: 120 VDC/VAC

Voltage Variations ($\pm 15\%$) for 15.247

		Channel 1 (MHz)	Dev. (MHz)	Channel 2 (MHz)	Dev. (MHz)	Channel 3 (MHz)	Dev. (MHz)
Channel		2412		2437		2462	
Frequency:							
20	102.0	2412.01000	0.01000	2437.13000	0.13000	2462.13000	9.87000
20	120.0	2411.99800	0.00200	2437.12999	0.12999	2462.12999	9.87001
20	138.0	2412.00000	0.00000	2437.13000	0.13000	2462.13000	9.87000

Note: For the remote, new batteries were used

Voltage Variations ($\pm 15\%$) for 15.249

		Channel 1 (MHz)	Dev. (MHz)	Channel 2 (MHz)	Dev. (MHz)	Channel 3 (MHz)	Dev. (MHz)
Channel		906		910		924	
Frequency:							
20	102.0	905.96100	0.03900	909.70000	0.30000	924.01200	0.01200
20	120.0	905.99200	0.00800	910.01200	0.01200	924.01100	0.01100
20	138.0	906.99200	0.99200	910.70001	0.70001	924.01100	0.01100

Note: For the remote, new batteries were used

Test Equipment

Description	Manufacturer	Model #	Serial #	Asset #	Cal Date	Cal Due
Digital Multimeter	Radio Shack	22-183	NA	01241	9/3/02	9/3/03
Spectrum Analyzer	HP	8593EM	3624A00159	02111	5/12/03	5/12/05
Variac	Superior Electronics	126	N/A	02037	5/1/03	5/1/04

FCC 15.31(m) Number Of Channels

Each transmitter was tested on three channels.

FCC 15.33(a) Frequency Ranges Tested

15.207 Conducted: 150 kHz – 30 MHz

15.249/15.247/15.209/15.205/15.109 Radiated: 9 kHz – 24 GHz

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	24 GHz	1 MHz

FCC 15.203 Antenna Requirements

The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

FCC 15.205 Restricted Bands

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.

Mode Of Operation

The EUT was configured by the manufacturer to operate in a continuous transmit mode for testing purposes.

EUT Operating Frequency

The EUT was operating at 2412 MHz, 2437 MHz and 2462 MHz for 15.247 and 906 MHz, 910 MHz & 924 MHz for 15.249 during testing.

The EUT is a direct sequencing device operating in the 902 – 928 MHz and 2400 – 2483.5 MHz band.

The following models were tested by CKC Laboratories: **DAP-WL0001/DAP-RF0001**

Since the time of testing the manufacturer has chosen to use the following model names in its place. Any differences between the names does not affect their EMC characteristics and therefore complies to the level of testing equivalent to the tested model name shown on the data sheets: **DAP-WL0001/DAA-RF0001**

EQUIPMENT UNDER TEST

Creative Wireless MP3 Receiver

Manuf: Creative Technology Ltd.
Model: DAP-WL0001/DAA-RF0001
Serial: 06032003-001
FCC ID: IBADAPWLR01/IBADAPWLR02

PERIPHERAL DEVICES

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

Magic LAN AP Wireless LAN Access Point

Manuf: Samsung
Model: SWL-33
Serial: APEUOB-116000475
FCC ID: DoC

Mouse

Manuf: HP
Model: 4D Browser Up Mouse
Serial: B00000960
FCC ID: DoC

Speakers

Manuf: Creative/Cambridge Sound Works
Model: GCS300/SBS36
Serial: SW00361192000071
FCC ID: DoC

Monitor

Manuf: NEC
Model: Multisync 50
Serial: 8450030YA
FCC ID: DoC

Keyboard

Manuf: HP
Model: N00905033 Rev 2.0
Serial: 5183-9980
FCC ID: DoC

Host PC

Manuf: HP (Home Products Division)
Model: 00-1065 PRO
Serial: Creative Labs Tahiti ULA M/B2
FCC ID: DoC

MEASUREMENT UNCERTAINTY

TEST	HIGHEST UNCERTAINTY
Radiated Emissions	+/- 2.94 dB
Conducted Emissions	+/- 1.56 dB

Note: Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Statements of compliance are based on the nominal values only.

REPORT OF MEASUREMENTS

The following tables report the six highest worst case levels recorded during the tests performed on the EUT. All readings taken are peak readings unless otherwise noted. The data sheets from which these tables were compiled are contained in Appendix C.

Table 1: FCC 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					
0.440883	36.1	0.4		0.1		36.6	47.0	-10.4	B
0.440883	35.7	0.3		0.1		36.1	47.0	-10.9	W
0.504513	36.8	0.3		0.1		37.2	46.0	-8.8	B
0.549963	40.1	0.2		0.1		40.4	46.0	-5.6	W
1.472690	37.2	0.3		0.0		37.5	46.0	-8.5	W
1.817561	36.2	0.3		0.0		36.5	46.0	-9.5	WA

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Section 15.207

NOTES: A = Average Reading
B = Black Lead
W = White Lead

COMMENTS: EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on 906MHz and 2437MHz.

Table 2: FCC 15.247(b)(3) Fundamental Emission 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	Corr. dB				
2409.630	89.8	28.3	-35.0	11.0	5.2	99.3	127.0	-27.7	V
2412.000	93.5	28.3	-35.0	11.0	5.2	103.0	127.0	-24.0	H
2437.130	99.5	28.4	-35.0	11.0	5.2	109.1	127.0	-17.9	V
2439.880	92.4	28.4	-35.0	11.0	5.2	102.0	127.0	-25.0	H
2459.250	93.1	28.4	-35.0	11.1	5.2	102.8	127.0	-24.2	H
2462.130	95.4	28.4	-35.0	11.2	5.2	105.2	127.0	-21.8	V

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

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on Low (2412MHz), Middle (2437MHz), and High (2462MHz) Channels. Signal is not capable of being unmodulated. BW Correction (dB) = $10 \cdot \log_{10}(10\text{MHz}/3\text{MHz}) = 10 \cdot \log_{10}(3.3333) = 10 \cdot 0.522878745 = 5.229\text{dB}$. Spectrum Analyzer Settings: RBW/VBW = 3MHz, Span = 50MHz, Sweep Time = 20msec, Reference Level = 107dBμV, Internal Attenuation = 10dB, External Attenuation = 6dB.

Table 3: FCC 15.247(c)/15.209/15.109 Six Highest Radiated Emission Levels

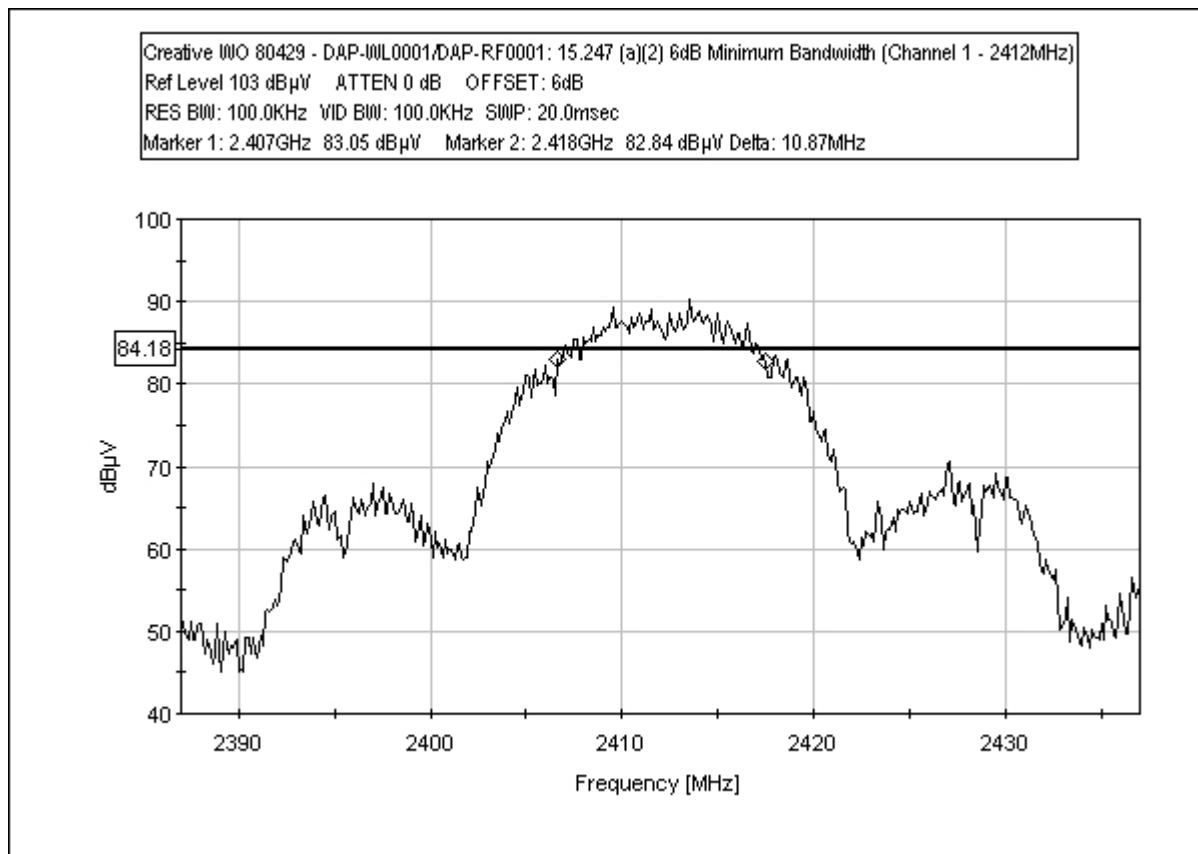
FREQUENCY MHz	METER READING dBμV	CORRECTION FACTORS				CORRECTED READING dBμV/m	SPEC LIMIT dBμV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB					
220.148	52.2	10.7	-26.5	2.5		38.9	46.0	-7.1	H
237.080	51.5	11.9	-26.5	2.6		39.5	46.0	-6.5	HQ
242.728	54.3	12.3	-26.5	2.6		42.7	46.0	-3.3	HQ
256.838	51.6	12.8	-26.5	2.7		40.6	46.0	-5.4	HQ
360.007	51.2	14.8	-26.9	3.5		42.6	46.0	-3.4	HQ
2736.500	41.2	29.6	-35.0	11.9		47.7	54.0	-6.3	H

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Sections 15.247(c)/15.209/15.109
Test Distance: 3 Meters

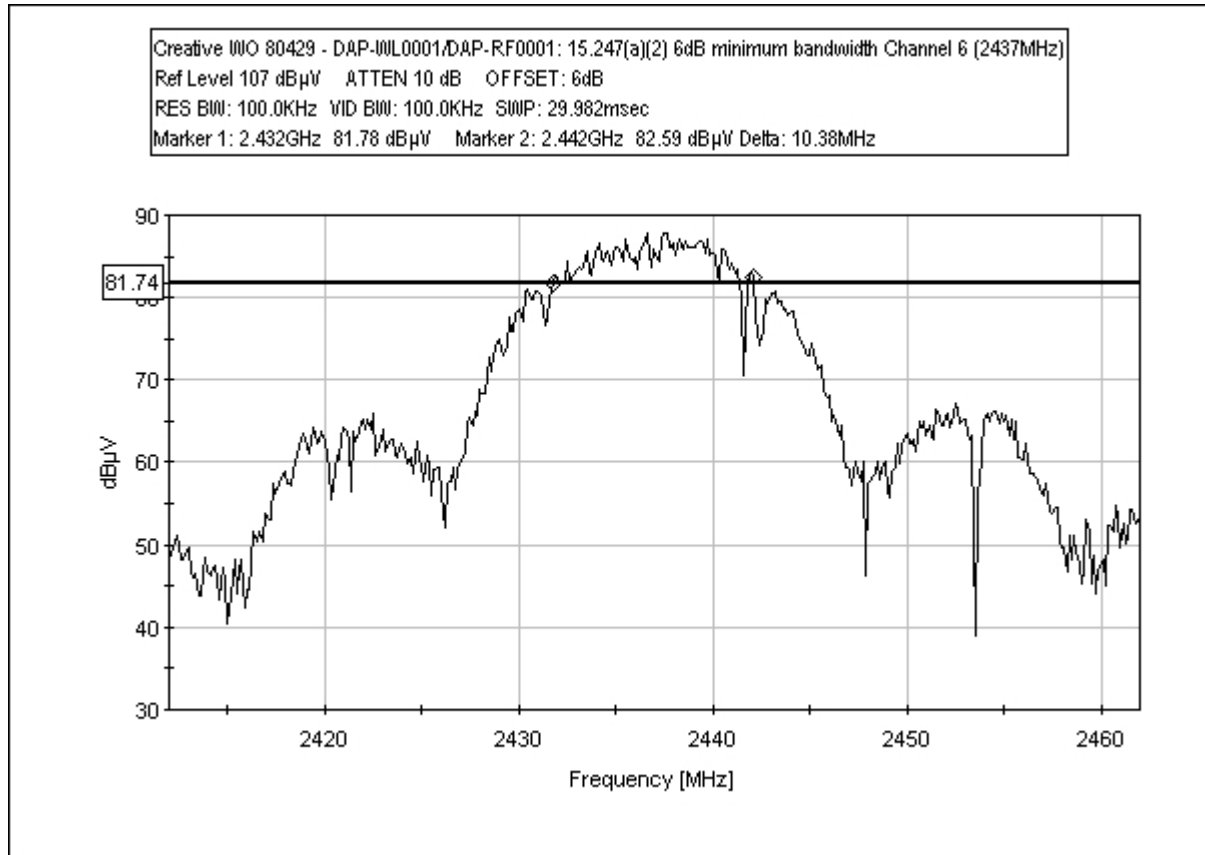
H = Horizontal Polarization
Q = Quasi Peak Reading

COMMENTS: EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on Low (2412MHz), Middle (2437MHz), and High (2462MHz) Channels. Signal is not capable of being unmodulated. Worst case emissions were reported. Tested with the 906MHz transmitter. Frequency Range 9kHz-24GHz.

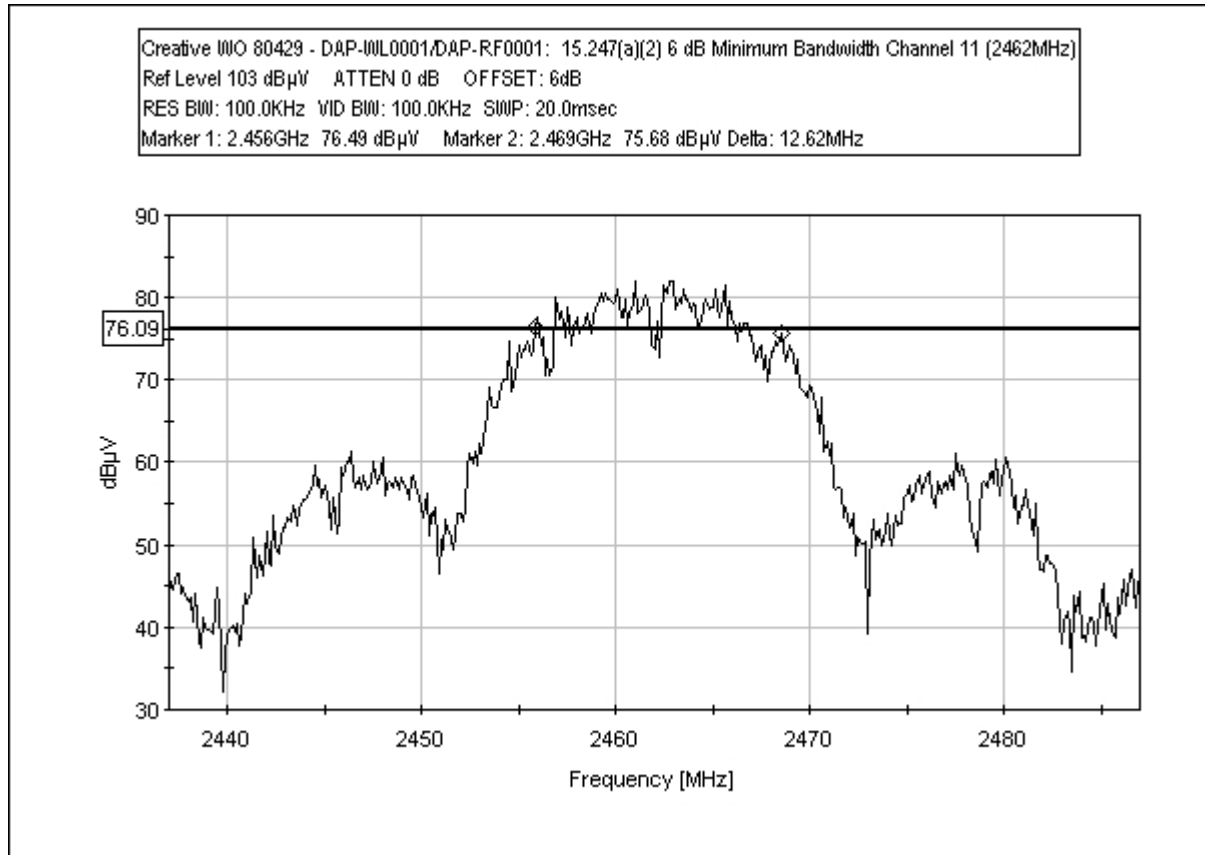
FCC 15.247(a)(2) - BANDWIDTH PLOT LOW CHANNEL 2412



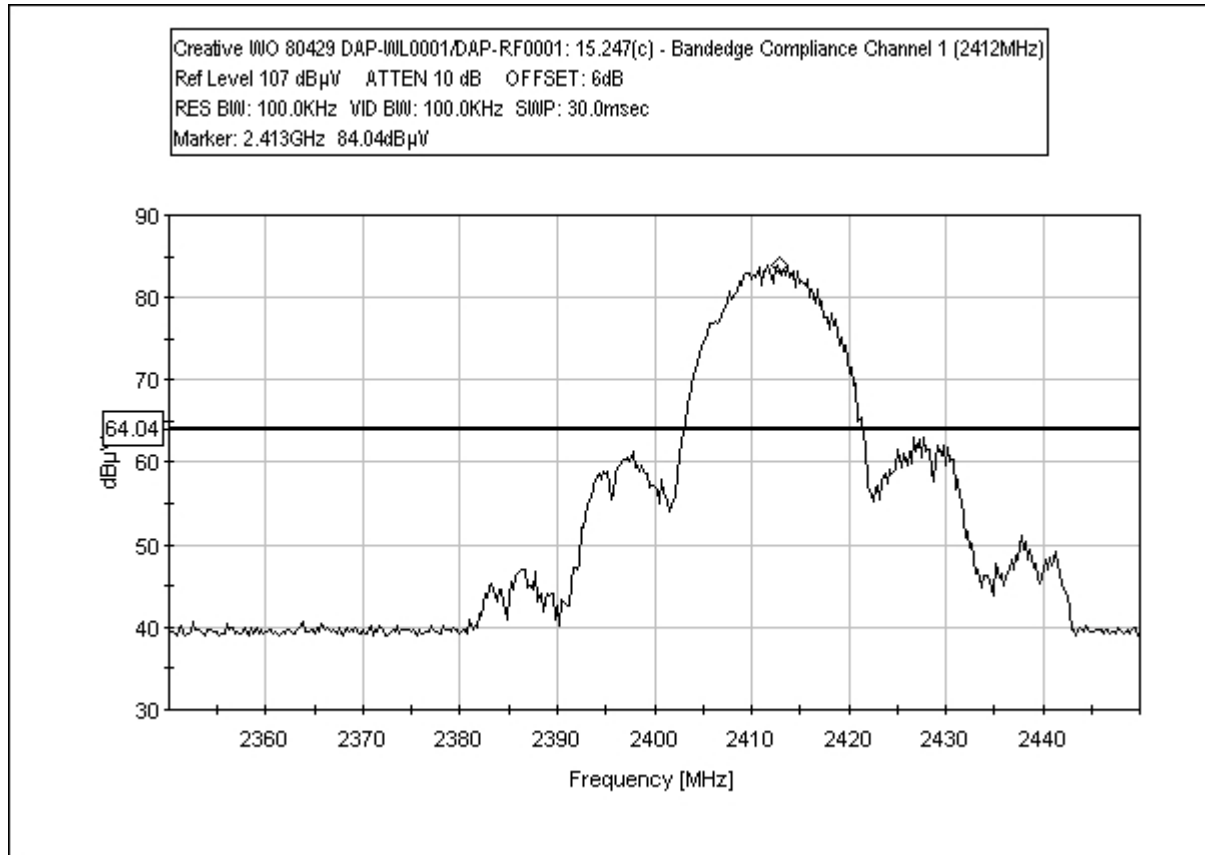
FCC 15.247(a)(2) - BANDWIDTH PLOT MID CHANNEL 2437



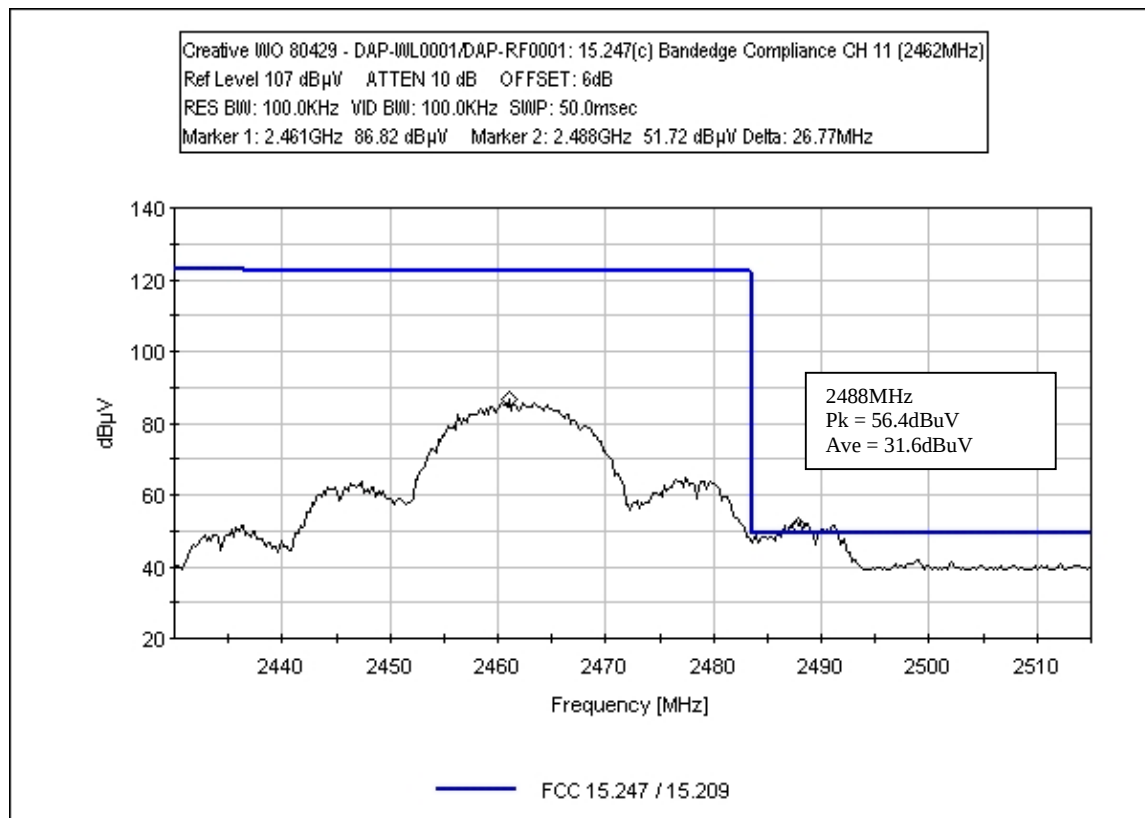
FCC 15.247(a)(2) - BANDWIDTH PLOT HIGH CHANNEL 2462



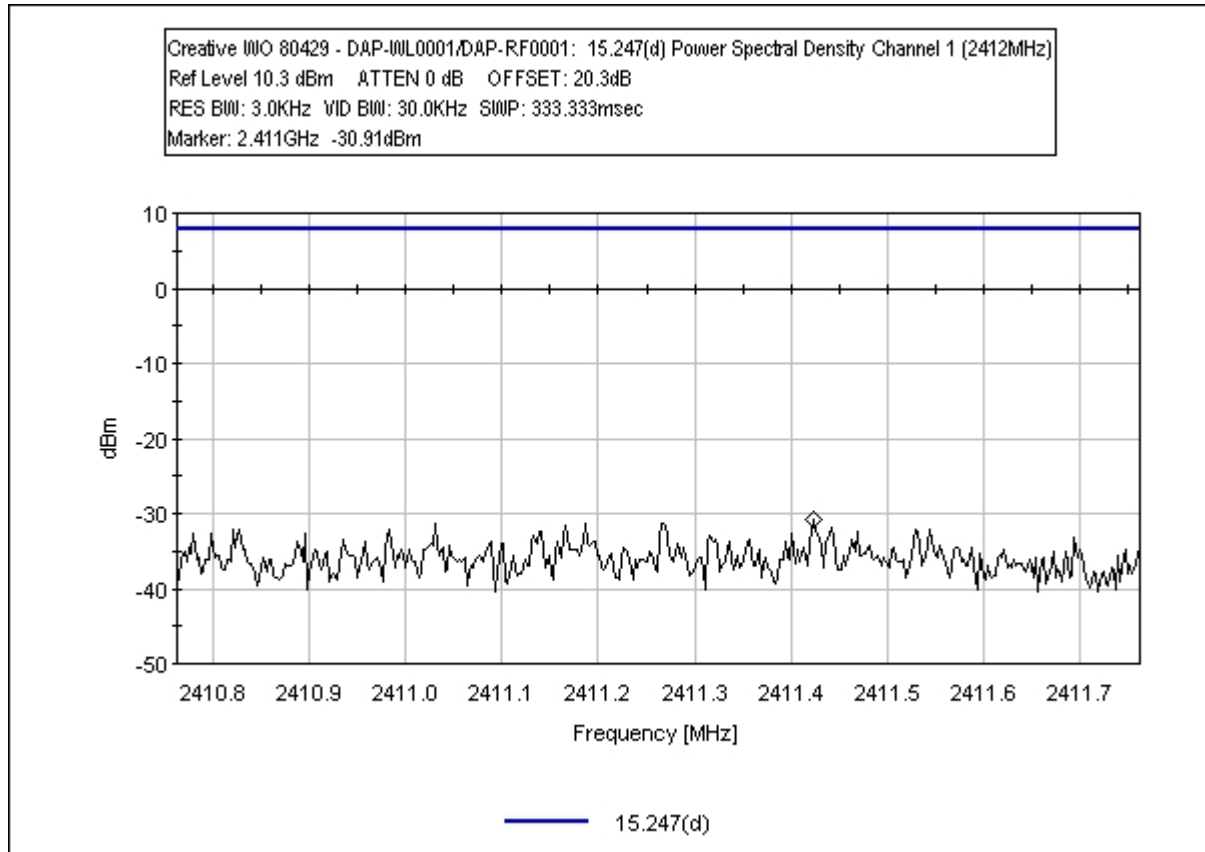
FCC 15.247(c) - BANDEDGE COMPLIANCE LOW CHANNEL 2412



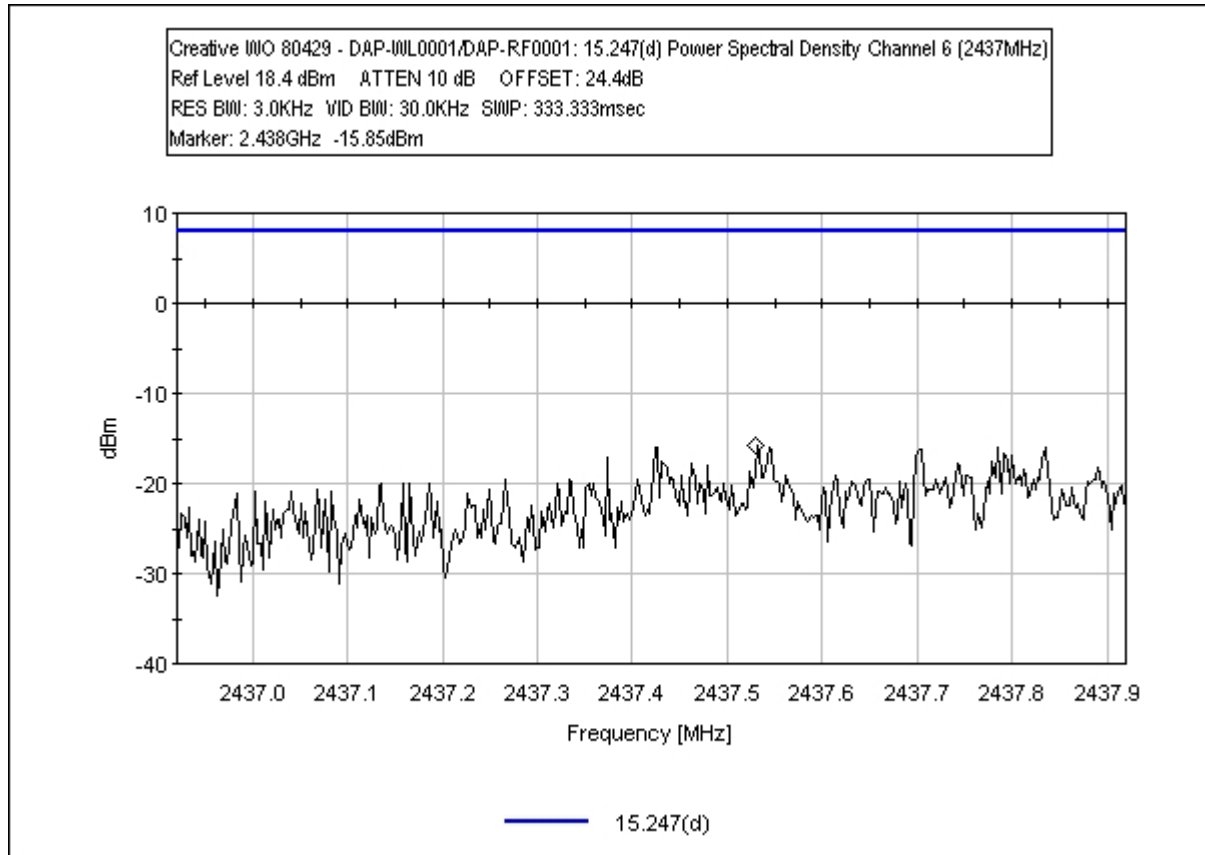
FCC 15.247(c) - BANDEDGE COMPLIANCE HIGH CHANNEL 2462



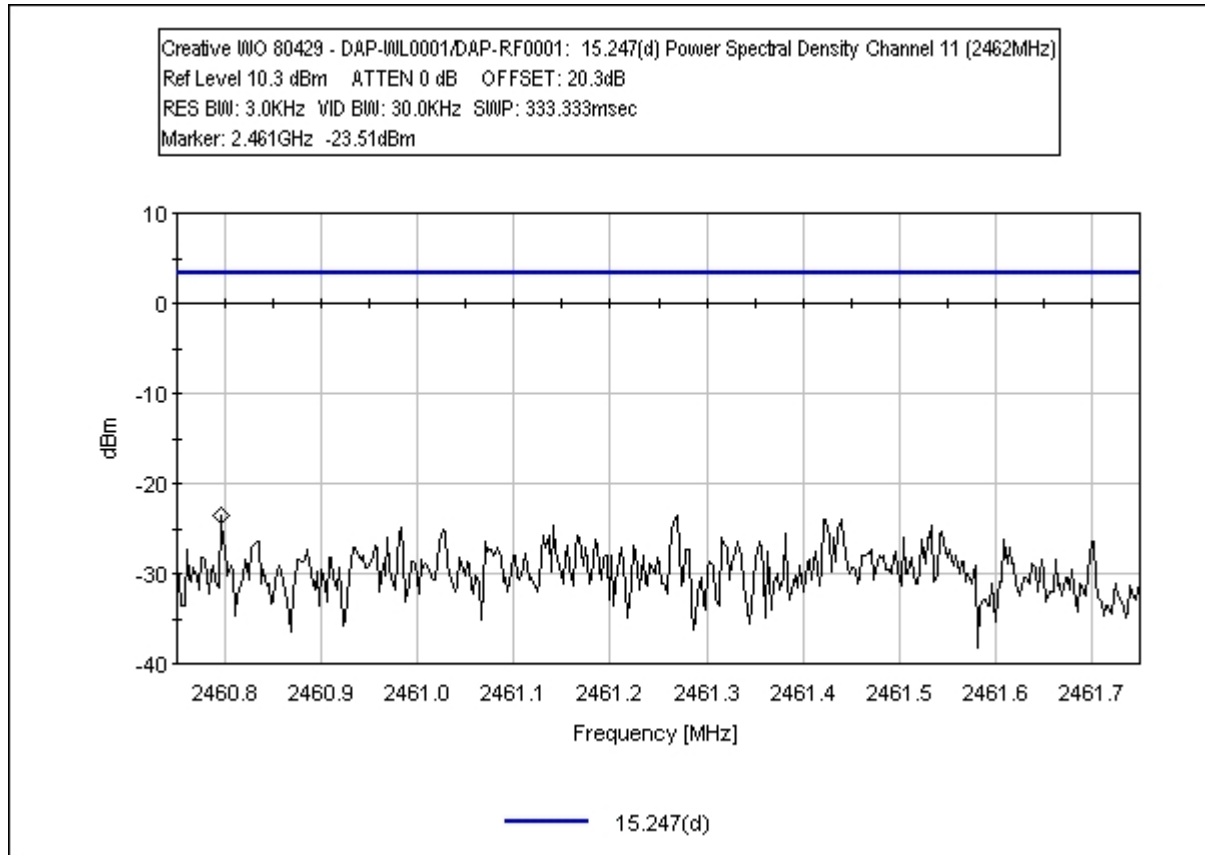
FCC 15.247(d) - POWER SPECTRAL DENSITY LOW CHANNEL 2412



FCC 15.247(d) - POWER SPECTRAL DENSITY MID CHANNEL 2437



FCC 15.247(d) - POWER SPECTRAL DENSITY HIGH CHANNEL 2462



FCC 2.1091/2.1093 MPE CALCULATIONS FOR 15.247

Maximum Permissible Exposure Calculations

Date of Report: June 23, 2003

Calculations prepared for:

Creative Technology
1901 McCarthy Blvd.
Milpitas, CA 95035

Calculations prepared by:

Monika Brandle
CKC Laboratories, Inc.
5473A Clouds Rest Road
Mariposa, CA 95338

Model Number: DAP-WL0001/DAP-RF-0001

Fundamental Operating Frequency: 2412MHz-2472MHz

Maximum Rated Output Power: .0149W (ERP)

Measured Output Power: .01449W (ERP)

Antenna Gain: EUT has an integral antenna – ERP calculated with reference to a half wave dipole antenna.

MPE Limit in accordance with 1.1310(b): Limits for general population/uncontrolled exposure

MPE Limit = 1

EIRP (mW)	Distance (Centimeters)	Power Density (mW/cm ²)	Result
24.39368473	1.393618438	1	Pass

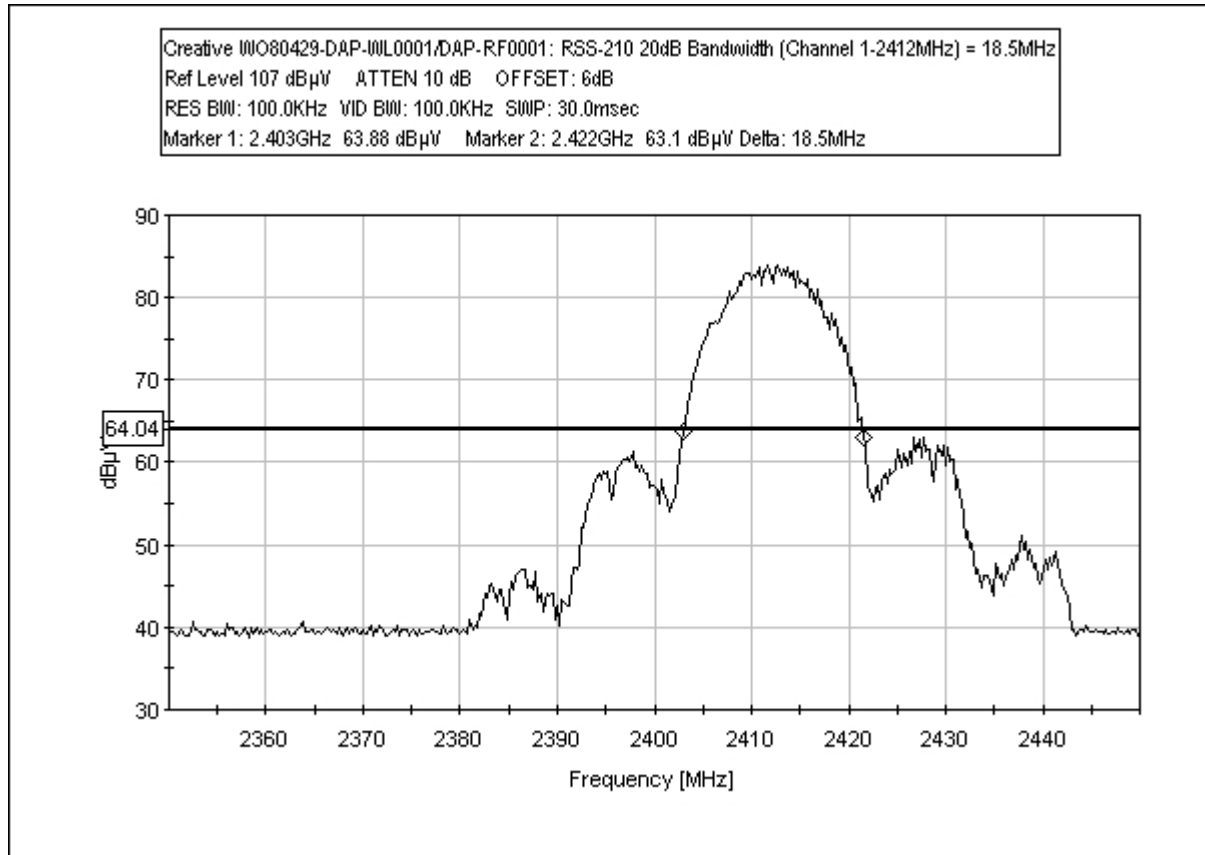
Note: Worse case power reported.

$$PowerDensity(mW / cm^2) = \frac{EIRP}{4\pi d^2}$$

Given: **EIRP** in mW and **d** in cm

Under normal operating conditions, the antenna is designed to maintain a separation distance of less than 20cm from all persons. As can be seen from the MPE results, this device passes the limits specified in 1.1310 at a distance of less than 20cm and at a output power of .014W(ERP).

RSS 210 5.9.1 EMISSIONS BANDWIDTH LOW CHANNEL 2412



RSS 210 5.9.1 EMISSIONS BANDWIDTH HIGH CHANNEL 2462

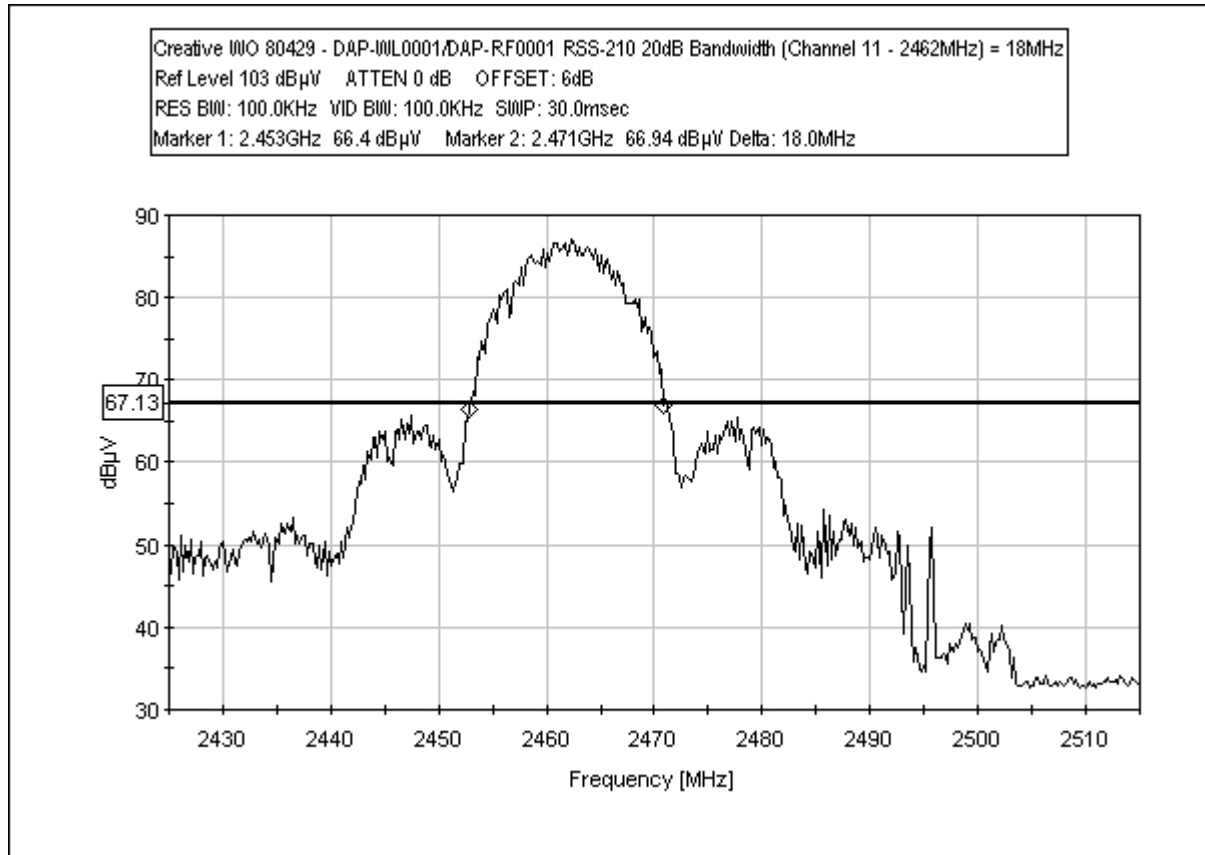


Table 4: FCC 15.249(a) Fundamental Emission Levels

FREQUENCY MHz	METER READING dBμV	CORRECTION FACTORS				CORRECTED READING dBμV/m	SPEC LIMIT dBμV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB					
905.960	88.8	22.9	-27.3	6.2		90.6	93.9	-3.3	H
905.993	84.4	22.9	-27.3	6.2		86.2	93.9	-7.7	VQ
909.700	83.0	22.9	-27.3	6.2		84.8	93.9	-9.1	H
910.010	77.8	22.9	-27.3	6.2		79.6	93.9	-14.3	V
924.010	73.0	23.1	-27.3	6.2		75.0	93.9	-18.9	H
924.110	68.2	23.1	-27.3	6.2		70.2	93.9	-23.7	V

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Section 15.249(a)
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
Q = Quasi Peak Reading

COMMENTS: EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on Low (906MHz), Middle (910MHz), and High (924MHz) Channels.

Table 5: FCC 15.249(a)/15.249(d)/15.249(e)/15.209/15.109 Six Highest Radiated Emission Levels

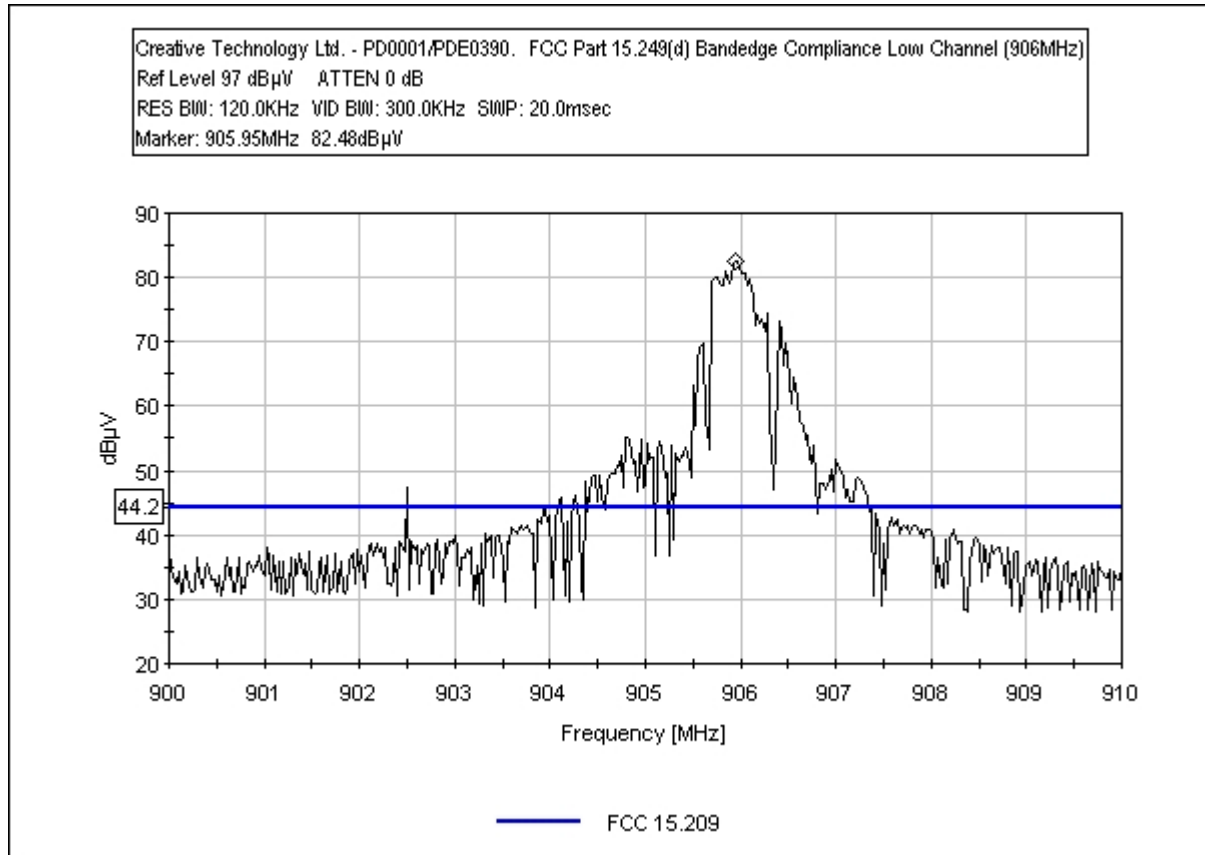
FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
220.148	52.2	10.7	-26.5	2.5		38.9	46.0	-7.1	H
237.080	51.5	11.9	-26.5	2.6		39.5	46.0	-6.5	HQ
242.725	56.0	12.3	-26.5	2.6		44.4	46.0	-1.6	HQ
256.838	51.6	12.8	-26.5	2.7		40.6	46.0	-5.4	HQ
360.007	51.2	14.8	-26.9	3.5		42.6	46.0	-3.4	HQ
1468.000	47.6	25.8	-35.5	8.5		46.4	54.0	-7.6	H

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Sections
15.249(a)/15.249(d)/15.249(e)/15.209/15.109
Test Distance: 3 Meters

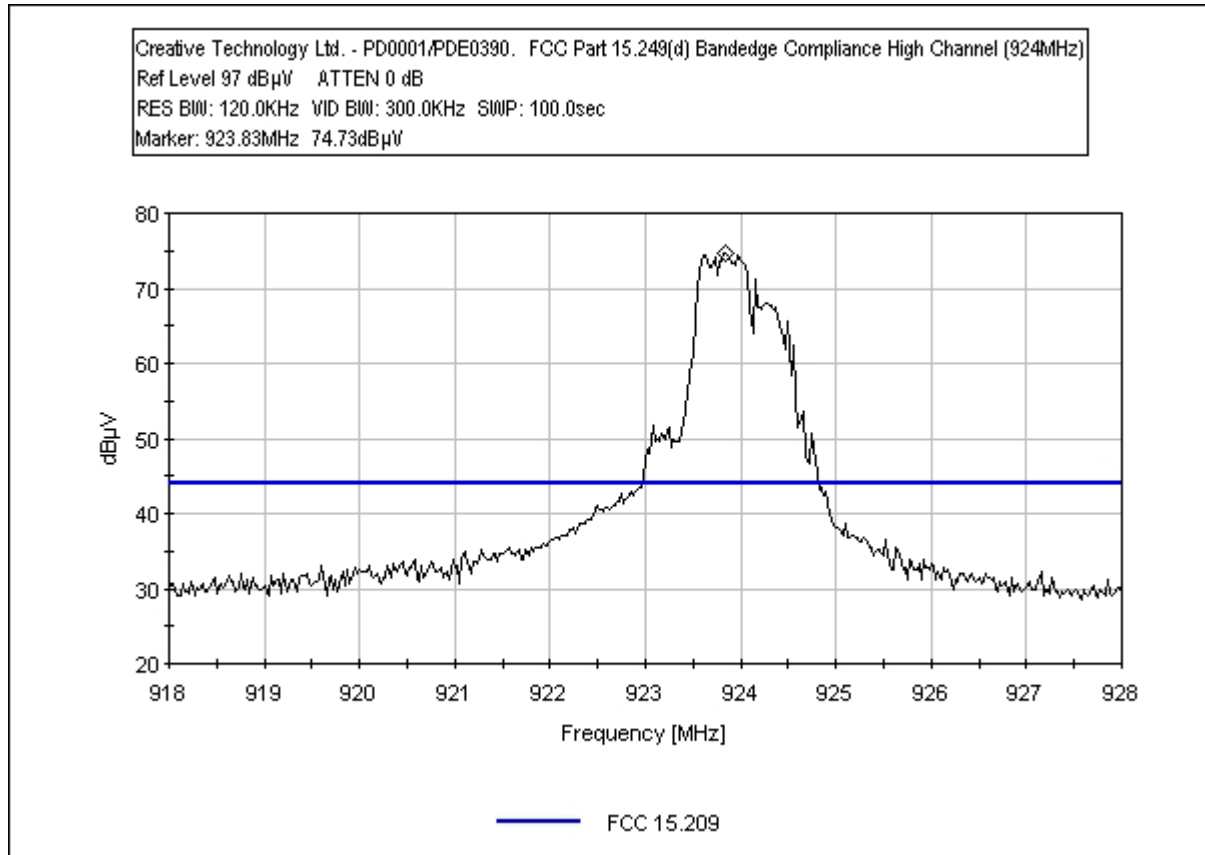
H = Horizontal Polarization
Q = Quasi Peak Reading

COMMENTS: EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on low (906MHz), middle (910MHz) and high (924MHz) channels. Worst case emissions reported. Frequency Range 9kHz-10GHz.

FCC 15.249(d) - BANDEDGE COMPLIANCE LOW CHANNEL 906 MHz



FCC 15.249(d) - BANDEDGE COMPLIANCE HIGH CHANNEL 924 MHz



FCC 2.1091/2.1093 MPE CALCULATIONS FOR 15.249

Maximum Permissible Exposure Calculations

Date of Report: June 23, 2003

Calculations prepared for:

Creative Technology
1901 McCarthy Blvd.
Milpitas, CA 95035

Calculations prepared by:

Monika Brandle
CKC Laboratories, Inc.
5473A Clouds Rest Road
Mariposa, CA 95338

Model Number: DAP-WL0001/DAP-RF-0001

Fundamental Operating Frequency: 906MHz-924MHz

Maximum Rated Output Power: .00021W (ERP)

Measured Output Power: .00021W (ERP)

Antenna Gain: EUT has an integral antenna – ERP calculated with reference to a half wave dipole antenna.

MPE Limit in accordance with 1.1310(b): Limits for general population/uncontrolled exposure

MPE Limit = .604

EIRP (mW)	Distance (Centimeters)	Power Density (mW/cm ²)	Result
.344569955	.213120592	.604	Pass

Note: Worse case power reported.

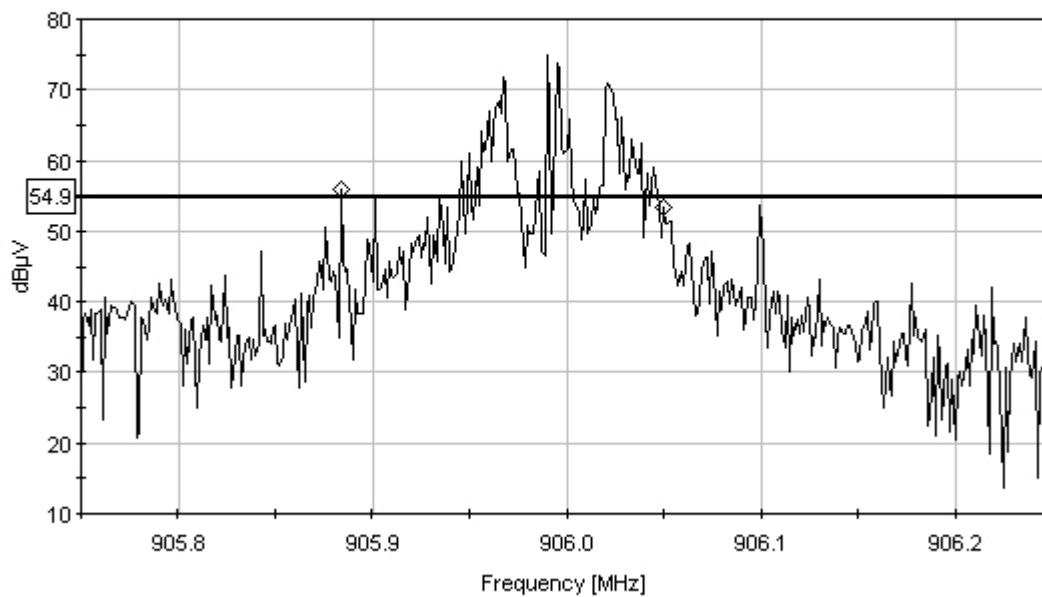
$$PowerDensity(mW / cm^2) = \frac{EIRP}{4\pi d^2}$$

Given: **EIRP** in mW and **d** in cm

Under normal operating conditions, the antenna is designed to maintain a separation distance of less than 20cm from all persons. As can be seen from the MPE results, this device passes the limits specified in 1.1310 at a distance of less than 20cm and at a output power of .002W(ERP).

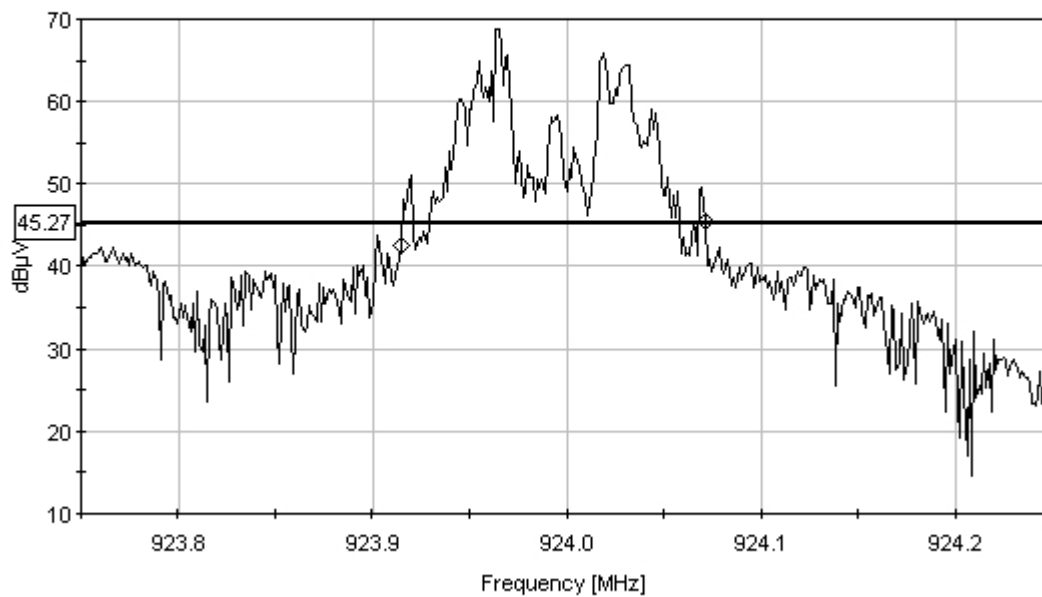
RSS 210 5.9.1 EMISSION BANDEDGE LOW CHANNEL 906 MHz

Creative Technology Ltd. - PD0001/PDE0390. RSS-210 Section 5.9.1 Emission Bandwidth Low Channel (906MHz) 167kHz
Ref Level 87 dB μ V ATTN 0 dB
RES BW: 1.0KHz VID BW: 1.0KHz SWP: 1.5sec
Marker 1: 905.884MHz 55.9 dB μ V Marker 2: 906.05MHz 53.35 dB μ V Delta: 166.199KHz



RSS 210 5.9.1 EMISSION BANDEDGE HIGH CHANNEL 924 MHz

Creative Technology Ltd. - PD0001/PDE0390. RSS-210 Section 5.9.1 Emission Bandwidth High Channel (924MHz) 160kHz
Ref Level 87 dB μ V ATTN 0 dB
RES BW: 1.0KHz VID BW: 1.0KHz SWP: 20.0sec
Marker 1: 923.915MHz 42.59 dB μ V Marker 2: 924.071MHz 45.4 dB μ V Delta: 156.311KHz



TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.

The relative humidity was between 20% and 75%.

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 EUT 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)

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 EUT. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For frequencies from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. All antennas were located at a distance of 3 meters from the edge of the EUT. 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.

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.

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

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.

The LISNs used were 50 μ H/+50 ohms. Above 150 kHz, a 0.15 μ F series capacitor was added in-line prior to connecting the analyzer to restore the proper impedance for the range. A 30 to 50 second sweep time was used for automated measurements in the frequency bands of 150 kHz to 500 kHz, and 500 kHz to 30 MHz. All readings within 20 dB of the limit were recorded, and those within 6 dB of the limit were examined with additional measurements using a slower sweep time.

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 EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog 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 biconilog 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.

APPENDIX A

INFORMATION ABOUT THE EQUIPMENT UNDER TEST

INFORMATION ABOUT THE EQUIPMENT UNDER TEST

Test Software/Firmware:	AP Manager
CRT was displaying:	Data/Text
Power Supply Manufacturer:	Creative
Power Supply Part Number:	MAE060150UA0
AC Line Filter Manufacturer:	N/A
AC Line Filter Part Number:	N/A

I/O PORTS

Type	#
USB	1
Audio (RCA)	1
Optical Out	1

CRYSTAL OSCILLATORS

Type	Freq In MHz
DAC	10.00MHz
Audio	10.245MHz

PRINTED CIRCUIT BOARDS

Function	Model & Rev	Clocks, MHz	Layers	Location
Wireless MP3 receiver	PD0390 Rev. N/A	10.00MHz & 10.245MHz	4	Center

CABLE INFORMATION

Cable #:	1	Cable(s) of this type:	1
Cable Type:	Audio (RCA)	Shield Type:	None
Construction:	Round	Length In Meters:	1m
Connected To End (1):	EUT	Connected To End (2):	Speaker
Connector At End (1):	Plastic	Connector At End (2):	Plastic
Shield Grounded At (1):	N/A	Shield Grounded At (2):	N/A
Part Number:		Number of Conductors:	1
Notes and/or description:			

Cable #:	2	Cable(s) of this type:	1
Cable Type:	Optical Out	Shield Type:	N/A
Construction:	Round	Length In Meters:	.50m
Connected To End (1):	EUT	Connected To End (2):	Digital Speaker
Connector At End (1):	Plastic	Connector At End (2):	Plastic
Shield Grounded At (1):	None	Shield Grounded At (2):	None
Part Number:		Number of Conductors:	1
Notes and/or description:			

Cable #:	1	Cable(s) of this type:	1
Cable Type:	USB	Shield Type:	Braid
Construction:	Round	Length In Meters:	1m
Connected To End (1):	EUT	Connected To End (2):	Host PC
Connector At End (1):	Plastic	Connector At End (2):	Plastic
Shield Grounded At (1):	None	Shield Grounded At (2):	None
Part Number:		Number of Conductors:	4
Notes and/or description:	This port is used for firmware UPDATE ONLY, Not supports data transferring (Upload)		

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



Mains Conducted Emissions - Front View

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



Mains Conducted Emissions - Side View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View

APPENDIX B

TEST EQUIPMENT LIST

FCC 15.207

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
8028-50-TS-24-BNC LISN	8379276, 280	06/05/2003	06/05/2005	1248

15.247(b)(3)

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010

15.247(c)/15.209/15.205/15.109

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010
ARA MWH-1826/B Horn Antenna	1005	06/28/2002	06/28/2003	2046
EMCO Loop Antenna	2078	08/23/2002	08/23/2003	432

FCC 15.249(a)

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99

FCC 15.249(a)/15.249(d)/15.249(e)/15.209/15.109

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010
EMCO Loop Antenna	2078	08/23/2002	08/23/2003	432

APPENDIX C
MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, Ca 95338 • (209) 966-5240

Customer: **Creative Technology Ltd.**

Specification: **FCC 15.207 - AVE**

Work Order #: **80429**

Date: 06/13/2003

Test Type: **Conducted Emissions**

Time: 17:10:58

Equipment: **Creative Wireless MP3 Receiver**

Sequence#: 9

Manufacturer: Creative Technology Ltd.

Tested By: Monika Brandle

Model: DAP-WL0001/DAP-RF0001

120V 60Hz

S/N: 06032003-001

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Creative Wireless MP3 Receiver*	Creative Technology Ltd.	DAP-WL0001/DAP-RF0001	06032003-001

Support Devices:

Function	Manufacturer	Model #	S/N
Magic LAN AP Wireless LAN Access Point	Samsung	SWL-33	APEUOB-116000475
Speakers	Creative/Cambridge Sound Works	GCS300/SBS36	SW00361192000071
Mouse	HP	4D Browser Up Mouse	B00000960
Keyboard	HP	N00905033 Rev 2.0	5183-9980
Host PC	HP (Home Products Division)	00-1065 PRO	Creative Labs Tahiti ULA M/B2
Monitor	NEC	Multisync 50	8450030YA

Test Conditions / Notes:

EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on 906MHz and 2437MHz.

Transducer Legend:

T1=Cable & Cap (Bench)	T2=LISN Insertion Loss s/n276
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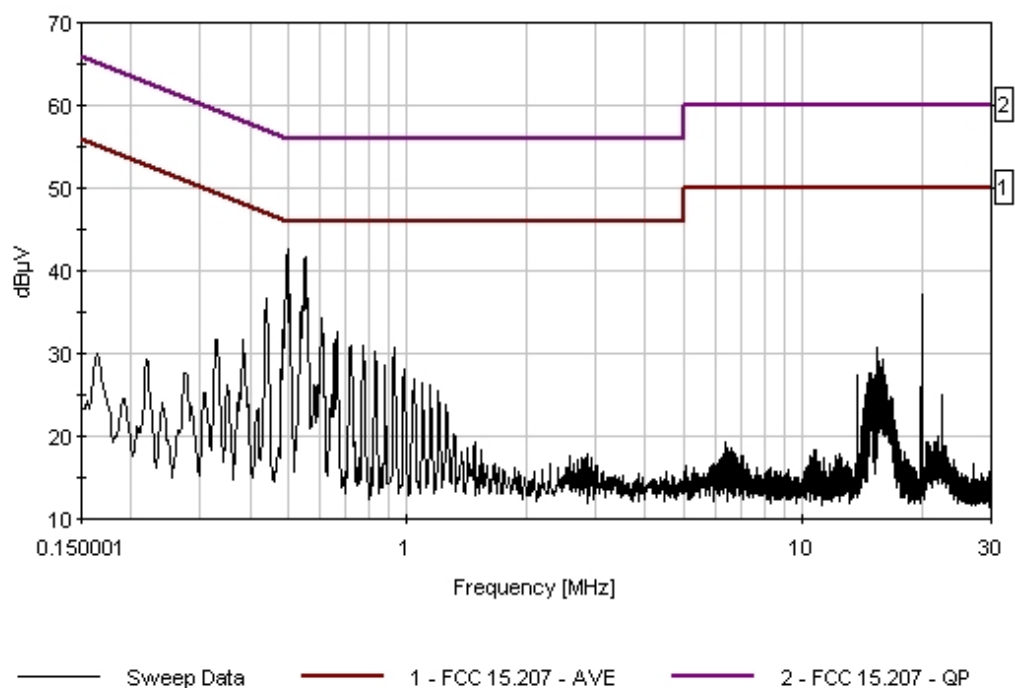
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	504.513k	36.8	+0.1	+0.3	+0.0	37.2	46.0	-8.8	Black
2	440.883k	36.1	+0.1	+0.4	+0.0	36.6	47.0	-10.4	Black
3	537.237k	34.5	+0.1	+0.3	+0.0	34.9	46.0	-11.1	Black
4	608.140k	34.0	+0.1	+0.3	+0.0	34.4	46.0	-11.6	Black
5	19.987M	36.6	+0.2	+0.4	+0.0	37.2	50.0	-12.8	Black
6	662.680k	32.3	+0.1	+0.3	+0.0	32.7	46.0	-13.3	Black
7	649.954k	30.8	+0.1	+0.3	+0.0	31.2	46.0	-14.8	Black

8	719.039k	30.7	+0.0	+0.3	+0.0	31.0	46.0	-15.0	Black
9	775.397k	30.8	+0.0	+0.2	+0.0	31.0	46.0	-15.0	Black
10	931.340k	30.5	+0.0	+0.3	+0.0	30.8	46.0	-15.2	Black
11	829.937k	30.1	+0.0	+0.2	+0.0	30.3	46.0	-15.7	Black
12	384.524k	31.1	+0.1	+0.4	+0.0	31.6	48.2	-16.6	Black
13	877.205k	28.3	+0.0	+0.3	+0.0	28.6	46.0	-17.4	Black
14	328.166k	31.3	+0.1	+0.3	+0.0	31.7	49.5	-17.8	Black
15	985.475k	27.7	+0.0	+0.3	+0.0	28.0	46.0	-18.0	Black
16	1.040M	26.6	+0.0	+0.3	+0.0	26.9	46.0	-19.1	Black
17	15.431M	30.0	+0.2	+0.4	+0.0	30.6	50.0	-19.4	Black
18	1.094M	26.1	+0.0	+0.3	+0.0	26.4	46.0	-19.6	Black
19	497.241k	24.8	+0.1	+0.3	+0.0	25.2	46.0	-20.8	Black
Ave									
^	497.241k	42.3	+0.1	+0.3	+0.0	42.7	46.0	-3.3	Black
21	551.781k	24.7	+0.1	+0.3	+0.0	25.1	46.0	-20.9	Black
Ave									
^	551.781k	41.2	+0.1	+0.3	+0.0	41.6	46.0	-4.4	Black

CKC Laboratories Date: 06/13/2003 Time: 17:10:58 Creative Technology Ltd. WVO#: 80429
 FCC 15.207 - AVE Test Lead: Black 120V 60Hz Sequence#: 9



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, Ca 95338 • (209) 966-5240

Customer: **Creative Technology Ltd.**

Specification: **FCC 15.207 - AVE**

Work Order #: **80429**

Date: 06/13/2003

Test Type: **Conducted Emissions**

Time: 16:55:21

Equipment: **Creative Wireless MP3 Receiver**

Sequence#: 8

Manufacturer: Creative Technology Ltd.

Tested By: Monika Brandle

Model: DAP-WL0001/DAP-RF0001

120V 60Hz

S/N: 06032003-001

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Creative Wireless MP3 Receiver*	Creative Technology Ltd.	DAP-WL0001/DAP-RF0001	06032003-001

Support Devices:

Function	Manufacturer	Model #	S/N
Magic LAN AP Wireless LAN Access Point	Samsung	SWL-33	APEUOB-116000475
Speakers	Creative/Cambridge Sound Works	GCS300/SBS36	SW00361192000071
Mouse	HP	4D Browser Up Mouse	B00000960
Keyboard	HP	N00905033 Rev 2.0	5183-9980
Host PC	HP (Home Products Division)	00-1065 PRO	Creative Labs Tahiti ULA M/B2
Monitor	NEC	Multisync 50	8450030YA

Test Conditions / Notes:

EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on 906MHz and 2437MHz.

Transducer Legend:

T1=Cable & Cap (Bench)	T2=LISN Insertion Loss s/n280
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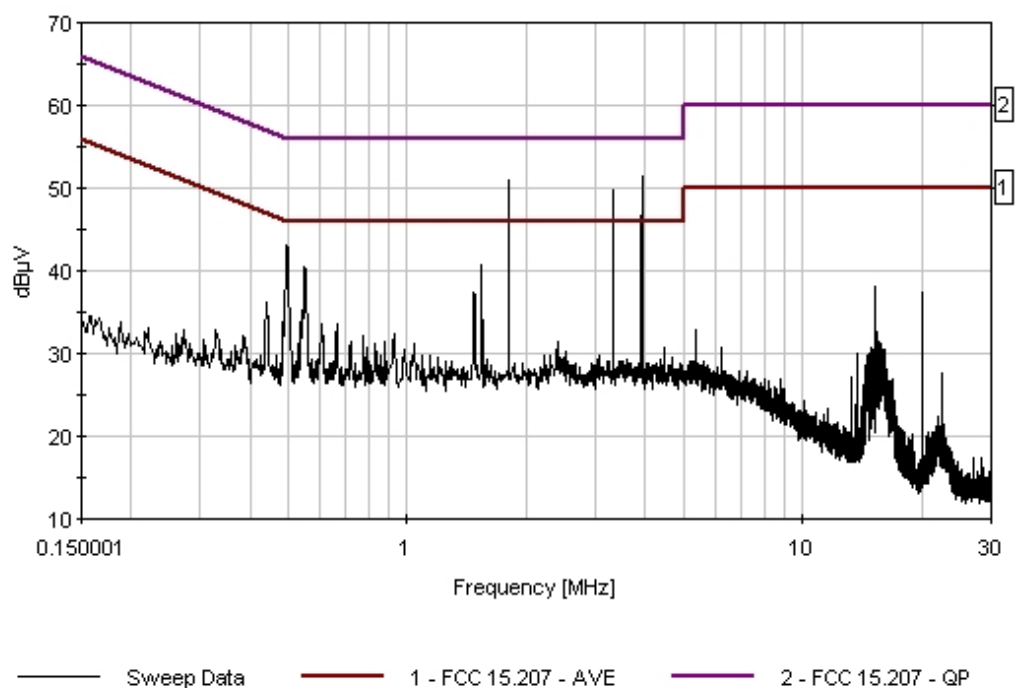
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	549.963k	40.1	+0.1	+0.2			+0.0	40.4	46.0	-5.6	White
2	1.473M	37.2	+0.0	+0.3			+0.0	37.5	46.0	-8.5	White
3	1.818M	36.2	+0.0	+0.3			+0.0	36.5	46.0	-9.5	White
Ave	1.818M	50.7	+0.0	+0.3			+0.0	51.0	46.0	+5.0	White
5	440.883k	35.7	+0.1	+0.3			+0.0	36.1	47.0	-10.9	White
6	608.140k	33.3	+0.1	+0.2			+0.0	33.6	46.0	-12.4	White
7	662.680k	33.3	+0.1	+0.2			+0.0	33.6	46.0	-12.4	White

8	19.996M	36.8	+0.2	+0.4	+0.0	37.4	50.0	-12.6	White
9	931.340k	32.1	+0.0	+0.2	+0.0	32.3	46.0	-13.7	White
10	771.761k	31.9	+0.0	+0.2	+0.0	32.1	46.0	-13.9	White
11	15.322M	35.3	+0.2	+0.4	+0.0	35.9	50.0	-14.1	White
12	720.856k	31.3	+0.0	+0.2	+0.0	31.5	46.0	-14.5	White
13	2.411M	31.1	+0.1	+0.3	+0.0	31.5	46.0	-14.5	White
14	877.205k	31.2	+0.0	+0.2	+0.0	31.4	46.0	-14.6	White
15	531.783k	30.9	+0.1	+0.3	+0.0	31.3	46.0	-14.7	White
16	1.040M	30.9	+0.0	+0.3	+0.0	31.2	46.0	-14.8	White
17	985.475k	30.1	+0.0	+0.3	+0.0	30.4	46.0	-15.6	White
18	3.928M	27.6	+0.1	+0.4	+0.0	28.1	46.0	-17.9	White
Ave									
^	3.927M	51.0	+0.1	+0.4	+0.0	51.5	46.0	+5.5	White
20	3.324M	25.8	+0.1	+0.3	+0.0	26.2	46.0	-19.8	White
Ave									
^	3.324M	49.3	+0.1	+0.3	+0.0	49.7	46.0	+3.7	White
22	495.000k	19.6	+0.1	+0.3	+0.0	20.0	46.1	-26.1	White
Ave									
^	495.000k	42.8	+0.1	+0.3	+0.0	43.2	46.1	-2.9	White
24	1.545M	13.8	+0.0	+0.3	+0.0	14.1	46.0	-31.9	White
Ave									
^	1.545M	40.4	+0.0	+0.3	+0.0	40.7	46.0	-5.3	White

CKC Laboratories Date: 06/13/2003 Time: 16:55:21 Creative Technology Ltd. WVO#: 80429
 FCC 15.207 - AVE Test Lead: White 120V 60Hz Sequence#: 8



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, Ca 95338 • (209) 966-5240

Customer: **Creative Technology Ltd.**

Specification: **15.247(b)(3)**

Work Order #: **80429**

Date: 06/19/2003

Test Type: **Maximized Emissions**

Time: 09:45:09

Equipment: **Creative Wireless MP3 Receiver**

Sequence#: 1

Manufacturer: Creative Technology Ltd.

Tested By: Monika Brandle

Model: DAP-WL0001/DAP-RF0001

S/N: 06032003-001

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Creative Wireless MP3 Receiver*	Creative Technology Ltd.	DAP-WL0001/DAP-RF0001	06032003-001

Support Devices:

Function	Manufacturer	Model #	S/N
Magic LAN AP Wireless LAN Access Point	Samsung	SWL-33	APEUOB-116000475
Speakers	Creative/Cambridge Sound Works	GCS300/SBS36	SW00361192000071
Mouse	HP	4D Browser Up Mouse	B00000960
Keyboard	HP	N00905033 Rev 2.0	5183-9980
Host PC	HP (Home Products Division)	00-1065 PRO	Creative Labs Tahiti ULA M/B2
Monitor	NEC	Multisync 50	8450030YA

Test Conditions / Notes:

EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on Low (2412MHz), Middle (2437MHz), and High (2462MHz) Channels. Signal is not capable of being unmodulated. BW Correction (dB) = $10 \cdot \log(10\text{MHz}/3\text{MHz}) = 10 \cdot \log(3.3333) = 10 \cdot 0.522878745 = 5.229\text{dB}$. Spectrum Analyzer Settings: RBW/VBW = 3MHz, Span = 50MHz, Sweep Time = 20msec, Reference Level = 107dBuV, Internal Attenuation = 10dB, External Attenuation = 6dB.

Transducer Legend:

T1=Amp - S/N 301	T2=Horn AN 00327 1-18GHz
T3=Cable HF P01527	T4=Cable 35' Blue SMA CKC P1352
T5=WL Gore SN 1065 AN P004301	T6=Cable 25' blue SMA ANP01353
T7=BW Correction Factor	

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

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	T5	T6	T7						
			dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	2437.130M	99.5	-35.0	+28.4	+0.4	+5.2	+0.0	109.1	127.0	-17.9	Vert
			+0.6	+4.8	+5.2						
2	2462.130M	95.4	-35.0	+28.4	+0.4	+5.3	+0.0	105.2	127.0	-21.8	Vert
			+0.6	+4.9	+5.2						
3	2412.000M	93.5	-35.0	+28.3	+0.4	+5.2	+0.0	103.0	127.0	-24.0	Horiz
			+0.6	+4.8	+5.2						

4	2459.250M	93.1	-35.0 +0.6	+28.4 +4.9	+0.4 +5.2	+5.2	+0.0	102.8	127.0	-24.2	Horiz
5	2439.880M	92.4	-35.0 +0.6	+28.4 +4.8	+0.4 +5.2	+5.2	+0.0	102.0	127.0	-25.0	Horiz
6	2409.630M	89.8	-35.0 +0.6	+28.3 +4.8	+0.4 +5.2	+5.2	+0.0	99.3	127.0	-27.7	Vert

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, Ca 95338 • (209) 966-5240

Customer: **Creative Technology Ltd.**

Specification: **FCC 15.247 (c) / 15.209 / 15.109**

Work Order #: **80429**

Date: 06/23/2003

Test Type: **Maximized Emissions**

Time: 13:54:07

Equipment: **Creative Wireless MP3 Receiver**

Sequence#: 6

Manufacturer: Creative Technology Ltd.

Tested By: Monika Brandle

Model: DAP-WL0001/DAP-RF0001

S/N: 06032003-001

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Creative Wireless MP3 Receiver*	Creative Technology Ltd.	DAP-WL0001/DAP-RF0001	06032003-001

Support Devices:

Function	Manufacturer	Model #	S/N
Magic LAN AP Wireless LAN Access Point	Samsung	SWL-33	APEUOB-116000475
Speakers	Creative/Cambridge Sound Works	GCS300/SBS36	SW00361192000071
Mouse	HP	4D Browser Up Mouse	B00000960
Keyboard	HP	N00905033 Rev 2.0	5183-9980
Host PC	HP (Home Products Division)	00-1065 PRO	Creative Labs Tahiti ULA M/B2
Monitor	NEC	Multisync 50	8450030YA

Test Conditions / Notes:

EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on Low (2412MHz), Middle (2437MHz), and High (2462MHz) Channels. Signal is not capable of being unmodulated. Worst case emissions were reported. Tested with the 906MHz transmitter. Frequency Range 9kHz-24GHz.

Transducer Legend:

T1=Cable - 10 Meter	T2=Amp - S/N 604
T3=Bilog B	T4=Amp - S/N 301
T5=Cable 35' Blue SMA CKC P1352	T6=Cable 25' blue SMA ANP01353
T7=Horn AN 00327 1-18GHz	T8=Cable HF P01527
T9=WL Gore SN 1065 AN P004301	T10=HPF 1.5GHz

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBµV	T9	T10							
			dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	242.728M	54.3	+2.6	-26.5	+12.3	+0.0	+0.0	42.7	46.0	-3.3	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
^	242.720M	57.0	+2.6	-26.5	+12.3	+0.0	+0.0	45.4	46.0	-0.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							

3	360.007M QP	51.2	+3.5 +0.0 +0.0	-26.9 +0.0 +0.0	+14.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	42.6	46.0	-3.4	Horiz
^	360.007M	35.1	+3.5 +0.0 +0.0	-26.9 +0.0 +0.0	+14.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	26.5	46.0	-19.5	Horiz
5	256.838M QP	51.6	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	40.6	46.0	-5.4	Horiz
^	256.848M	52.8	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	41.8	46.0	-4.2	Horiz
7	2736.500M	41.2	+0.0 +5.6 +0.7	+0.0 +5.2 +0.3	+0.0 +29.3 +0.4	-35.0 +0.0 +0.0	+0.0	47.7	54.0	-6.3	Horiz
8	237.080M QP	51.5	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	39.5	46.0	-6.5	Horiz
^	237.078M	53.0	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	41.0	46.0	-5.0	Horiz
10	220.148M	52.2	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+10.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	38.9	46.0	-7.1	Horiz
11	1468.000M	47.6	+0.0 +4.0 +0.5	+0.0 +3.7 +0.9	+0.0 +24.9 +0.3	-35.5 +0.0 +0.0	+0.0	46.4	54.0	-7.6	Horiz
12	231.426M	50.4	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	38.1	46.0	-7.9	Horiz
13	262.481M	48.6	+2.8 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	37.7	46.0	-8.3	Horiz
14	213.736M	48.9	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.1	43.5	-8.4	Horiz
15	1812.100M	43.6	+0.0 +4.4 +0.6	+0.0 +4.1 +0.8	+0.0 +26.4 +0.3	-35.3 +0.0 +0.0	+0.0	44.9	54.0	-9.1	Horiz
16	76.206M QP	49.8	+1.4 +0.0 +0.0	-27.2 +0.0 +0.0	+6.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.8	40.0	-9.2	Vert
^	76.196M	59.2	+1.4 +0.0 +0.0	-27.2 +0.0 +0.0	+6.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	40.2	40.0	+0.2	Vert
18	208.866M	48.5	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+9.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	34.2	43.5	-9.3	Horiz
19	251.193M	47.4	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	36.4	46.0	-9.6	Horiz

20	245.543M	47.3	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	36.0	46.0	-10.0	Horiz
21	719.998M	37.7	+5.3 +0.0 +0.0	-27.8 +0.0 +0.0	+20.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	36.0	46.0	-10.0	Horiz
22	232.201M	48.1	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.8	46.0	-10.2	Horiz
23	135.472M	47.0	+1.8 +0.0 +0.0	-27.1 +0.0 +0.0	+11.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.2	43.5	-10.3	Horiz
24	1700.000M	43.4	+0.0 +4.3 +0.5	+0.0 +4.0 +0.7	+0.0 +25.9 +0.3	-35.4 +0.0 +0.0	+0.0	43.7	54.0	-10.3	Horiz
25	248.363M	46.7	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.6	46.0	-10.4	Horiz
26	2339.000M	39.3	+0.0 +5.1 +0.6	+0.0 +4.7 +0.4	+0.0 +28.1 +0.4	-35.1 +0.0 +0.0	+0.0	43.5	54.0	-10.5	Vert
27	231.415M	47.8	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.5	46.0	-10.5	Vert
28	210.564M	47.0	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+10.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	43.5	-10.7	Horiz
29	213.851M	46.6	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	43.5	-10.7	Vert
30	214.985M	46.3	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.6	43.5	-10.9	Vert
31	208.866M	46.7	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+9.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.4	43.5	-11.1	Vert
32	1962.000M	40.6	+0.0 +4.6 +0.6	+0.0 +4.3 +0.4	+0.0 +27.0 +0.4	-35.2 +0.0 +0.0	+0.0	42.7	54.0	-11.3	Vert
33	215.577M QP	45.7	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.0	43.5	-11.5	Horiz
^	215.547M	51.4	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	37.7	43.5	-5.8	Horiz
35	1469.200M	43.6	+0.0 +4.0 +0.5	+0.0 +3.7 +0.9	+0.0 +24.9 +0.3	-35.5 +0.0 +0.0	+0.0	42.4	54.0	-11.6	Vert
36	215.747M	45.2	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.5	43.5	-12.1	Vert

37	214.501M	45.2	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.4	43.5	-12.1	Horiz
38	70.561M	47.7	+1.3 +0.0 +0.0	-27.2 +0.0 +0.0	+6.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	27.9	40.0	-12.1	Vert
39	1622.100M	42.1	+0.0 +4.2 +0.5	+0.0 +3.9 +0.6	+0.0 +25.5 +0.3	-35.4 +0.0 +0.0	+0.0	41.7	54.0	-12.3	Horiz
40	270.003M	44.5	+2.8 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.6	46.0	-12.4	Horiz
41	213.500M	44.8	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.0	43.5	-12.5	Vert
42	229.673M	45.9	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.3	46.0	-12.7	Vert
43	244.784M	44.6	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.3	46.0	-12.8	Horiz
44	519.323M	37.4	+4.6 +0.0 +0.0	-27.8 +0.0 +0.0	+19.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.2	46.0	-12.8	Vert
45	237.093M	45.2	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.2	46.0	-12.8	Vert
46	242.730M	44.6	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.0	46.0	-13.0	Vert
47	209.928M	44.7	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+10.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.5	43.5	-13.0	Vert
48	1093.000M	45.5	+0.0 +3.3 +0.4	+0.0 +3.1 +0.0	+0.0 +24.4 +0.2	-36.0 +0.0 +0.0	+0.0	40.9	54.0	-13.1	Vert
49	220.156M	46.1	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+10.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	46.0	-13.2	Vert
50	200.399M	45.4	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.3	43.5	-13.2	Horiz
51	216.230M	46.4	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	46.0	-13.3	Horiz
52	462.010M	38.4	+4.1 +0.0 +0.0	-27.6 +0.0 +0.0	+17.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.7	46.0	-13.3	Horiz
53	146.768M	42.9	+1.9 +0.0 +0.0	-27.0 +0.0 +0.0	+12.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.1	43.5	-13.4	Vert

54	224.927M	45.5	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.6	46.0	-13.4	Horiz
55	227.804M	45.0	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.3	46.0	-13.7	Vert
56	201.475M	44.8	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.8	43.5	-13.7	Vert
57	240.001M	44.1	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.3	46.0	-13.7	Horiz
58	519.320M	36.4	+4.6 +0.0 +0.0	-27.8 +0.0 +0.0	+19.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.2	46.0	-13.8	Horiz
59	225.784M	44.9	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.1	46.0	-13.9	Horiz
60	210.648M	43.7	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+10.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.5	43.5	-14.0	Vert
61	59.753M	46.7	+1.1 +0.0 +0.0	-27.3 +0.0 +0.0	+5.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	26.0	40.0	-14.0	Vert
62	197.576M	44.5	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.4	43.5	-14.1	Horiz
63	233.760M	44.0	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.8	46.0	-14.2	Vert
64	254.010M	42.8	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.8	46.0	-14.2	Horiz
65	124.180M	43.0	+1.7 +0.0 +0.0	-27.2 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.1	43.5	-14.4	Horiz
66	238.135M	43.5	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.6	46.0	-14.5	Horiz
67	1702.000M	39.2	+0.0 +4.3 +0.5	+0.0 +4.0 +0.7	+0.0 +25.9 +0.3	-35.4 +0.3 +0.3	+0.0	39.5	54.0	-14.5	Vert
68	468.516M	36.8	+4.2 +0.0 +0.0	-27.6 +0.0 +0.0	+18.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.4	46.0	-14.6	Horiz
69	240.005M	43.2	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.4	46.0	-14.6	Vert
70	491.093M	35.8	+4.4 +0.0 +0.0	-27.7 +0.0 +0.0	+18.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.2	46.0	-14.8	Horiz

71	270.000M	41.9	+2.8 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.0	46.0	-15.0	Vert
72	239.980M	42.5	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.7	46.0	-15.3	Vert
73	60.093M	45.3	+1.1 +0.0 +0.0	-27.3 +0.0 +0.0	+5.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	24.5	40.0	-15.5	Horiz
74	226.751M	43.2	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.4	46.0	-15.6	Horiz
75	285.060M	41.1	+2.9 +0.0 +0.0	-26.5 +0.0 +0.0	+12.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.4	46.0	-15.6	Vert
76	1090.000M	42.8	+0.0 +3.3 +0.4	+0.0 +3.1 +0.0	+0.0 +24.3 +0.2	-36.1 +0.2 +0.0	+0.0	38.0	54.0	-16.0	Horiz
77	143.940M	40.4	+1.9 +0.0 +0.0	-27.0 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	27.2	43.5	-16.3	Horiz
78	59.754M	44.3	+1.1 +0.0 +0.0	-27.3 +0.0 +0.0	+5.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	23.6	40.0	-16.4	Horiz
79	230.571M	42.1	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.6	46.0	-16.5	Horiz
80	212.630M	40.7	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	26.8	43.5	-16.7	Horiz
81	227.549M	41.7	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.0	46.0	-17.0	Horiz
82	225.789M	41.3	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	28.5	46.0	-17.5	Horiz
83	158.060M	39.5	+2.0 +0.0 +0.0	-26.9 +0.0 +0.0	+11.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.7	43.5	-17.8	Vert
84	2487.820M Ave	28.5	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5 +0.4	-35.0 +0.4 +0.0	+0.0	33.5	54.0	-20.5	Horiz
^	2487.820M	50.9	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5 +0.4	-35.0 +0.4 +0.0	+0.0	55.9	54.0	+1.9	Horiz
86	200.393M	37.8	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	22.7	43.5	-20.8	Vert

87	2491.458M Ave	26.9	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5	-35.0 +0.4	+0.0	31.9	54.0	-22.1	Horiz
^	2491.458M	57.4	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5	-35.0 +0.4	+0.0	62.4	54.0	+8.4	Horiz
89	2486.912M Ave	26.8	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5	-35.0 +0.4	+0.0	31.8	54.0	-22.3	Vert
^	2486.912M	46.6	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5	-35.0 +0.4	+0.0	51.6	54.0	-2.4	Vert
91	2375.880M Ave	27.2	+0.0 +5.1 +0.6	+0.0 +4.8 +0.4	+0.0 +28.2	-35.0 +0.4	+0.0	31.7	54.0	-22.3	Vert
92	2490.000M Ave	26.6	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5	-35.0 +0.4	+0.0	31.6	54.0	-22.4	Vert
^	2490.000M	56.8	+0.0 +5.3 +0.6	+0.0 +4.9 +0.3	+0.0 +28.5	-35.0 +0.4	+0.0	61.8	54.0	+7.8	Vert
94	2386.130M Ave	26.6	+0.0 +5.2 +0.6	+0.0 +4.8 +0.4	+0.0 +28.2	-35.0 +0.4	+0.0	31.2	54.0	-22.8	Vert
^	2386.130M	54.7	+0.0 +5.2 +0.6	+0.0 +4.8 +0.4	+0.0 +28.2	-35.0 +0.4	+0.0	59.3	54.0	+5.3	Vert
^	2386.130M	49.3	+0.0 +5.2 +0.6	+0.0 +4.8 +0.4	+0.0 +28.2	-35.0 +0.4	+0.0	53.9	54.0	-0.1	Vert
97	2787.000M Ave	22.0	+0.0 +5.7 +0.7	+0.0 +5.3 +0.4	+0.0 +29.5	-35.0 +0.4	+0.0	29.0	54.0	-25.0	Vert
^	2787.000M	45.6	+0.0 +5.7 +0.7	+0.0 +5.3 +0.4	+0.0 +29.5	-35.0 +0.4	+0.0	52.6	54.0	-1.4	Vert
99	2730.850M Ave	21.8	+0.0 +5.6 +0.7	+0.0 +5.2 +0.3	+0.0 +29.3	-35.0 +0.4	+0.0	28.3	54.0	-25.7	Horiz
^	2730.850M	43.0	+0.0 +5.6 +0.7	+0.0 +5.2 +0.3	+0.0 +29.3	-35.0 +0.4	+0.0	49.5	54.0	-4.5	Horiz
101	2781.882M Ave	21.1	+0.0 +5.7 +0.7	+0.0 +5.3 +0.4	+0.0 +29.4	-35.0 +0.4	+0.0	28.0	54.0	-26.0	Vert

102	1030.062M	32.7	+0.0	+0.0	+0.0	-36.1	+0.0	27.7	54.0	-26.4	Vert
	Ave		+3.2	+3.0	+24.3	+0.2					
			+0.4	+0.0							
^	1030.062M	61.1	+0.0	+0.0	+0.0	-36.1	+0.0	56.1	54.0	+2.1	Vert
			+3.2	+3.0	+24.3	+0.2					
			+0.4	+0.0							
104	1089.700M	31.2	+0.0	+0.0	+0.0	-36.1	+0.0	26.4	54.0	-27.6	Vert
	Ave		+3.3	+3.1	+24.3	+0.2					
			+0.4	+0.0							
^	1089.700M	69.7	+0.0	+0.0	+0.0	-36.1	+0.0	64.9	54.0	+10.9	Vert
			+3.3	+3.1	+24.3	+0.2					
			+0.4	+0.0							

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, Ca 95338 • (209) 966-5240
 Customer: **Creative Technology Ltd.**
 Specification: **FCC 15.249 (a)**
 Work Order #: **80429**
 Test Type: **Maximized Emissions**
 Equipment: **Creative Wireless MP3 Receiver**
 Manufacturer: Creative Technology Ltd.
 Model: DAP-WL0001/DAP-RF0001
 S/N: 06032003-001

Date: 06/03/2003
 Time: 12:11:25
 Sequence#: 1
 Tested By: Monika Brandle

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Creative Wireless MP3 Receiver*	Creative Technology Ltd.	DAP-WL0001/DAP-RF0001	06032003-001

Support Devices:

Function	Manufacturer	Model #	S/N
Magic LAN AP Wireless LAN Access Point	Samsung	SWL-33	APEUOB-116000475
Speakers	Creative/Cambridge Sound Works	GCS300/SBS36	SW00361192000071
Mouse	HP	4D Browser Up Mouse	B00000960
Keyboard	HP	N00905033 Rev 2.0	5183-9980
Host PC	HP (Home Products Division)	00-1065 PRO	Creative Labs Tahiti ULA M/B2
Monitor	NEC	Multisync 50	8450030YA

Test Conditions / Notes:

EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on Low (906MHz), Middle (910MHz), and High (924MHz) Channels.

Transducer Legend:

T1=Cable - 10 Meter	T2=Amp - S/N 604
T3=Bilog B	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB		Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	905.960M	88.8	+6.2	-27.3	+22.9		+0.0	90.6	93.9	-3.3	Horiz
2	905.993M	84.4	+6.2	-27.3	+22.9		+0.0	86.2	93.9	-7.7	Vert
^	905.988M	80.4	+6.2	-27.3	+22.9		+0.0	82.2	93.9	-11.7	Vert
4	909.700M	83.0	+6.2	-27.3	+22.9		+0.0	84.8	93.9	-9.1	Horiz
5	910.010M	77.8	+6.2	-27.3	+22.9		+0.0	79.6	93.9	-14.3	Vert
6	924.010M	73.0	+6.2	-27.3	+23.1		+0.0	75.0	93.9	-18.9	Horiz
7	924.110M	68.2	+6.2	-27.3	+23.1		+0.0	70.2	93.9	-23.7	Vert

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, Ca 95338 • (209) 966-5240

Customer: **Creative Technology Ltd.**
 Specification: **FCC 15.249(a)/15.249(d)/15.249(e)/15.209/15.109**
 Work Order #: **80429** Date: 06/23/2003
 Test Type: **Maximized Emissions** Time: 13:10:25
 Equipment: **Creative Wireless MP3 Receiver** Sequence#: 6
 Manufacturer: Creative Technology Ltd. Tested By: Monika Brandle
 Model: DAP-WL0001/DAP-RF0001
 S/N: 06032003-001

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Creative Wireless MP3 Receiver*	Creative Technology Ltd.	DAP-WL0001/DAP-RF0001	06032003-001

Support Devices:

Function	Manufacturer	Model #	S/N
Magic LAN AP Wireless LAN Access Point	Samsung	SWL-33	APEUOB-116000475
Speakers	Creative/Cambridge Sound Works	GCS300/SBS36	SW00361192000071
Mouse	HP	4D Browser Up Mouse	B00000960
Keyboard	HP	N00905033 Rev 2.0	5183-9980
Host PC	HP (Home Products Division)	00-1065 PRO	Creative Labs Tahiti ULA M/B2
Monitor	NEC	Multisync 50	8450030YA

Test Conditions / Notes:

EUT is continuously transmitting and receiving FSK modulated data to control main unit (PD0390). The maximum amount of data is being transmitted to produce worst case emissions. Transmitting on low (906MHz), middle (910MHz) and high (924MHz) channels. Worst case emissions reported. Frequency Range 9kHz-10GHz

Transducer Legend:

T1=Cable - 10 Meter	T2=Amp - S/N 604
T3=Bilog B	T4=Amp - S/N 301
T5=Cable 35' Blue SMA CKC P1352	T6=Cable 25' blue SMA ANP01353
T7=Horn AN 00327 1-18GHz	T8=Cable HF P01527
T9=WL Gore SN 1065 AN P004301	T10=HPF 1.5GHz

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBμV	T9	T10							
			dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	242.725M	56.0	+2.6	-26.5	+12.3	+0.0	+0.0	44.4	46.0	-1.6	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
^	242.720M	57.0	+2.6	-26.5	+12.3	+0.0	+0.0	45.4	46.0	-0.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							

3	360.007M QP	51.2	+3.5 +0.0 +0.0	-26.9 +0.0 +0.0	+14.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	42.6	46.0	-3.4	Horiz
^	360.007M	31.7	+3.5 +0.0 +0.0	-26.9 +0.0 +0.0	+14.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	23.1	46.0	-22.9	Horiz
5	256.838M QP	51.6	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	40.6	46.0	-5.4	Horiz
^	256.848M	52.8	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	41.8	46.0	-4.2	Horiz
7	237.080M QP	51.5	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	39.5	46.0	-6.5	Horiz
^	237.078M	53.0	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	41.0	46.0	-5.0	Horiz
9	220.148M	52.2	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+10.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	38.9	46.0	-7.1	Horiz
10	1468.000M	47.6	+0.0 +4.0 +0.5	+0.0 +3.7 +0.9	+0.0 +24.9 +0.3	-35.5 +0.3 +0.0	+0.0	46.4	54.0	-7.6	Horiz
11	231.426M	50.4	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	38.1	46.0	-7.9	Horiz
12	262.481M	48.6	+2.8 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	37.7	46.0	-8.3	Horiz
13	213.736M	48.9	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.1	43.5	-8.4	Horiz
14	1812.100M	43.6	+0.0 +4.4 +0.6	+0.0 +4.1 +0.8	+0.0 +26.4 +0.3	-35.3 +0.3 +0.0	+0.0	44.9	54.0	-9.1	Horiz
15	76.206M QP	49.8	+1.4 +0.0 +0.0	-27.2 +0.0 +0.0	+6.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.8	40.0	-9.2	Vert
^	76.196M	59.2	+1.4 +0.0 +0.0	-27.2 +0.0 +0.0	+6.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	40.2	40.0	+0.2	Vert
17	208.866M	48.5	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+9.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	34.2	43.5	-9.3	Horiz
18	251.193M	47.4	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	36.4	46.0	-9.6	Horiz
19	245.543M	47.3	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	36.0	46.0	-10.0	Horiz

20	719.998M	37.7	+5.3 +0.0 +0.0	-27.8 +0.0 +0.0	+20.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	36.0	46.0	-10.0	Horiz
21	232.201M	48.1	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.8	46.0	-10.2	Horiz
22	135.472M	47.0	+1.8 +0.0 +0.0	-27.1 +0.0 +0.0	+11.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.2	43.5	-10.3	Horiz
23	1700.000M	43.4	+0.0 +4.3 +0.5	+0.0 +4.0 +0.7	+0.0 +25.9 +0.3	-35.4 +0.3 +0.0	+0.0	43.7	54.0	-10.3	Horiz
24	248.363M	46.7	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.6	46.0	-10.4	Horiz
25	2339.000M	39.3	+0.0 +5.1 +0.6	+0.0 +4.7 +0.4	+0.0 +28.1 +0.4	-35.1 +0.4 +0.0	+0.0	43.5	54.0	-10.5	Vert
26	231.415M	47.8	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	35.5	46.0	-10.5	Vert
27	210.564M	47.0	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+10.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	43.5	-10.7	Horiz
28	213.851M	46.6	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	43.5	-10.7	Vert
29	214.985M	46.3	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.6	43.5	-10.9	Vert
30	208.866M	46.7	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+9.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.4	43.5	-11.1	Vert
31	1962.000M	40.6	+0.0 +4.6 +0.6	+0.0 +4.3 +0.4	+0.0 +27.0 +0.4	-35.2 +0.4 +0.0	+0.0	42.7	54.0	-11.3	Vert
32	215.577M QP	45.7	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.0	43.5	-11.5	Horiz
^	215.547M	51.4	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	37.7	43.5	-5.8	Horiz
34	1469.200M	43.6	+0.0 +4.0 +0.5	+0.0 +3.7 +0.9	+0.0 +24.9 +0.3	-35.5 +0.3 +0.0	+0.0	42.4	54.0	-11.6	Vert
35	215.747M	45.2	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.5	43.5	-12.1	Vert
36	214.501M	45.2	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.4	43.5	-12.1	Horiz

37	70.561M	47.7	+1.3 +0.0 +0.0	-27.2 +0.0 +0.0	+6.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	27.9	40.0	-12.1	Vert
38	1622.100M	42.1	+0.0 +4.2 +0.5	+0.0 +3.9 +0.6	+0.0 +25.5 +0.3	-35.4 +0.0 +0.0	+0.0	41.7	54.0	-12.3	Horiz
39	270.003M	44.5	+2.8 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.6	46.0	-12.4	Horiz
40	213.500M	44.8	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.0	43.5	-12.5	Vert
41	229.673M	45.9	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.3	46.0	-12.7	Vert
42	244.784M	44.6	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.3	46.0	-12.8	Horiz
43	519.323M	37.4	+4.6 +0.0 +0.0	-27.8 +0.0 +0.0	+19.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.2	46.0	-12.8	Vert
44	237.093M	45.2	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.2	46.0	-12.8	Vert
45	242.730M	44.6	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	33.0	46.0	-13.0	Vert
46	209.928M	44.7	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+10.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.5	43.5	-13.0	Vert
47	220.156M	46.1	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+10.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	46.0	-13.2	Vert
48	200.399M	45.4	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.3	43.5	-13.2	Horiz
49	216.230M	46.4	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.8	46.0	-13.3	Horiz
50	462.010M	38.4	+4.1 +0.0 +0.0	-27.6 +0.0 +0.0	+17.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.7	46.0	-13.3	Horiz
51	146.768M	42.9	+1.9 +0.0 +0.0	-27.0 +0.0 +0.0	+12.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.1	43.5	-13.4	Vert
52	224.927M	45.5	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.6	46.0	-13.4	Horiz
53	227.804M	45.0	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.3	46.0	-13.7	Vert

54	201.475M	44.8	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.8	43.5	-13.7	Vert
55	240.001M	44.1	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.3	46.0	-13.7	Horiz
56	519.320M	36.4	+4.6 +0.0 +0.0	-27.8 +0.0 +0.0	+19.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.2	46.0	-13.8	Horiz
57	225.784M	44.9	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	32.1	46.0	-13.9	Horiz
58	210.648M	43.7	+2.4 +0.0 +0.0	-26.6 +0.0 +0.0	+10.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.5	43.5	-14.0	Vert
59	59.753M	46.7	+1.1 +0.0 +0.0	-27.3 +0.0 +0.0	+5.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	26.0	40.0	-14.0	Vert
60	197.576M	44.5	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.4	43.5	-14.1	Horiz
61	233.760M	44.0	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+11.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.8	46.0	-14.2	Vert
62	254.010M	42.8	+2.7 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.8	46.0	-14.2	Horiz
63	124.180M	43.0	+1.7 +0.0 +0.0	-27.2 +0.0 +0.0	+11.6 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.1	43.5	-14.4	Horiz
64	242.723M	43.2	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.6	46.0	-14.4	Vert
65	238.135M	43.5	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.6	46.0	-14.5	Horiz
66	1702.000M	39.2	+0.0 +4.3 +0.5	+0.0 +4.0 +0.7	+0.0 +25.9 +0.3	-35.4 +0.3 +0.0	+0.0	39.5	54.0	-14.5	Vert
67	468.516M	36.8	+4.2 +0.0 +0.0	-27.6 +0.0 +0.0	+18.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.4	46.0	-14.6	Horiz
68	240.005M	43.2	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.4	46.0	-14.6	Vert
69	491.093M	35.8	+4.4 +0.0 +0.0	-27.7 +0.0 +0.0	+18.7 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.2	46.0	-14.8	Horiz
70	270.000M	41.9	+2.8 +0.0 +0.0	-26.5 +0.0 +0.0	+12.8 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.0	46.0	-15.0	Vert

71	239.980M	42.5	+2.6 +0.0 +0.0	-26.5 +0.0 +0.0	+12.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.7	46.0	-15.3	Vert
72	60.093M	45.3	+1.1 +0.0 +0.0	-27.3 +0.0 +0.0	+5.4 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	24.5	40.0	-15.5	Horiz
73	226.751M	43.2	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.4	46.0	-15.6	Horiz
74	285.060M	41.1	+2.9 +0.0 +0.0	-26.5 +0.0 +0.0	+12.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	30.4	46.0	-15.6	Vert
75	143.940M	40.4	+1.9 +0.0 +0.0	-27.0 +0.0 +0.0	+11.9 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	27.2	43.5	-16.3	Horiz
76	59.754M	44.3	+1.1 +0.0 +0.0	-27.3 +0.0 +0.0	+5.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	23.6	40.0	-16.4	Horiz
77	230.571M	42.1	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.5 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.6	46.0	-16.5	Horiz
78	212.630M	40.7	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	26.8	43.5	-16.7	Horiz
79	227.549M	41.7	+2.5 +0.0 +0.0	-26.5 +0.0 +0.0	+11.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	29.0	46.0	-17.0	Horiz
80	158.060M	39.5	+2.0 +0.0 +0.0	-26.9 +0.0 +0.0	+11.1 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.7	43.5	-17.8	Vert
81	214.518M	39.4	+2.5 +0.0 +0.0	-26.6 +0.0 +0.0	+10.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.6	43.5	-18.0	Horiz
82	200.393M	37.8	+2.4 +0.0 +0.0	-26.7 +0.0 +0.0	+9.2 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	22.7	43.5	-20.8	Vert