Exhibit B: Test Report
Xanboo
Mcam XWC900 Security Camera Transmitter

Project Number: 04442-10

Prepared for:
Xanboo
1626 Vineyard
Grand Praire , TX 75052

By

Professional Testing (EMI), Inc.
1601 FM 1460, Suite B
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May 2004

CERTIFICATION
Electromagnetic Interference Test Report
Xanboo
Mcam XWC900 Security Camera
(Intentional Radiator Portion)

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Certificate Of Compliance

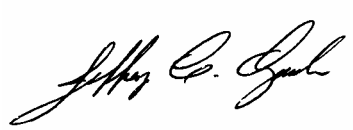
Applicant:	Xanboo
Applicant's Address:	1626 Vineyard Grand Praire, TX 75052
FCC ID:	OU4-XWC900
Project Number:	03376-10
Test Dates:	March 20, 2003

I, Jeffrey A. Lenk, for Professional Testing (EMI), Inc., being familiar with the FCC rules and test procedures have reviewed the test setup, measured data and this report. I believe them to be true and accurate.

The **Xanboo, Mcam XWC900 Security Camera Transmitter** was tested to and found to be in compliance with FCC Part 15 Subpart C for an Intentional Radiator.

The highest emissions generated by the above equipment are listed below:

	Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Fundamental	2470	100.8	103.5	-1.9
	418	79.8	80.3	-0.5
Spurious	4940	46.7	63.5	-0.1
Conducted	0.15	44.1	66.0	-21.9
Occupied Bandwidth	121 (kHz)		1.045 (MHz)	



NVLAP

Lab Code 200062-0

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Jeffrey A. Lenk
President

This report has been reviewed and accepted by Xanboo. The undersigned is responsible for ensuring that **Xanboo, Mcam XWC900 Security Camera Transmitter** will continue to comply with the FCC rules.

1.0 EUT Description

The **Mcam XWC900 Security Camera Transmitter** (EUT) is a remotely controlled surveillance camera. The (EUT) contains a Passive Infra Red detector. When the PIR detects a person, it transmits the unit's unique ID number and action code on 418 MHz to the Xanboo system. If so programmed, the Xanboo System will tell the (EUT) to turn on its video camera and 2.4 GHz transmitter. The owner can then monitor the video, or screen captured and emailed to the owner. The (EUT) can also be commanded on. The 418 MHz signal is a 19mS long transmission uniquely identifying the sending station. The transmission is encoded in FSK. A similar 418 MHz signal is sent periodically to maintain system integrity. The transmitter automatically shuts off following the 19mS encoded message and does not re-transmit for at least fifteen seconds.

47 CFR 15.231e & 15.249	Fundamental Transmit Power
47 CFR 15.231e & 15.205 & 15.249	Spurious Radiated Power
47 CFR 15.231e	Occupied Bandwidth
47 CFR 15.203	Antenna Requirement
47 CFR 15.207	Conducted Emissions

The system tested consisted of the following:

Manufacturer & Model	**Serial #**	**FCC ID #**	**Description**
Xanboo, Mcam XWC900 Security Camera	N/A	OU4-XWC900	Security Camera

1.1 EUT Operation

The **Mcam XWC900 Security Camera Transmitter** was tested using internal batteries with the exception of conducted emissions testing. The frequency of the transmitting television signal is 2470 MHz. This signal is transmitted continuously. The Infrared Motion Sensor Transmitter operating at 418 MHz under normal configuration can only be triggered once per fifteen seconds and transmits a recognition code for 52 milliseconds.

For the purpose of testing, a special mode was used, for most of the testing, allowing the 418 MHz infrared transmitter to transmit continuously.

2.0 Electromagnetic Emissions Testing

Professional Testing (EMI), Inc. (PTI), follows the guidelines of NIST for all uncertainty calculations, estimates and expressions thereof for EMC testing.

2.1 Conducted Emissions Measurements

Conducted emissions measurements were made on the Class II Power Supply mains terminals of the **Mcam XWC900 Security Camera Transmitter** to determine the line-to-ground radio noise emitted from each power-input terminal. Conducted emissions measurements on the mains terminals were performed at Professional Testing, located in Round Rock, Texas.

2.1.1 Test Procedure

The EUT was configured and operated in a manner consistent with typical applications. The EUT power cord in excess of one meter was folded back and forth forming a bundle 30 to 40 cm long in the approximate center of the cable. Power supply cords for the peripheral equipment were powered from an auxiliary LISN. Excess interface cable lengths were separately bundled in a non-inductive arrangement at the approximate center of the cable with the bundle 30 to 40 centimeters in length. The conducted emissions were maximized, by varying the operating states and configuration of the EUT.

The tests were performed in a 12' x 16' RayProof modular shielded room. The EUT was placed on a non-metallic table 0.4 meters from a vertical metal reference plane and 0.8 meters from a horizontal metal reference plane.

The measurements were taken using a Line Impedance Stabilization Network (LISN). A Spectrum Analyzer with a measurement bandwidth of 10 kHz was used to record the conducted emissions measurements. The configuration of the shielded room showing the location of the EUT and the measurement equipment is given as Figure 1.

2.1.2 Test Criteria

The FCC Part 15.207 B conducted emissions limits are given below.

Frequency (MHz)	Limits (dBμV) Average
0.15 – .50	56 - 46
.50 - 5	46
5 – 30	50

The lower limit shall apply at the transition frequency.

2.1.3 Test Results

The conducted emissions data is included as Appendix A. The conducted emissions generated by the **Mcam XWC900 Security Camera Transmitter** as measured on the Class II Power Supply mains terminals were found to be below FCC 15.207 maximum emissions criteria.

2.2 Radiated Emissions Measurements

Radiated emission measurements were made of the Fundamental and Spurious Emission levels for the **Mcam XWC900 Security Camera.** Measurements of the occupied bandwidth were also made for the Infrared Transmitter.

Measurements of the maximum emission levels for the fundamental and the spurious/harmonic emissions of the **Mcam XWC900 Security Camera Transmitter** were made at the Professional Testing "Open Field" Site 3, located in Round Rock, Texas to determine the radio noise radiated from the EUT. A "Description of Measurement Facilities" has been submitted to the FCC and approved pursuant to Section 2.948 of CFR 47 of the FCC rules.

Tests of the fundamental for the device were performed to determine the worst case polarization of the devices. The fundamental emissions of the device were measured with the antennas of the device in the three orthogonal axes. The on/off switch is activated by raising the antenna to the vertical position.

2.2.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a motorized turntable which allows 360 degree rotation. For measurements of the fundamental signal, a measurement antenna was positioned at a distance of 3 meters as measured from the closest point of the EUT. For spurious/harmonic measurements above 1 GHz, the measurement antenna was placed 1 meter from the EUT. The radiated emissions were maximized by rotating the EUT.

A Spectrum Analyzer with peak detection was used to find the maximums of the radiated emissions during the variability testing. A drawing showing the test setup is given as Figure 2.

2.2.2 Test Criteria

The table below shows FCC Part 15.231e radiated limits for an intentional radiator operating at 418 MHz band. FCC Part 15.231e allows the use of its spurious limit which is higher than the 15.209 limit normally associated with the restricted bands outlined in 15.205. The television transmitter transmitting in the band of 2400-2483.5 MHz is limited to fundamental field strength of 50 millivolts per meter for the fundamental emission and 500 microvolts per meter for the strength of harmonics. The spurious measurements of the harmonic were performed to the 10th harmonic of the fundamental. The reference distance for each limit is also shown in this table.

	Test Distance	Field Strength	
Signal Type	(Meters)	(μV/m)	(dBμV/m)
Fundamental 2470 MHz	3	50,000	94
Harmonics (2nd through 10th)	3	500	54

	Test Distance	Field Strength	
Signal Type	(Meters)	(μV/m)	(dBμV/m)
Fundamental 418 MHz	3	10333.35	80.3
Harmonics (2nd through 10th)	3	1033.335	60.3

Note: Radiated emissions above 1000 MHz were measured at 1 meter and the limit was increased by 9.5 dB.

2.2.3 Test Results

The radiated test data for the fundamental is included in Appendix A. Peak detection was used during the test and the corrected signal level was then averaged to account for the duty cycle of the pulsed transmission of the 418 MHz transmitter. The radiated emission test data for the harmonics is included in Appendix A. The emissions were maximized at each frequency and the highest emissions identified were measured using peak detection. The radiated emissions generated by the **Mcam XWC900 Security Camera Transmitter** are below the FCC Part 15.231e and FCC Part 15.249 maximum emission criteria.

3.0 Occupied Bandwidth Measurements

Measurements of the occupied bandwidth for the fundamental signals of the FCC Part 15.231e were made at the Professional Testing's Round Rock, Texas site. All measurements were made in a controlled indoor environment in a configuration which did not present measurement distortion or ambient interference.

3.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the floor. The table was rotated to an angle which presented the highest signal level. The occupied bandwidth was also measured on the device. Peak detection was used for all tests. The occupied bandwidth was based on a 20 dB criteria (20 dB down either side of the emission from the peak emission). A drawing showing the test setup is given as Figure 1.

3.2 Test Criteria

According to FCC Part 15.231e, the bandwidth of the emission shall not be wider than 0.25 % of the center frequency for the devices operating above 70 MHz and below 900 MHz. The limit is 1.045 MHz for the transmitter working at 418 MHz.

Measurement of the occupied bandwidth was performed to verify that the emission bandwidth from the EUT did not exceed 1.045 MHz. The typical occupied bandwidth for the module is 170 kHz.

FCC Part 15.249 deals with frequency bands. No occupied bandwidth criteria is set forth.

3.3 Test Results

The occupied bandwidth test data is included in Appendix B. The occupied bandwidth for the fundamental frequency 418MHz is 121 kHz. The figure is typical for the **Mcam XWC900 Security Camera.** This occupied bandwidth complies with the FCC Part 15.231e requirement.

The intended center frequency for the EUT was centered at 2470 MHz. The center frequency is within the allowed band. The fundamental signal generated by the **Mcam XWC900 Security Camera Transmitter** is within the band allowed under FCC Part 15.249 emission band criteria.

4.0 Antenna Requirement

An analysis of the **Mcam XWC900 Security Camera Transmitter** was performed to determine compliance with Section 15.203 of the Rules. This section requires specific handling and control of antennas used for devices subject to regulations under the Intentional Radiator portions of Part 15.

4.1 Evaluation Procedure

The structure and application of the **Mcam XWC900 Security Camera Transmitter** were analyzed with respect to the rules. The antenna for the television transmitter is an external antenna, which is molded as part of the EUT housing and is not accessible to the user. The antenna for the motion sensor transmitter is a wire that is soldered to the PCB and is inside of the EUT housing and is not accessible to the user. An auxiliary antenna port is not present in either case.

4.2 Evaluation Criteria

Section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

(a) Antenna be permanently attached to the unit.

(b) Antenna must use a unique type of connector to attach to the EUT.

(c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

4.3 Evaluation Results

The **Mcam XWC900 Security Camera Transmitter** meets the criteria of this rule by virtue of having an external antenna permanently attached to the unit and an internal antenna not accessible to the user. The EUT is therefore compliant with §15.203.

5.0 Modifications to Equipment

The inductor L4 was reversed. The 418 MHz transmit level was programmed to -6.

6.0 List of Test Equipment

A list of the test equipment utilized to perform the testing is given below. The date of calibration is given for each.

Electromagnetic Emissions Test Equipment

Device	Description	Calibration Due
EMCO 3146	Log Periodic Antenna	December 2004
HP 85650A	Quasi Peak Adapter	November 2004
HP 8566B	Spectrum Analyzer	November 2004
HP 8447D	Preamplifier	November 2004
Compliance Design B-100	Biconical Antenna	December 2004
Cond. EMI Cable	RG-223	November 2004
Tektronix 2706	RF Preselctor	January 2005
MITEQ	18GHz 20dB Preamplifier	June 2004
SOLAR 8012-50-R-24-	LISN	October 2004
EMCO 3115	Ridge Guide Antenna	June 2004

FIGURE 1: Conducted Emissions Mains Terminal Measurements

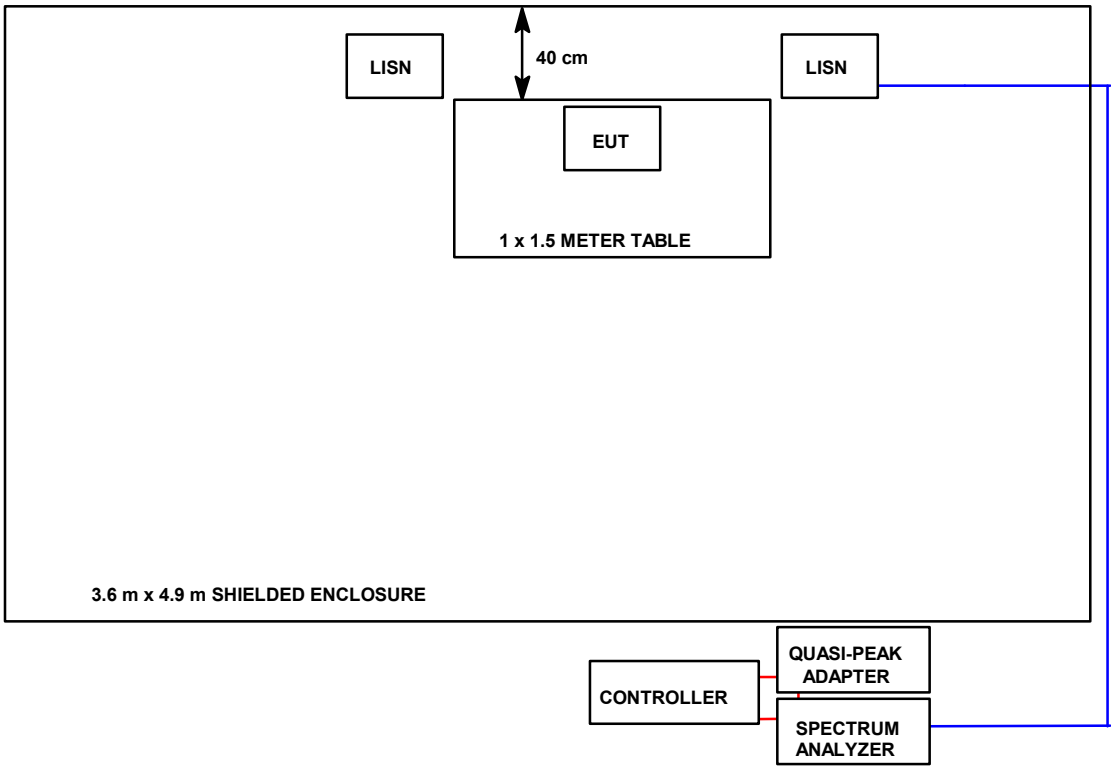
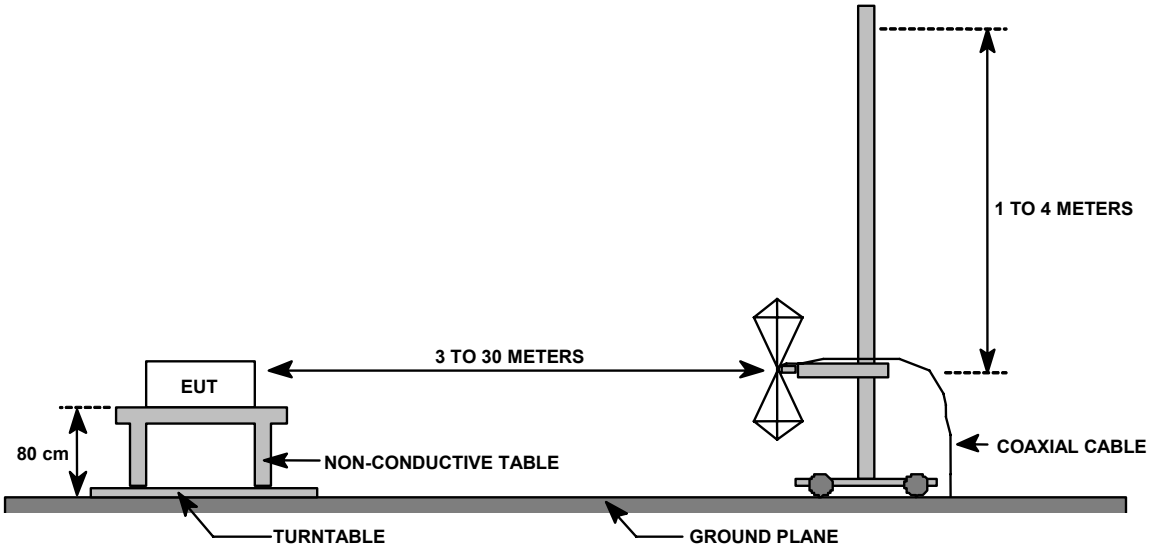


FIGURE 2: Radiated Emissions Test Setup



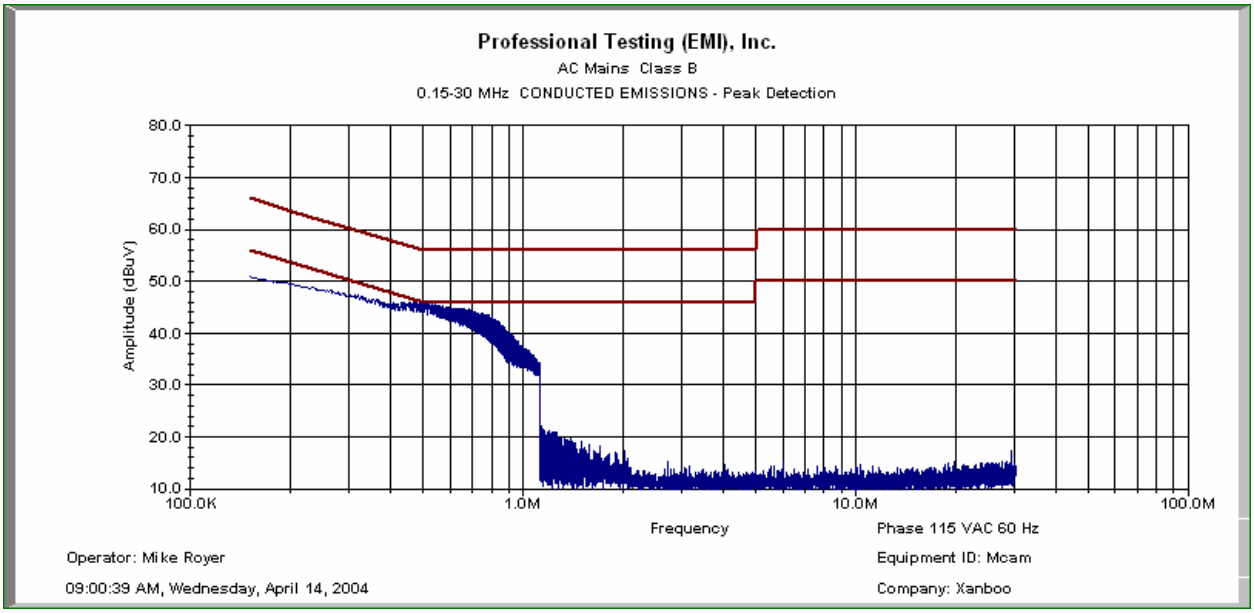
Appendix A Emissions Data Sheet

Conducted Data Sheet
AC Mains Class B
Xanboo
Mcam XWC900 Security Camera

Test Date: April 14, 2004

Line Selection: Phase

FREQ INPUT MHz	READING INPUT dBuV	CORR FACTOR dB	CORR READING dBuV	Limit dBuV	Margin dB	Detector Function
0.15	41	3.1	44.1	66.0	-21.9	Quasi-peak
0.15	25	3.1	28.1	56.0	-27.9	Average
0.25	36	3.1	39.1	61.8	-22.7	Quasi-peak
0.25	13.7	3.1	16.8	61.8	-45.0	Average
1	13.1	3.3	16.4	56.0	-39.6	Quasi-peak
1	6	3.3	9.3	56.0	-46.7	Average



The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

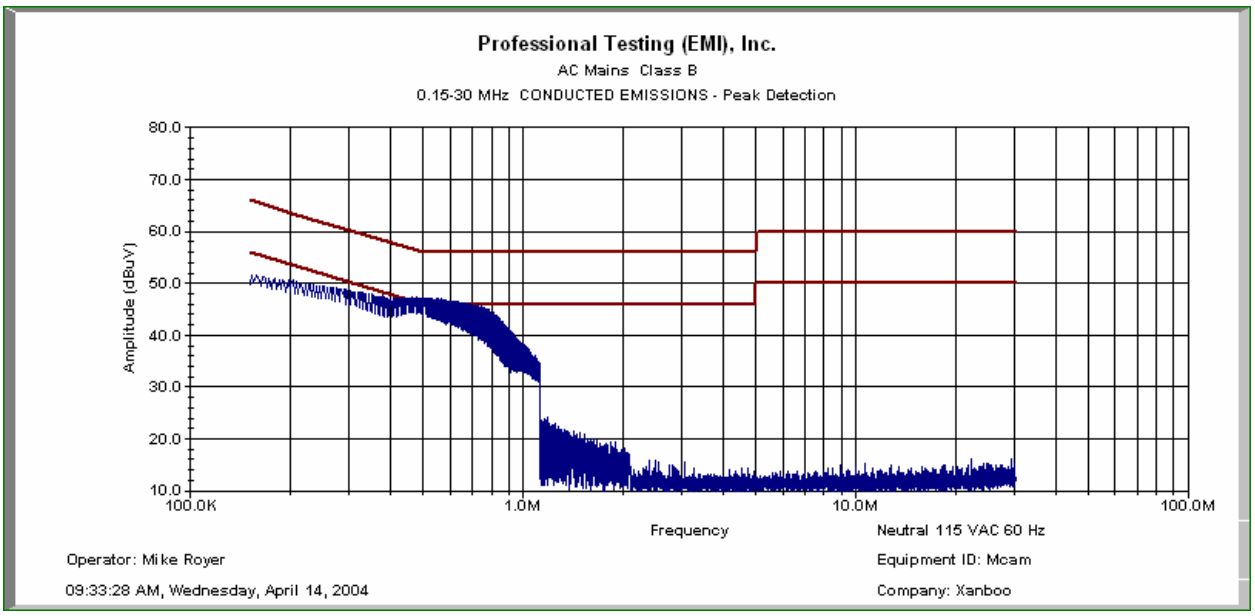
TEST ENGINEER: Mike Royer

Conducted Data Sheet
AC Mains Class B
Xanboo
Mcam XWC900 Security Camera

Test Date: April 14, 2004

Line Selection: Neutral

FREQ INPUT MHz	READING INPUT dBuV	CORR FACTOR dB	CORR READING dBuV	Limit dBuV	Margin dB	Detector Function
0.15	41	3.1	44.1	66.0	-21.9	Quasi-peak
0.15	25	3.1	28.1	56.0	-27.9	Average
0.25	36.39	3.1	39.5	61.8	-22.3	Quasi-peak
0.25	14	3.1	17.1	51.8	-34.7	Average
1	13	3.3	16.3	56.0	-39.7	Quasi-peak
1	6	3.3	9.3	46.0	-36.7	Average



The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

TEST ENGINEER: Mike Royer

Radiated Data Sheet
Fundamental and Spurious
Xanboo
Mcam XWC900 Security Camera
Peak Detection

Test Date: April 14, 2004
Measurement Distance (Meters): 3

Vertical

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
-6 db unit									
418	160	1.5	59.8	27.1	18.7	7.8	59.1	72.3	-13.2
418	290	1	53	27.1	18.7	7.8	52.3	72.3	-20.0

Horizontal

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
418	180	1	50.8	27.1	18.7	7.8	50.1	72.3	-22.2
418	170	1	51	27.1	18.7	7.8	50.3	72.3	-22.0

No spurious emissions were found 30 MHz to 1 GHz

TEST ENGINEER: Mike Royer

Radiated Data Sheet
Fundamental and Harmonics
Xanboo
Mcam XWC900 Security Camera Transmitter
Peak Detection

Test Date: April 22, 2004
Measurement Distance (Meters): 1

Vertical

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/M)	Cable Loss (dB)	Corrected Level (dBuV/M)	Limit (dBuV/M)	Margin (dB)
2472	210	1	93	22.5	28.3	2.9	101.6	103.5	-1.9
4938	180	1	51.6	23.2	34.4	4.2	66.9	83.5	-16.6
4938	180	1					63.4	63.5	-0.1
7413	noise	floor	35	21.3	37.1	5.3	56.1	63.5	-7.4
14825	noise	floor	36	22.3	39.7	7.5	60.8	63.5	-2.7

Average calculation, judge that signal is on for 2/3 of each 16mS period. = 3.5dB

Horizontal

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/M)	Cable Loss (dB)	Corrected Level (dBuV/M)	Limit (dBuV/M)	Margin (dB)
2467	0	1	83.4	22.5	28.3	2.9	92.0	103.5	-11.5
4941	270	1	45.7	23.2	34.4	4.2	61.0	63.5	-2.5
7413	noise	floor	35	21.3	37.1	5.3	56.1	63.5	-7.4
9884	noise	floor	36	20.5	38.0	6.1	59.7	63.5	-3.8
12355	noise	floor	36	22.1	39.6	6.7	60.2	63.5	-3.3
14825	noise	floor	36	22.3	39.7	7.5	60.8	63.5	-2.7

Average Corrected Level = Peak Corrected Level + Averaging Factor (when T on < 100 ms)

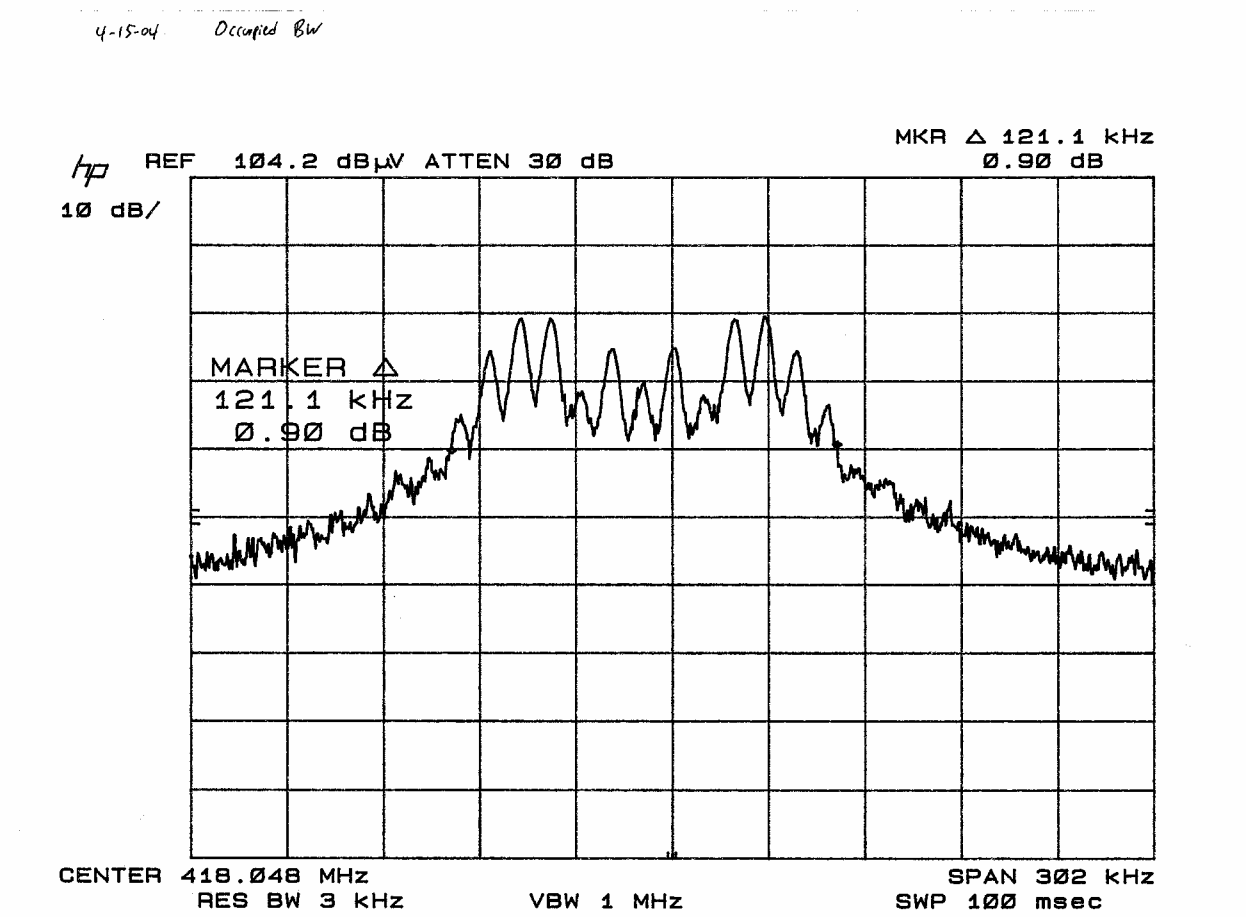
Average calculation, judge that signal is on for 2/3 of each 16mS period. = 3.5dB

TEST ENGINEER: Mike Royer

Appendix B Occupied Bandwidth Data Sheets

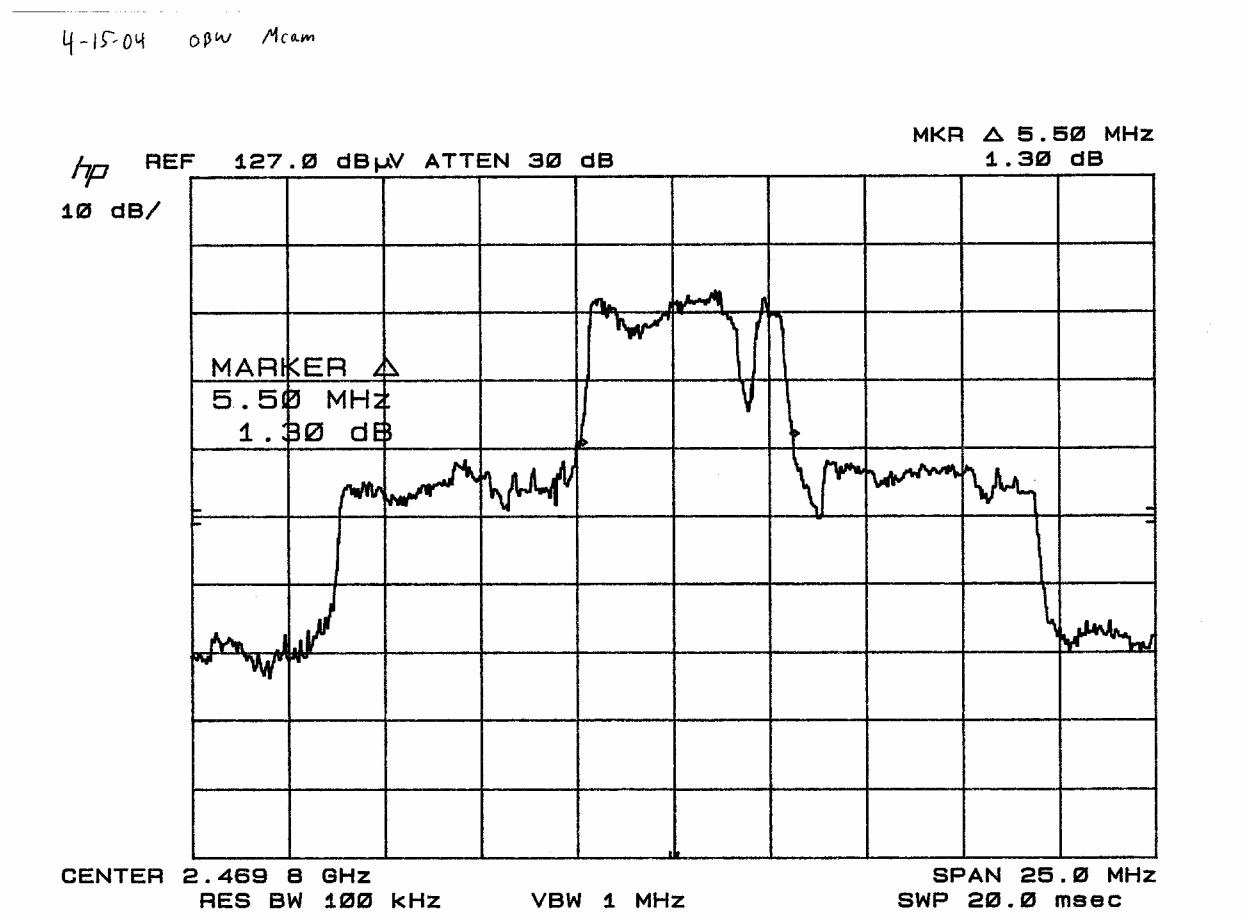
Occupied Bandwidth Datasheet
Xanboo
Mcam XWC900 Security Camera Transmitter

418 MHz Transmitter



Occupied Bandwidth Datasheet
Xanboo
Mcam XWC900 Security Camera Transmitter

2.4 GHz Transmitter



Transmitter Timing Measurement
Xanboo
Mcam XWC900 Security Camera

418 MHz Transmitter