

## Technical Information

Applicant	Manufacturer
Name: X10 (USA), Inc.	Name: X-10 Electronics (Shenzhen) Co. Ltd.
Address: 19823 58 <sup>th</sup> Place South	Address: Together Rich Industrial Park B Sanwei Industrial District, Xixiang Town
City, State, Zip: Kent, WA 98032	City, State, Zip: Baoan County, Shenzhen, China

**Test Specification:** FCC Rules and Regulations Part 15, Subpart C, Para. 15.231

**Test Procedure:** ANSI C63.4:2003

### Test Sample Description

<b>Test Sample:</b>	IR Sensor / Wireless Transmitter
<b>Brandname:</b>	X10 (USA), Inc.
<b>Model Number:</b>	UX24A
<b>FCC ID:</b>	B4SUX24A
<b>Type:</b>	Pulsed Transmitter
<b>Power Requirements:</b>	2 AAA (1.5V) Alkaline batteries
<b>Frequency of Operation:</b>	433.92 MHz
<b>Applicable Rule Section:</b>	Part 15, Subpart C, Section 15.231

### Tests Performed

- Para. 15.231(a), Radiated Emissions, Fundamental and Harmonics
- Para. 15.231(b), Radiated Emissions, Spurious Case
- Para. 15.231(b), Duty Cycle Determination
- Para. 15.231(c), Occupied Bandwidth

## Test Results

- 15.231 (a): This device transmits a control signal and is used as an: remote control transmitter.
- 15.231 (a)(1) The transmitter is manually operated. Transmission ends within 5 seconds of deactivation.
- 15.231 (a)(3): The transmitter does not perform periodic transmissions.
- 15.231 (b): The fundamental field strength did not exceed 10996.6  $\mu\text{V}/\text{M}$  (Average) at a test distance of 3 meters. In addition, the requirements of section 15.35 for averaging pulsed emissions and for limiting peak emissions were met. The field strength of harmonic and spurious emissions did not exceed 1099.6  $\mu\text{V}/\text{M}$  (AVERAGE).
- 15.231 (c) The Bandwidth of the emission was no wider than 0.25% of the center frequency (82.4 kHz) as measured 20 db down from the modulated carrier.

## Determination of Field Strength Limits

The field strength limits shown below are found in Section 15.231:

	Frequency		Limit
F1 =	260	3750 =	L1
Fo =	<u>433.92 MHz</u>		Lo
F2 =	470	12500 =	L2

The formula below was utilized to determine the limits:

$$\text{Limit} = L1 + [(Fo-F1)(L2-L1)/(F2-F1)]$$

### Solving Yields

$$\text{Fundamental Limit} = \underline{10996.6} \text{ } \mu\text{V/M (AVERAGE) @ 3 Meters}$$

$$\text{Harmonic Limit} = \underline{1099.6} \text{ } \mu\text{V/M (AVERAGE) @ 3 Meters}$$

### Duty Cycle Determination

The unit's RF output was directly coupled to the input of the spectrum analyzer. The analyzer was set for a frequency span of 0 Hz. The sweep time was then adjusted in order to display one full pulse train. The transmitter on time was then summed and compared to the time for one full cycle in order to obtain the duty cycle. (See plots for additional information.)

$$\text{Transmitter On Time} = \underline{27.0} \text{ milliseconds (maximum per cycle)}$$

$$\text{Transmitter Cycle Time} = \underline{103.0} \text{ milliseconds (100 ms maximum)}$$

$$\text{Transmitter Duty Cycle} = \underline{27.0} \%$$

### Calculation

$$1 \text{ Small Pulse} = \underline{0.48} \text{ milliseconds}$$

$$\underline{34.0} \times \underline{0.78} \text{ } \mu\text{s (Large pulse)} = \underline{26.52} \text{ milliseconds}$$

$$\underline{0.48} + \underline{26.52} = \underline{27.0} \text{ milliseconds}$$

$$\text{Duty Cycle } (26.98/100) \times 100 = \underline{27.0} \%$$

$$\text{Correction Factor} = 20 \log \underline{(0.27)} = \underline{-11.3} \text{ dB}$$

## **Spectrum Analyzer Desensitization Considerations**

Due to the nature of the emissions being measured, care was taken to ensure that the resolution bandwidth of the spectrum analyzer was adequate to provide accurate measurements. The following formula was utilized:  $\text{minimum bandwidth} = 1 / \{\text{minimum pulse width (in seconds)} \times 1.5\} = \text{Hz}$ . Setting pulse desensitization equal to zero and utilizing the minimum observed pulse width of 480.0  $\mu\text{s}$  yields a minimum required bandwidth of 1389 Hz. FCC specified bandwidths of 100 kHz and 1 MHz were utilized below and above 1 GHz, respectively.

### **General Notes**

1. All readings were taken utilizing a peak detector function at a test distance of 3 meters.
2. The duty cycle was applied to the peak readings in order to determine the average value of the emissions.
3. The frequency range was scanned from 30 MHz to 4.34 GHz. All emissions not reported were more than 20 dB below the specified limit.

## Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.



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Donald C. Lerner  
EMC Test Engineer



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Richard J. Reitz  
Laboratory Manager

### Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

### Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

## EQUIPMENT LIST

### Radiated Emissions

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3 Meter	RNY	9/12/2006	9/12/2009
091	Shielded Enclosure	Retlif	10 kHz - 1 GHz	Room 6	10/16/2006	10/16/2007
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	3/27/2006	3/27/2007
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/27/2006	6/27/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	10/10/2006	4/10/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	10/9/2006	4/9/2007
141C	Cable	Retlif	1 GHz ~ 18 GHz	1 METER, BLUE	1/4/2006	1/4/2007
141D	Cable	Retlif	1 GHz ~ 18 GHz	10 METER, BLACK	1/4/2006	1/4/2007
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2006	6/27/2007
512	Graphics Plotter	Hewlett Packard	N/A	7470A	10/18/2006	10/18/2007
523	Biconilog	Electro-Mechanics	26 - 2000 MHz	3142B	11/10/2006	11/10/2007
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	2/21/2006	2/21/2007
712	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	9/26/2006	9/26/2007
712B	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	8/21/2006	8/21/2007
712C	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	6/3/2006	6/3/2007
723	H.P. Filter	Mini-Circuits	1 GHz	BHP-1000	8/7/2006	8/7/2007

### Duty Cycle Determination and Occupied Bandwidth

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	10/10/2006	4/10/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	10/9/2006	4/9/2007
512	Graphics Plotter	Hewlett Packard	N/A	7470A	10/18/2006	10/18/2007

FCC Part 15 Subpart C, 15.231(c), Radiated Emissions, Fundamental & Harmonic Emissions  
Test Data

Test Method:	FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions, Paragraph 15.231						
Customer:	X-10 (USA), Inc.				Job No.	R-11714-1	
Test Sample:	IR Sensor / Wireless Transmitter						
Model No.:	UX24A				FCC ID:	B4SUX24A	
Operating Mode:	Continuously sending a Pulsed 433.92 MHz signal.						
Technician:	R. Soodoo				Date:	November 29, 2006.	
Notes:	Test Distance: 3 Meters Detector: Peak, Unless otherwise specified						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Peak Limit
MHz	(V/H)/Meters	X / Y / Z	dBµV	dB	dBµV/m	uV/m	uV/m
433.92	V / 1.0	X	85.3	-0.5	84.8	17378.0	109966.0
	V / 1.0	Y	74.1	-0.5	73.6	4786.3	
	V / 1.5	Z	75.6	-0.5	75.1	5688.5	
	H / 2.0	X	80.5	-0.5	80.0	10000.0	
	H / 1.5	Y	78.9	-0.5	78.4	8317.6	
433.92	H / 2.0	Z	69.2	-0.5	68.7	2722.7	109966.0
867.82	V / 1.0	X	39.9	7.2	47.1	226.5	10996.6
	V / 1.5	Y	34.5	7.2	41.7	121.6	
	V / 1.5	Z	29.5	7.2	36.7	68.4	
	H / 2.0	X	30.1	7.2	37.3	73.3	
	H / 2.0	Y	33.9	7.2	41.1	113.5	
867.82	H / 1.0	Z	34.3	7.2	41.5	118.9	10996.6
1301.76	V / 2.5	X	49.3	-3.7	45.6	190.5	5000.0
	V / 1.0	Y	50.5	-3.7	46.8	218.8	
	V / 1.5	Z	48.8	-3.7	45.1	179.9	
	H / 1.3	X	48.7	-3.7	45.0	177.8	
	H / 1.2	Y	46.7	-3.7	43.0	141.3	
1301.76	H / 1.0	Z	48.3	-3.7	44.6	169.8	5000.0
1735.72	V / 2.0	X	60.5	-2.7	57.8	776.2	10996.6
	V / 2.5	Y	56.2	-2.7	53.5	473.2	
	V / 1.5	Z	57.3	-2.7	54.6	537.0	
	H / 1.3	X	49.3	-2.7	46.6	213.8	
	H / 2.0	Y	53.3	-2.7	50.6	338.8	
1735.72	H / 2.0	Z	51.5	-2.7	48.8	275.4	10996.6
2169.60	V / 1.5	X	52.7	-1.5	51.2	363.1	10996.6
	V / 1.5	Y	53.7	-1.5	52.2	407.4	
	V / 2.0	Z	49.0	-1.5	47.5	237.1	
	H / 2.0	X	50.1	-1.5	48.6	269.2	
	H / 1.5	Y	50.1	-1.5	48.6	269.2	
2169.60	H / 2.0	Z	49.1	-1.5	47.6	239.9	10996.6
	The frequency range was scanned from 30 MHz to 4.34 GHz. All emissions not recorded were more						
	Than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*= Noise Floor Measurements (minimum sensitivity).						

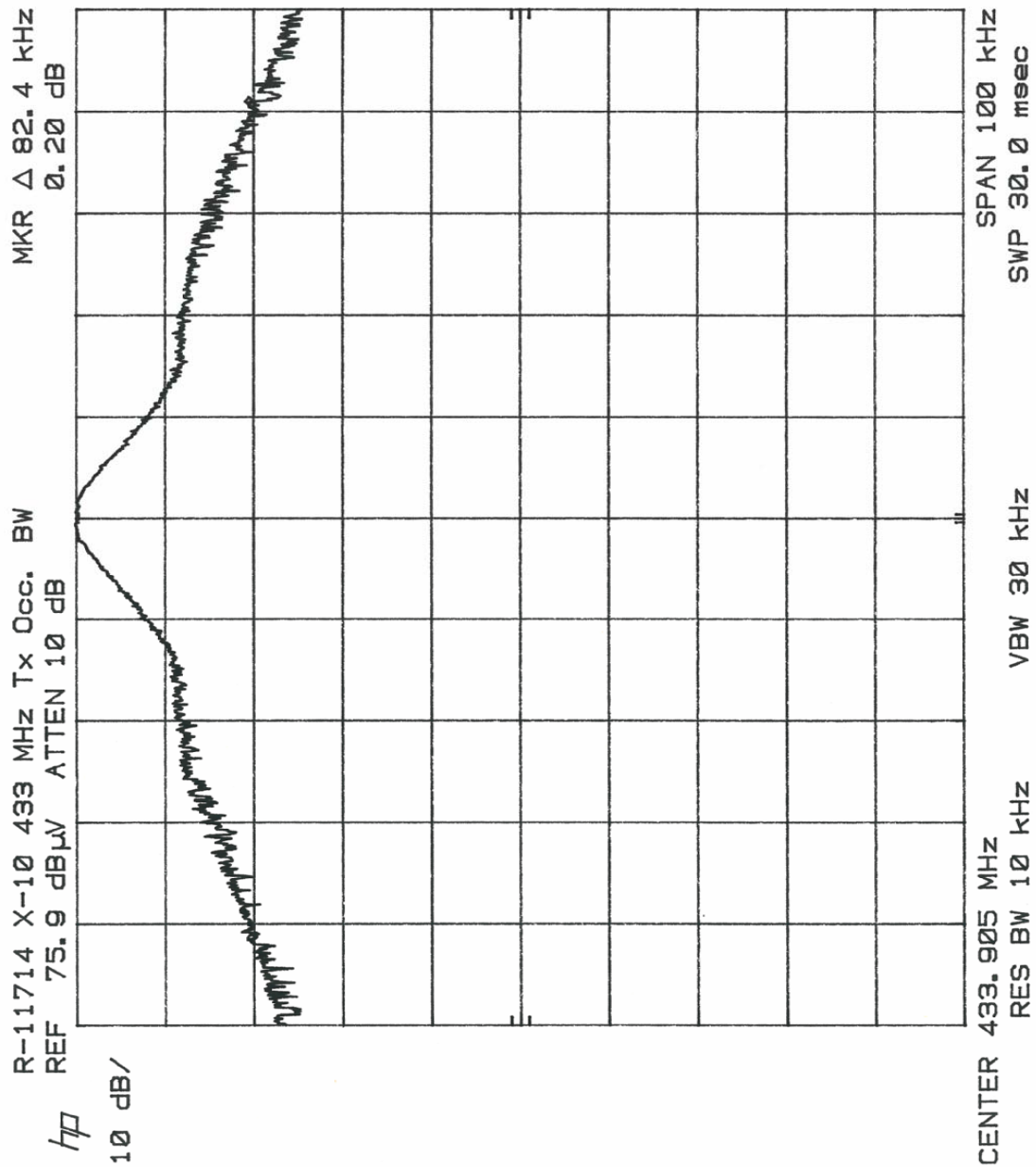


Test Method:	FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions, Paragraph 15.231						
Customer:	X-10 (USA), Inc.				Job No.	R-11714-1	
Test Sample:	IR Sensor / Wireless Transmitter						
Model No.:	UX24A				FCC ID:	B4SUX24A	
Operating Mode:	Continuously sending a Pulsed 433.92 MHz signal.						
Technician:	R. Soodoo				Date:	November 29, 2006.	
Notes:	Test Distance: 3 Meters Detector: Peak, unless otherwise specified						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Peak Limit
MHz	(V/H)-Meters	X / Y / Z	dBμV	dB	dBμV/m	uV/m	uV/m
2603.52	V / 1.5	X	50.3	-1.5	48.8	275.4	10996.6
	V / 4.0	Y	46.2	-1.5	44.7	171.8	
	V / 1.0	Z	49.0	-1.5	47.5	237.1	
	H / 1.5	X	50.8	-1.5	49.3	291.7	
	H / 2.5	Y	50.7	-1.5	49.2	288.4	
2603.52	H / 1.5	Z	48.4	-1.5	46.9	221.3	10996.6
3037.44	V / 1.0	X	45.8	-0.5	45.3	184.1	10996.6
	V / 1.2	Y	46.7	-0.5	46.2	204.2	
	V / 1.0	Z	44.3	-0.5	43.8	*154.9	
	H / 2.0	X	47.2	-0.5	46.7	216.3	
	H / 1.8	Y	44.8	-0.5	44.3	164.1	
3037.44	H / 2.5	Z	47.0	-0.5	46.5	211.3	10996.6
3471.36	V / 1.0	X	41.3	0.8	42.1	*127.4	10996.6
	V / 1.0	Y	41.3	0.8	42.1	*127.4	
	V / 1.0	Z	41.3	0.8	42.1	*127.4	
	H / 1.0	X	40.8	0.8	41.6	*120.2	
	H / 1.0	Y	40.8	0.8	41.6	*120.2	
3471.36	H / 1.0	Z	40.8	0.8	41.6	*120.2	10996.6
3905.28	V / 1.0	X	41.3	3.0	44.3	*164.1	5000.0
	V / 1.0	Y	41.3	3.0	44.3	*164.1	
	V / 1.0	Z	41.3	3.0	44.3	*164.1	
	H / 1.0	X	40.8	3.0	43.8	*154.9	
	H / 1.0	Y	40.8	3.0	43.8	*154.9	
3905.28	H / 1.0	Z	40.8	3.0	43.8	*154.9	5000.0
4339.2	V / 1.0	X	41.3	3.1	44.4	*166.0	5000.0
	V / 1.0	Y	41.3	3.1	44.4	*166.0	
	V / 1.0	Z	41.3	3.1	44.4	*166.0	
	H / 1.0	X	40.8	3.1	43.9	*156.7	
	H / 1.0	Y	40.8	3.1	43.9	*156.7	
4339.2	H / 1.0	Z	40.8	3.1	43.9	*156.7	5000.0
	The frequency range was scanned from 30 MHz to 4.34 GHz. All emissions not recorded were more						
	Than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements ( Minimum system sensitivity)						

Test Method:	FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions, Paragraph 15.231						
Customer:	X-10 (USA), Inc.				Job No.	R-11714-1	
Test Sample:	IR Sensor / Wireless Transmitter						
Model No.:	UX24A				FCC ID:	B4SUX24A	
Operating Mode:	Continuously sending a Pulsed 433.92 MHz signal.						
Technician:	R. Soodoo				Date:	November 29, 2006.	
Notes:	Test Distance: 3 Meters				Duty Cycle: 27.0%		
	Detector: Peak, unless otherwise specified				Duty Cycle Correction: -11.3dB		
Test Freq.	Antenna Pol./Height	EUT Orientation	Peak Reading	Correction Factor	Corrected Reading	Converted Reading	Avg. Limit
MHz	(V/H)-Meters	X / Y / Z	dBμV	dB	dBμV/m	uV/m	uV/m
433.92	V / 1.0	X	84.8	-11.3	73.5	4731.5	10996.6
	V / 1.0	Y	73.6	-11.3	62.3	1303.2	
	V / 1.0	Z	75.1	-11.3	63.8	1548.8	
	H / 1.0	X	80.0	-11.3	68.7	2722.7	
	H / 1.0	Y	78.4	-11.3	67.1	2264.6	
433.92	H / 1.0	Z	68.7	-11.3	57.4	741.3	10996.6
867.84	V / 1.5	X	47.1	-11.3	35.8	61.7	1099.6
	V / 1.0	Y	41.7	-11.3	30.4	33.1	
	V / 2.5	Z	36.7	-11.3	25.4	18.6	
	H / 1.5	X	37.3	-11.3	26.0	20.0	
	H / 1.0	Y	41.1	-11.3	29.8	30.9	
867.84	H / 1.0	Z	41.5	-11.3	30.2	32.4	1099.6
1301.76	V / 1.0	X	45.6	-11.3	34.3	51.9	500.0
	V / 1.0	Y	46.8	-11.3	35.5	59.6	
	V / 1.0	Z	45.1	-11.3	33.8	49.0	
	H / 1.0	X	45.0	-11.3	33.7	48.4	
	H / 1.0	Y	43.0	-11.3	31.7	38.5	
1301.76	H / 1.0	Z	44.6	-11.3	33.3	46.2	500.0
1735.68	V / 1.0	X	57.8	-11.3	46.5	211.3	1099.6
	V / 1.0	Y	53.5	-11.3	42.2	128.8	
	V / 1.0	Z	54.6	-11.3	43.3	146.2	
	H / 1.0	X	46.6	-11.3	35.3	58.2	
	H / 1.0	Y	50.6	-11.3	39.3	92.3	
1735.68	H / 1.0	Z	48.8	-11.3	37.5	75.0	1099.6
2169.60	V / 1.0	X	51.2	-11.3	39.9	98.9	1099.6
	V / 1.0	Y	52.2	-11.3	40.9	110.9	
	H / 1.0	Z	47.5	-11.3	36.2	64.6	
	H / 1.0	X	48.6	-11.3	37.3	73.3	
	H / 1.0	Y	48.6	-11.3	37.3	73.3	
2169.60	V / 1.0	Z	47.6	-11.3	36.3	65.3	1099.6
	The frequency range was scanned from 30 MHz to 4.34 GHz. All emissions not recorded were more						
	Than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements ( Minimum system sensitivity)						

Test Method:	FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions, Paragraph 15.231						
Customer:	X-10 (USA), Inc.				Job No.	R-11714-1	
Test Sample:	IR Sensor / Wireless Transmitter						
Model No.:	UX24A				FCC ID:	B4SUX24A	
Operating Mode:	Continuously sending a Pulsed 433.92 MHz signal.						
Technician:	R. Soodoo				Date:	November 29, 2006.	
Notes:	Test Distance: 3 Meters				Duty Cycle: 27.0%		
	Detector: Peak, unless otherwise specified				Duty Cycle Correction: -11.3dB		
Test Freq.	Antenna Pol./Height	EUT Orientation	Peak Reading	Correction Factor	Corrected Reading	Converted Reading	Avg. Limit
MHz	(V/H)-Meters	X / Y / Z	dBμV	dB	dBμV/m	uV/m	uV/m
2603.52	V / 1.0	X	48.8	-11.3	37.5	75.0	1099.6
	V / 1.0	Y	44.7	-11.3	33.4	46.8	
	V / 1.0	Z	47.5	-11.3	36.2	64.6	
	H / 1.0	X	49.3	-11.3	38.0	79.4	
	H / 1.0	Y	49.2	-11.3	37.9	78.5	
2603.52	H / 1.0	Z	46.9	-11.3	35.6	60.3	1099.6
3037.44	V / 1.0	X	45.3	-11.3	34.0	50.1	1099.6
	V / 1.0	Y	46.2	-11.3	34.9	55.6	
	V / 1.0	Z	43.8	-11.3	32.5	*42.2	
	H / 1.0	X	46.7	-11.3	35.4	58.9	
	H / 1.0	Y	44.3	-11.3	33.0	44.7	
3037.44	H / 1.0	Z	46.5	-11.3	35.2	57.5	1099.6
3471.36	V / 1.0	X	42.1	-11.3	30.8	*34.7	1099.6
	V / 1.0	Y	42.1	-11.3	30.8	*34.7	
	V / 1.0	Z	42.1	-11.3	30.8	*34.7	
	H / 1.0	X	41.6	-11.3	30.3	*32.7	
	H / 1.0	Y	41.6	-11.3	30.3	*32.7	
3471.36	H / 1.0	Z	41.6	-11.3	30.3	*32.7	1099.6
3905.28	V / 1.0	X	44.3	-11.3	33.0	*44.7	500.0
	V / 1.0	Y	44.3	-11.3	33.0	*44.7	
	V / 1.0	Z	44.3	-11.3	33.0	*44.7	
	H / 1.0	X	43.8	-11.3	32.5	*42.2	
	H / 1.0	Y	43.8	-11.3	32.5	*42.2	
3905.28	H / 1.0	Z	43.8	-11.3	32.5	*42.2	500.0
4339.2	V / 1.0	X	44.4	-11.3	33.1	*45.2	500.0
	V / 1.0	Y	44.4	-11.3	33.1	*45.2	
	V / 1.0	Z	44.4	-11.3	33.1	*45.2	
	H / 1.0	X	43.9	-11.3	32.6	*42.7	
	H / 1.0	Y	43.9	-11.3	32.6	*42.7	
4339.2	H / 1.0	Z	43.9	-11.3	32.6	*42.7	500.0
	The frequency range was scanned from 30 MHz to 4.34 GHz. All emissions not recorded were more						
	Than 20 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements ( Minimum system sensitivity)						

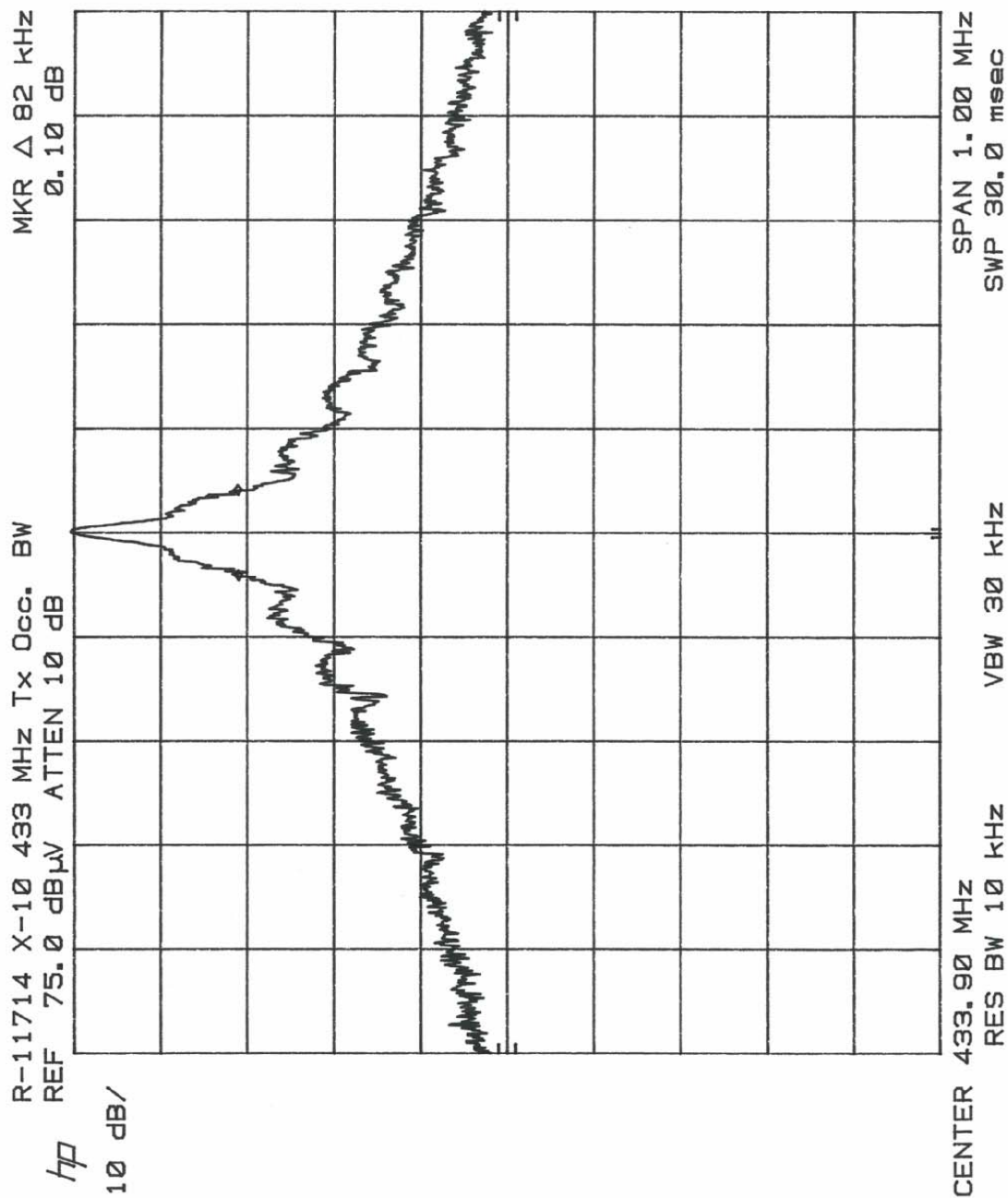
FCC Part 15, Subpart C, 15.231(c), Occupied Bandwidth  
Test Data



**Test Method:** FCC Part 15, Subpart C, 15.231(c), Occupied Bandwidth.

**Notes:** Occupied Bandwidth measured 82.4 kHz, does not exceed 0.25% of center frequency at the 20 dBc points (1.08 MHz)

Customer	X-10 (USA), Inc.	
Test Sample	IR Sensor / Wireless Transmitter	
Model Number	UX24A	FCC ID: B4SUX24A
Date: 11-27-06	Tech: R.S.	Sheet 1 of 2

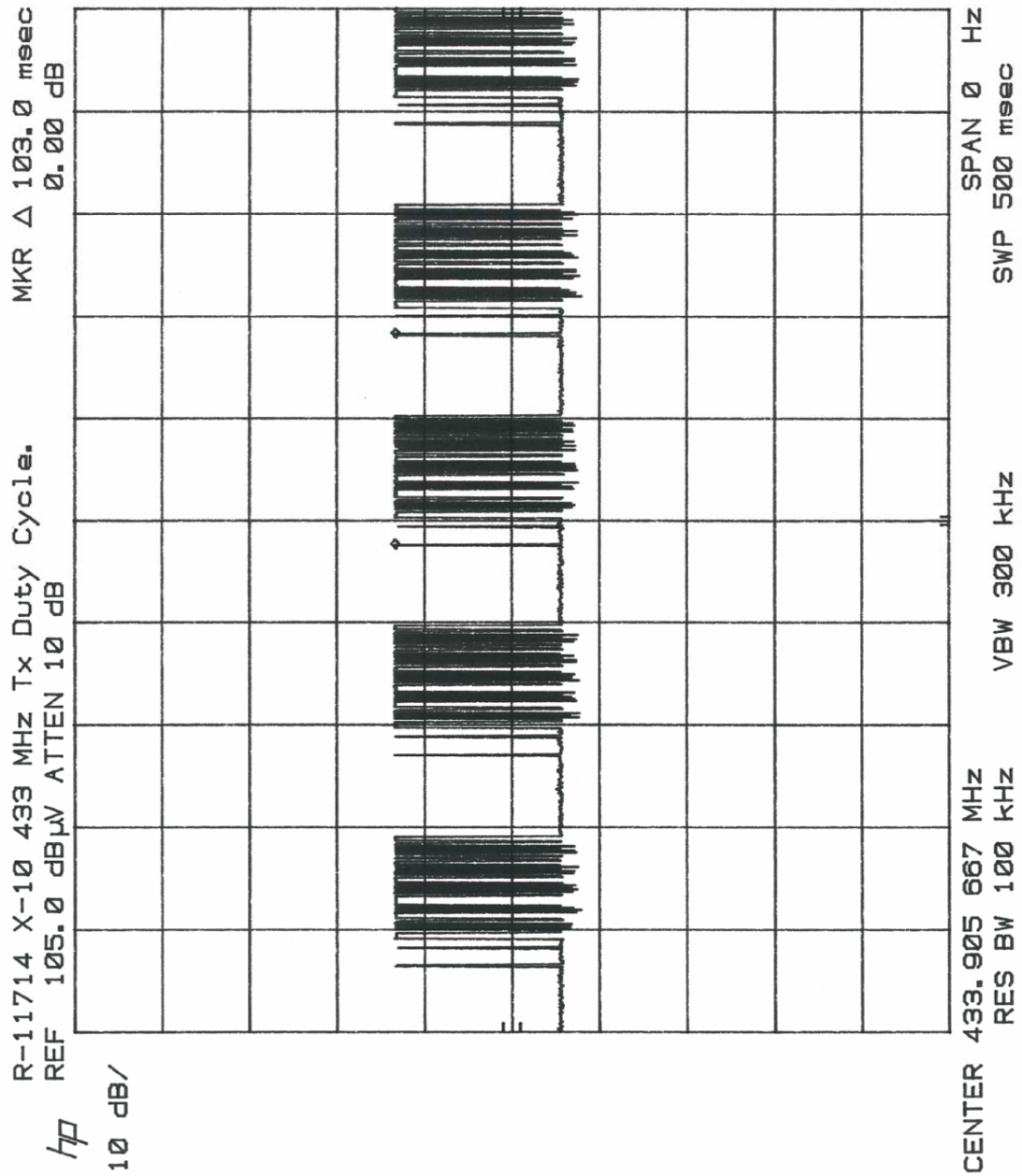


**Test Method:** FCC Part 15, Subpart C, 15.231(c), Occupied Bandwidth.

**Notes:** Occupied Bandwidth measured 82.4 kHz, does not exceed 0.25% of center frequency at the 20 dBc points (1.08 MHz)

Customer	X-10 (USA), Inc.	
Test Sample	IR Sensor / Wireless Transmitter	
Model Number	UX24A	FCC ID: B4SUX24A
Date: 11-27-06	Tech: R.S.	Sheet 2 of 2

FCC Part 15, Subpart C, 15.231(c), Duty Cycle Determination  
Test Data

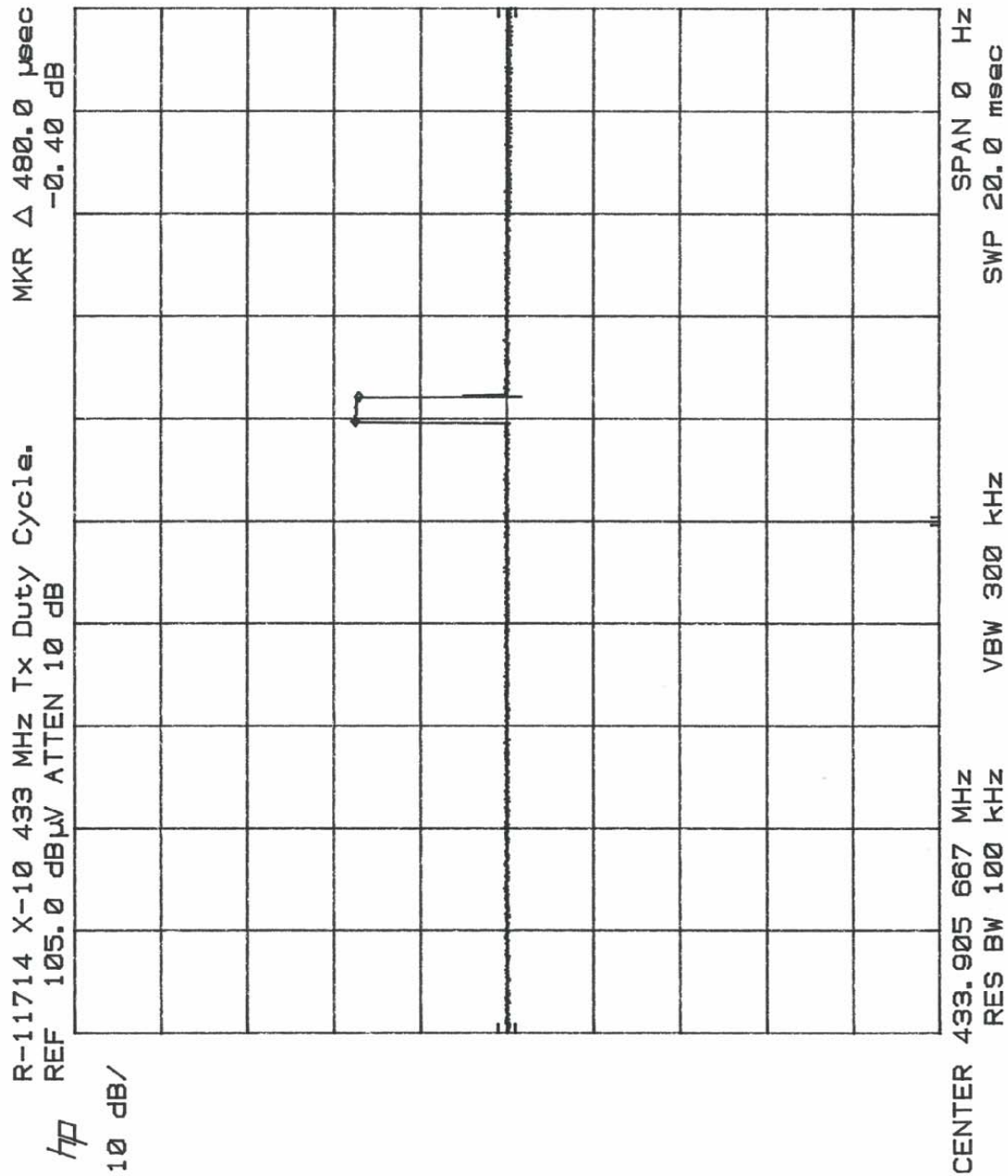


**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Measurement of cycle time = 103 mSec.

Customer	X-10 (USA), Inc		
Test Sample	IR Sensor / Wireless Transmitter		
Model Number	UX24A	FCC ID: B4SUX24A	
Date: 11-27-06	Tech: R.S.	Sheet 1 of 4	

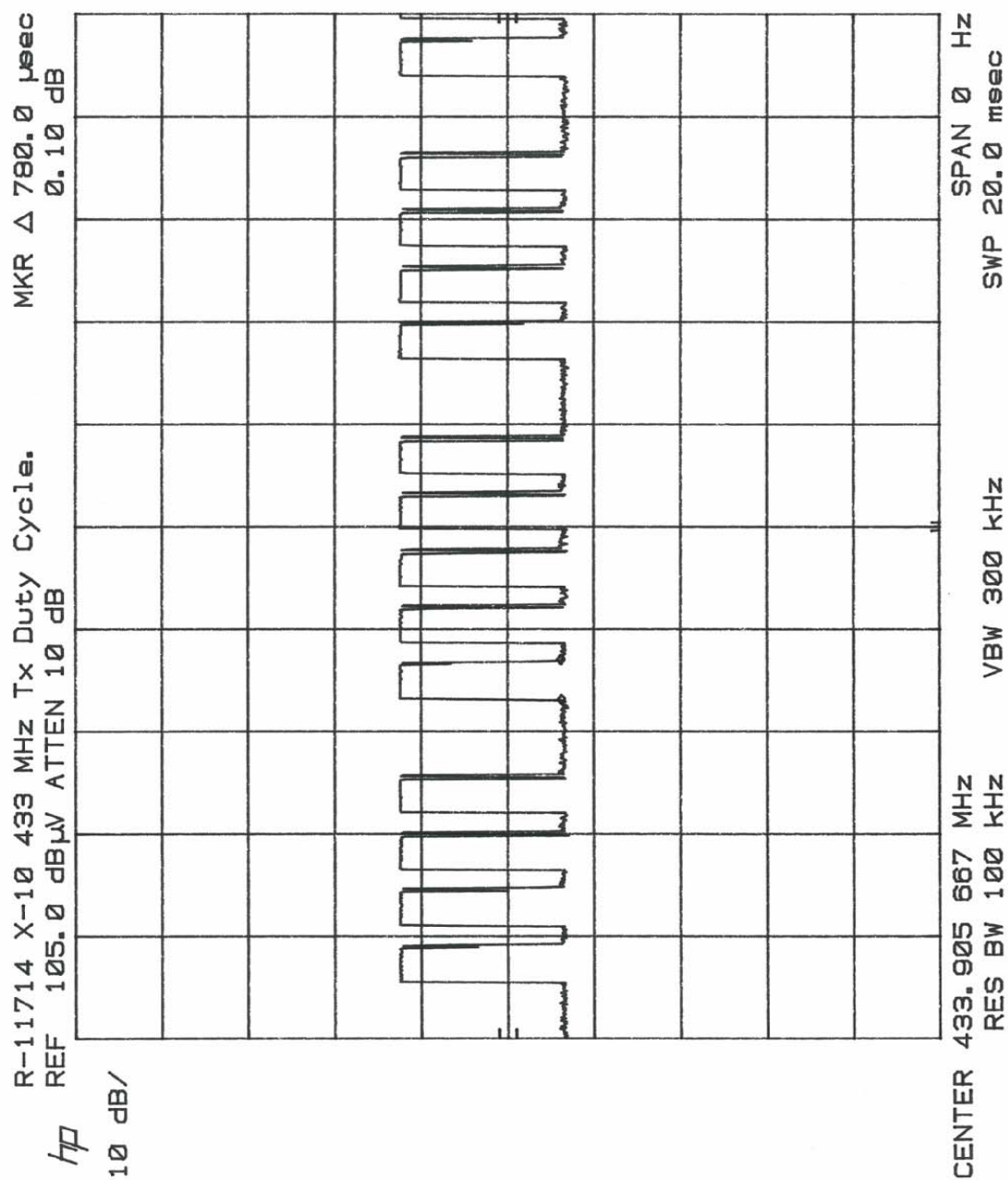




**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Measurement of 1 small pulse = 480 μSec.

Customer	X-10 (USA), Inc	
Test Sample	IR Sensor / Wireless Transmitter	
Model Number	UX24A	FCC ID: B4SUX24A
Date: 11-27-06	Tech: R.S.	Sheet 2 of 4

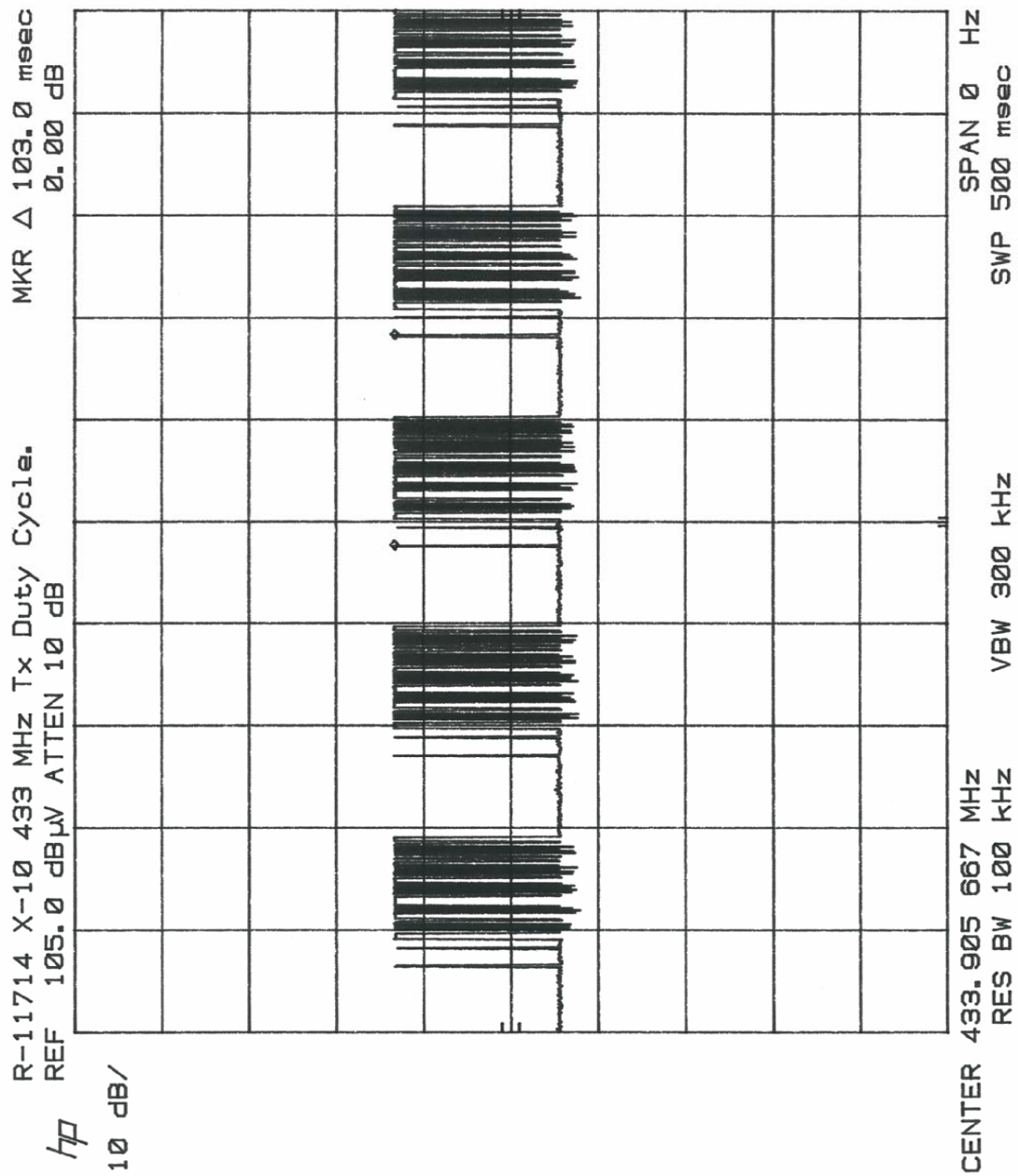


**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Measurement of 1 large pulse = 780 μSec.

Measurements of 34 large pulses = 34(780μSec) = 26.52mSec.

Customer	X-10 (USA), Inc	
Test Sample	IR Sensor / Wireless Transmitter	
Model Number	UX24A	FCC ID: B4SUX24A
Date: 11-27-06	Tech: R.S.	Sheet 3 of 4



**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Duty cycle = (1)(480 μSec) + (34) (780 μSec) = 27.0mSec.  
 Duty cycle = (27mSec / 100=0.27) 20 log 0.27 = -11.3 dB

Customer	X-10 (USA), Inc	
Test Sample	IR Sensor / Wireless Transmitter	
Model Number	UX24A	FCC ID: B4SUX24A
Date: 11-27-06	Tech: R.S.	Sheet 4 of 4

FCC Part 15, Subpart C, 15.231(c), Spurious Emissions  
Test Data

<b>Test Method:</b>	FCC Part 15 Subpart C, Spurious Case Radiated Emissions, Paragraph 15.209(a).						
<b>Customer:</b>	X-10 (USA), Inc.	<b>Job No.</b>		R-11714-1			
<b>Test Sample:</b>	IR Sensor / Wireless Transmitter						
<b>Model No.:</b>	UX24A	<b>FCC ID:</b>		B4SUX24A			
<b>Operating Mode:</b>	Continuously sending a Pulsed 433.92 MHz signal.						
<b>Technician:</b>	R. Soodoo	<b>Date:</b>		November 29, 2006.			
<b>Notes:</b>	Test Distance: 3 Meters                      Temp: 16°C                      Humidity: 28% Detector: Quasi-Peak from 30 MHz to 1 GHz, Peak above 1 GHz						
Frequency	Antenna Position	EUT Orientation	Meter Readings	Correction Factor	Corrected Reading	Converted Reading	Limit
MHz	(V/H) / Meters	Degrees	dBuV	dB	dBµV/m	µV /m	µV /m
30.00							100
88.00							100
88.00		No emissions observed at the specified test distance					150
216.0							150
216.0							200
960.0							200
960.0							500
4340							500
The frequency range was scanned from 30 MHz to 4.34 GHz.							
The emissions observed from the EUT do not exceed the specified limits.							
Emissions not recorded were more than 20dB under the specified limit.							