

### Technical Information

Applicant	Manufacturer
Name: <u>X10 (USA), Inc.</u>	Name: <u>X-10 Electronics (Shenzhen) Co. Ltd.</u>
Address: <u>Blackriver Corporate Park 620 Naches Ave SW, Building A</u>	Address: <u>Together Rich Industrial Park B Sanwei Industrial District, Xixiang Town</u>
City, State, Zip: <u>Renton, WA 98057</u>	City, State, Zip: <u>Baoan County, Shenzhen, China</u>

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

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

### Test Sample Description

**Test Sample:** Eyeglasses FOFA Remote

**Brandname:** X-10 (USA), Inc.

**Model Number:** GXD-27

**FCC ID:** B4SGXD-27

**Type:** Pulsed Transmitter / UHF ASK Receiver

**Power Requirements:** 3V CR2032 battery

**Frequency of Operation:** 433.75 MHz

**Applicable Rule Section:** Part 15, Subpart C, Section 15.231

### Tests Performed

Transmitter: Para. 15.231(b), Radiated Emissions, Fundamental and Harmonics

Transmitter: Para. 15.231(b), Radiated Emissions, Spurious Case

Transmitter: Para. 15.231(b)(3), Duty Cycle Determination

Transmitter: Para. 15.231(c), Occupied Bandwidth

Receiver: Para. 15.109(a), Receiver Radiated Spurious Emissions

## Test Results

### Receiver:

15.109(a): The field strength of spurious emissions did not exceed Class B Limits specified in paragraph 1.109(a).

### Transmitter:

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 or the transmitter performs periodic transmissions at predetermined intervals greater than 1 hour apart and are shorter than 1 second in duration.

15.231 (b): The fundamental field strength did not exceed 10989.6  $\mu\text{V/M}$  (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 1098.9  $\mu\text{V/M}$  (AVERAGE).

15.231 (c) The Bandwidth of the emission was no wider than 0.25% of the center frequency 52 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>433.75 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

$$\text{Fundamental Limit} = \underline{10989.6} \text{ } \mu\text{V/M (AVERAGE) @ 3 Meters}$$

$$\text{Harmonic Limit} = \underline{1098.9} \text{ } \mu\text{V/M (AVERAGE) @ 3 Meters}$$

### 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.)

$$\text{Transmitter On Time} = \underline{25.72} \text{ milliseconds (maximum per cycle)}$$

$$\text{Transmitter Cycle Time} = \underline{116.6} \text{ milliseconds (100 ms maximum)}$$

$$\text{Transmitter Duty Cycle} = \underline{25.72} \%$$

### Calculation

$$\begin{aligned} & \underline{53} \times \underline{460} \quad \text{1 Large Pulse} = \underline{1.34} \text{ milliseconds} \\ & \quad \quad \quad \mu\text{s (small pulse)} = \underline{24.38} \text{ milliseconds} \\ & \quad \quad \quad \underline{24.38} + \underline{1.34} = \underline{25.72} \text{ milliseconds} \\ & \quad \quad \text{Duty Cycle } (25.72/100)*100 = \underline{25.72} \% \\ & \text{Correction Factor} = 20 \log \underline{0.2572} = \underline{-11.8} \text{ dB} \end{aligned}$$

## **Spectrum Analyzer Desensitization Considerations**

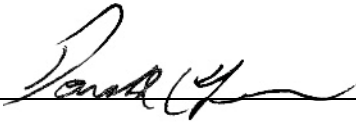
Due to the nature of the emissions being measured, care was taken to ensure that the resolution bandwidth of the spectrum analyzer was adequate to provide accurate measurements. The following formula was utilized:  $\text{minimum bandwidth} = 1 / \{\text{minimum pulse width (in seconds)} \times 1.5\} = \text{Hz}$ . Setting pulse desensitization equal to zero and utilizing the minimum observed pulse width of 460  $\mu\text{s}$  yields a minimum required bandwidth of 1149 Hz. FCC specified bandwidths of 100 kHz and 1 MHz were utilized below and above 1 GHz, respectively.

### **General Notes**

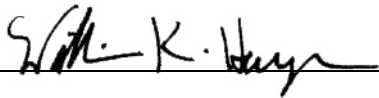
1. All readings were taken utilizing a peak detector function at a test distance of 3 meters.
2. The duty cycle was applied to the peak readings in order to determine the average value of the emissions.
3. The frequency range was scanned from 30 MHz to 4.375 GHz. All emissions not reported were more 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.



Donald C. Lerner  
EMC Test Engineer



William K. Hayes  
Executive Vice President

### 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

### FCC Part 15, Subpart C, Radiated Emissions, Fundamental and Harmonics

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3/10 Meter	RNY	9/12/2006	9/12/2009
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	2/21/2008	2/21/2009
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	4/28/2008	4/28/2009
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	4/30/2008	4/30/2009
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	4/30/2008	4/30/2009
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	4/28/2008	4/28/2009
512	Graphics Plotter	Hewlett Packard	N/A	7470A	9/25/2008	9/25/2009
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	7/17/2008	7/17/2009
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	10/24/2007	10/24/2008
723	H.P. Filter	Mini-Circuits	1 GHz	BHP-1000	7/14/2008	7/14/2009
767	Biconilog	EMCO	26 - 2000 MHz	3142B	8/8/2008	8/8/2009

### FCC Part 15, Subpart C, Radiated Emissions, Spurious Case

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3/10 Meter	RNY	9/12/2006	9/12/2009
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	2/21/2008	2/21/2009
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	4/28/2008	4/28/2009
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	4/30/2008	4/30/2009
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	4/30/2008	4/30/2009
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	4/28/2008	4/28/2009
512	Graphics Plotter	Hewlett Packard	N/A	7470A	9/25/2008	9/25/2009
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	7/17/2008	7/17/2009
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	10/24/2007	10/24/2008
723	H.P. Filter	Mini-Circuits	1 GHz	BHP-1000	7/14/2008	7/14/2009
767	Biconilog	EMCO	26 - 2000 MHz	3142B	8/8/2008	8/8/2009

### FCC Part 15, Subpart C, Duty Cycle Determination

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3/10 Meter	RNY	9/12/2006	9/12/2009
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	4/30/2008	4/30/2009
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	4/30/2008	4/30/2009
512	Graphics Plotter	Hewlett Packard	N/A	7470A	9/25/2008	9/25/2009

### FCC Part 15, Subpart C, Occupied Bandwidth

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3/10 Meter	RNY	9/12/2006	9/12/2009
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	4/30/2008	4/30/2009
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	4/30/2008	4/30/2009
512	Graphics Plotter	Hewlett Packard	N/A	7470A	9/25/2008	9/25/2009

## FCC Part 15, Subpart B, Receiver Radiated Spurious Emissions

<b>EN</b>	<b>Type</b>	<b>Manufacturer</b>	<b>Description</b>	<b>Model No.</b>	<b>Cal Date</b>	<b>Due Date</b>
067	Open Area Test Site	Retlif	3/10 Meter	RNY	9/12/2006	9/12/2009
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	2/21/2008	2/21/2009
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	4/28/2008	4/28/2009
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	4/30/2008	4/30/2009
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	4/30/2008	4/30/2009
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	4/28/2008	4/28/2009
512	Graphics Plotter	Hewlett Packard	N/A	7470A	9/25/2008	9/25/2009
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	7/17/2008	7/17/2009
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	10/24/2007	10/24/2008
723	H.P. Filter	Mini-Circuits	1 GHz	BHP-1000	7/14/2008	7/14/2009
767	Biconilog	EMCO	26 - 2000 MHz	3142B	8/8/2008	8/8/2009

**FCC Part 15 Subpart C, Radiated Emissions,  
Fundamental and Harmonics, Paragraph 15.231(b)  
Test Data**



Test Method:	FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions, Paragraph						
Customer:	X-10 (USA), Inc.				Job No.	R-12647-1	
Test Sample:	Eyeglasses FOFA Remote						
Model No.:	GXD-27				FCC ID:	B4SGXD-27	
Operating Mode:	Continuously transmitting a Pulsed 433.75 MHz signal.						
Technician:	R. Soodoo				Date:	October 8, 2008	
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
433.75	V / 2.1	X	61.2	-0.6	60.6	1071.5	109896.0
	V / 2.3	Y	59.3	-0.6	58.7	861.0	
	V / 1.0	Z	64.6	-0.6	64.0	1584.9	
	H / 2.0	X	65.7	-0.6	65.1	1798.9	
	H / 2.2	Y	63.4	-0.6	62.8	1380.4	
433.75	H / 1.7	Z	67.9	-0.6	67.3	2317.4	109896.0
867.50	V / 1.5	X	35.4	8.4	43.8	154.9	10989.6
	V / 1.0	Y	32.5	8.4	40.9	110.9	
	V / 1.0	Z	40.7	8.4	49.1	285.1	
	H / 1.0	X	35.9	8.4	44.3	164.1	
	H / 1.0	Y	32.1	8.4	40.5	105.9	
867.50	H / 1.0	Z	39.5	8.4	47.9	248.3	10989.6
1301.2	V / 1.0	X	36.7	1.5	38.2	*81.3	5000.0
	V / 1.0	Y	36.7	1.5	38.2	*81.3	
	V / 1.0	Z	36.7	1.5	38.2	*81.3	
	H / 1.0	X	36.3	1.5	37.8	*77.6	
	H / 1.0	Y	36.3	1.5	37.8	*77.6	
1301.2	H / 1.0	Z	36.3	1.5	37.8	*77.6	5000.0
1735.0	V / 1.0	X	36.7	2.1	38.8	*87.1	10989.6
	V / 1.0	Y	36.7	2.1	38.8	*87.1	
	V / 1.0	Z	36.7	2.1	38.8	*87.1	
	H / 1.0	X	36.3	2.1	38.4	*83.2	
	H / 1.0	Y	36.3	2.1	38.4	*83.2	
1735.0	H / 1.0	Z	36.6	2.1	38.4	*83.2	10989.6
2168.7	V / 1.0	X	36.7	3.5	40.2	*102.3	10989.6
	V / 1.0	Y	36.7	3.5	40.2	*102.3	
	V / 1.0	Z	36.7	3.5	40.2	*102.3	
	H / 1.0	X	36.3	3.5	39.8	*97.7	
	H / 1.0	Y	36.3	3.5	39.8	*97.7	
2168.7	H / 1.0	Z	36.3	3.5	39.8	*97.7	10989.6
	The frequency range was scanned from 30 MHz to 4.4 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						
Customer:	X-10 (USA), Inc.				Job No.	R-12647-1	
Test Sample:	Eyeglasses FOFA Remote						
Model No.:	GXD-27				FCC ID:	B4SGXD-27	
Operating Mode:	Continuously transmitting a Pulsed 433.75 MHz signal.						
Technician:	R. Soodoo				Date:	October 8, 2008.	
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
2602.8	V / 1.0	X	44.3	5.0	49.3	*291.7	10989.6
	V / 1.0	Y	44.3	5.0	49.3	*291.7	
	V / 1.0	Z	44.3	5.0	49.3	*291.7	
	H / 1.0	X	44.3	5.0	49.3	*291.7	
	H / 1.0	Y	44.3	5.0	49.3	*291.7	
2602.8	H / 1.0	Z	44.3	5.0	49.3	*291.7	10989.6
3036.6	V / 1.0	X	44.3	7.1	51.4	*371.5	10989.6
	V / 1.0	Y	44.3	7.1	51.4	*371.5	
	V / 1.0	Z	44.3	7.1	51.4	*371.5	
	H / 1.0	X	44.3	7.1	51.4	*371.5	
	H / 1.0	Y	44.3	7.1	51.4	*371.5	
3036.6	H / 1.0	Z	44.3	7.1	51.4	*371.5	10989.6
3470.4	V / 1.0	X	44.3	9.6	53.9	*495.5	10989.6
	V / 1.0	Y	44.3	9.6	53.9	*495.5	
	V / 1.0	Z	44.3	9.6	53.9	*495.5	
	H / 1.0	X	44.3	9.6	53.9	*495.5	
	H / 1.0	Y	44.3	9.6	53.9	*495.5	
3470.4	H / 1.0	Z	44.3	9.6	53.9	*495.5	10989.6
3904.2	V / 1.0	X	34.1	12.8	46.9	**221.3	5000.0
	V / 1.0	Y	34.1	12.8	46.9	**221.3	
	V / 1.0	Z	34.1	12.8	46.9	**221.3	
	H / 1.0	X	34.1	12.8	46.9	**221.3	
	H / 1.0	Y	34.1	12.8	46.9	**221.3	
3904.2	H / 1.0	Z	34.1	12.8	46.9	**221.3	5000.0
4338.0	V / 1.0	X	35.3	13.2	48.5	**266.1	5000.0
	V / 1.0	Y	35.3	13.2	48.5	**266.1	
	V / 1.0	Z	35.3	13.2	48.5	**266.1	
	H / 1.0	X	35.3	13.2	48.5	**266.1	
	H / 1.0	Y	35.3	13.2	48.5	**266.1	
4338.0	H / 1.0	Z	35.3	13.2	48.5	**266.1	5000.0
	The frequency range was scanned from 30 MHz to 4.4 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) ** RBW = 100 kHz						

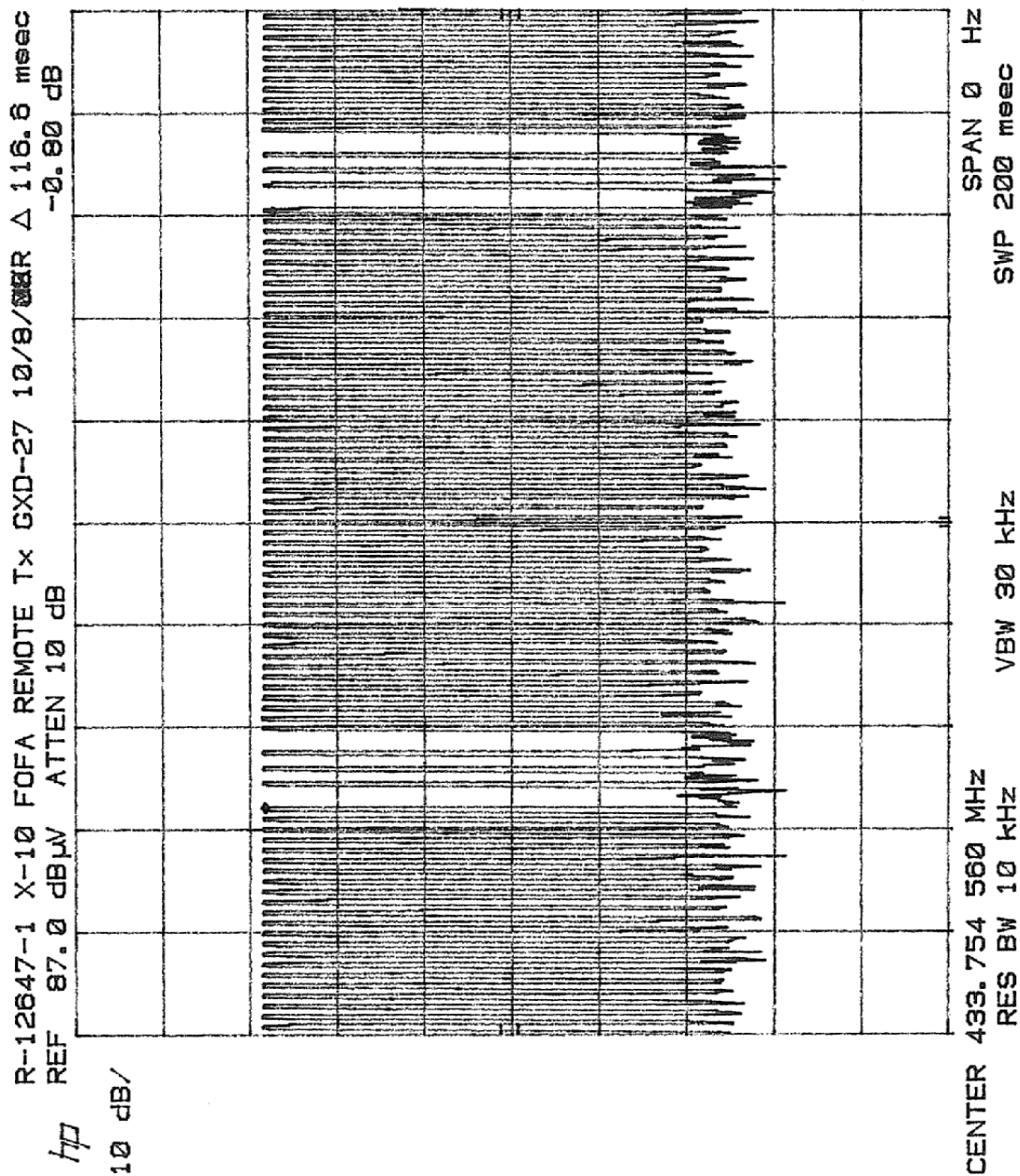
Test Method:	FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions, Paragraph						
Customer:	X-10 (USA), Inc.				Job No.	R-12647-1	
Test Sample:	Eyeglasses FOFA Remote						
Model No.:	GXD-27				FCC ID:	B4SGXD-27	
Operating Mode:	Continuously transmitting a Pulsed 433.75 MHz signal.						
Technician:	R. Soodoo				Date:	October 8, 2008.	
Notes:	Test Distance: 3 Meters				Duty Cycle: 25.7%		
	Detector: Peak, unless otherwise specified				Duty Cycle Correction: -11.8dB		
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
433.75	V / 1.0	X	60.6	-11.8	48.8	275.4	10989.6
	V / 1.0	Y	58.7	-11.8	46.9	221.3	
	V / 1.0	Z	64.0	-11.8	52.2	407.4	
	H / 1.0	X	65.1	-11.8	53.3	462.4	
	H / 1.0	Y	62.8	-11.8	51.0	354.8	
433.75	H / 1.0	Z	67.3	-11.8	55.5	595.7	10989.6
867.50	V / 1.0	X	43.8	-11.8	32.0	39.8	1098.9
	V / 1.0	Y	40.9	-11.8	29.1	28.5	
	V / 1.0	Z	49.1	-11.8	37.3	73.3	
	H / 1.0	X	44.3	-11.8	32.5	42.2	
	H / 1.0	Y	40.5	-11.8	28.7	27.2	
867.50	H / 1.0	Z	47.9	-11.8	36.1	63.8	1098.9
1301.2	V / 1.0	X	38.2	-11.8	26.4	*20.9	500.0
	V / 1.0	Y	38.2	-11.8	26.4	*20.9	
	V / 1.0	Z	38.2	-11.8	26.4	*20.9	
	H / 1.0	X	37.8	-11.8	26.0	*20.0	
	H / 1.0	Y	37.8	-11.8	26.0	*20.0	
1301.2	H / 1.0	Z	37.8	-11.8	26.0	*20.0	500.0
1735.0	V / 1.0	X	38.8	-11.8	27.0	*22.4	1098.9
	V / 1.0	Y	38.8	-11.8	27.0	*22.4	
	V / 1.0	Z	38.8	-11.8	27.0	*22.4	
	H / 1.0	X	38.4	-11.8	26.6	*21.4	
	H / 1.0	Y	38.4	-11.8	26.6	*21.4	
1735.0	H / 1.0	Z	38.4	-11.8	26.6	*21.4	1098.9
2168.7	V / 1.0	X	40.2	-11.8	28.4	*26.3	1098.9
	V / 1.0	Y	40.2	-11.8	28.4	*26.3	
	H / 1.0	Z	40.2	-11.8	28.4	*26.3	
	H / 1.0	X	39.8	-11.8	28.0	*25.1	
	H / 1.0	Y	39.8	-11.8	28.0	*25.1	
2168.7	V / 1.0	Z	39.8	-11.8	28.0	*25.1	1098.9
	The frequency range was scanned from 30 MHz to 4.4 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)						

<b>Test Method:</b>		FCC Part 15 Subpart C, Radiated Emissions, Fundamental & Harmonic Emissions,						
<b>Customer:</b>		X-10 (USA), Inc.			<b>Job No.</b>		R-12647-1	
<b>Test Sample:</b>		Eyeglasses FOFA Remote						
<b>Model No.:</b>		GXD-27			<b>FCC ID:</b>		B4SGXD-27	
<b>Operating Mode:</b>		Continuously transmitting a Pulsed 433.75 MHz signal.						
<b>Technician:</b>		R. Soodoo			<b>Date:</b>		October 8, 2008.	
<b>Notes:</b>		Test Distance: 3 Meters			Duty Cycle: 25.7%			
		Detector: Peak, unless otherwise specified			Duty Cycle Correction: -11.8dB			
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	
2602.8	V / 1.0	X	49.3	-11.8	37.5	*75.0	1098.9	
	V / 1.0	Y	49.3	-11.8	37.5	*75.0		
	V / 1.0	Z	49.3	-11.8	37.5	*75.0		
	H / 1.0	X	49.3	-11.8	37.5	*75.0		
	H / 1.0	Y	49.3	-11.8	37.5	*75.0		
2602.8	H / 1.0	Z	49.3	-11.8	37.5	*75.0	1098.9	
3036.6	V / 1.0	X	51.4	-11.8	39.6	*95.5	1098.9	
	V / 1.0	Y	51.4	-11.8	39.6	*95.5		
	V / 1.0	Z	51.4	-11.8	39.6	*95.5		
	H / 1.0	X	51.4	-11.8	39.6	*95.5		
	H / 1.0	Y	51.4	-11.8	39.6	*95.5		
3036.6	H / 1.0	Z	51.4	-11.8	39.6	*95.5	1098.9	
3470.4	V / 1.0	X	53.9	-11.8	42.1	*127.4	1098.9	
	V / 1.0	Y	53.9	-11.8	42.1	*127.4		
	V / 1.0	Z	53.9	-11.8	42.1	*127.4		
	H / 1.0	X	53.9	-11.8	42.1	*127.4		
	H / 1.0	Y	53.9	-11.8	42.1	*127.4		
3470.4	H / 1.0	Z	53.9	-11.8	42.1	*127.4	1098.9	
3904.2	V / 1.0	X	46.9	-11.8	35.1	**56.9	500.0	
	V / 1.0	Y	46.9	-11.8	35.1	**56.9		
	V / 1.0	Z	46.9	-11.8	35.1	**56.9		
	H / 1.0	X	46.9	-11.8	35.1	**56.9		
	H / 1.0	Y	46.9	-11.8	35.1	**56.9		
3904.2	H / 1.0	Z	46.9	-11.8	35.1	**56.9	500.0	
4338.0	V / 1.0	X	48.5	-11.8	36.7	**68.4	500.0	
	V / 1.0	Y	48.5	-11.8	36.7	**68.4		
	V / 1.0	Z	48.5	-11.8	36.7	**68.4		
	H / 1.0	X	48.5	-11.8	36.7	**68.4		
	H / 1.0	Y	48.5	-11.8	36.7	**68.4		
4338.0	H / 1.0	Z	48.5	-11.8	36.7	**68.4	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) ** RBW = 100 kHz							

**FCC Part 15 Subpart C, Spurious Case Radiated Emissions, Paragraph 15.231(b)**  
**Test Data**

Test Method:	FCC Part 15 Subpart C, Spurious Case Radiated Emissions, Paragraph 15.231(b).						
Customer:	X-10 (USA), Inc.			Job No.:	R-12647-1		
Test Sample:	Eyeglasses FOFA Remote						
Model No.:	GXD-27			FCC ID No.:	B4SGXD-27		
Operating Mode:	Continuously transmitting a Pulsed 433.75 MHz signal.						
Technician:	R.Soodoo			Date:	October 8, 2008.		
Notes:	Test Distance: 3 Meters		Temp: 16°C		Humidity: 32.0%		
	Detector: Quasi-Peak from 30 MHz to 1 GHz, Average above 1 GHz						
Frequency	Antenna Position	EUT Orientation	Meter Readings	Correction Factor	Corrected Reading	Converted Reading	Limit
MHz	(V/H) / Meters	Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
30.00							100
*35.00	V / 1.0	0.0	28.0	4.3	32.3	41.2	
88.00							100
88.00							150
*195.0	V / 1.0	0.0	22.9	-7.7	15.2	5.8	
*205.0	V / 1.0	0.0	22.9	-7.7	15.2	5.8	
216.0							150
216.0							200
960.0							200
960.0							500
*995.0	V / 1.0	0.0	22.0	12.2	34.2	51.3	
*1050.0	V / 1.0	0.0	27.3	2.0	29.3	29.2	
*1700.0	V / 1.0	0.0	36.7	2.1	38.8	87.1	
*4330.0	V / 1.0	0.0	34.3	13.2	47.5	266.1	
4400.0							500
	The frequency range was scanned from 30 MHz to 4.4 GHz.						
	The emissions observed from the EUT do not exceed the specified limits.						
	Emissions not recorded were more than 20dB under the specified limit.						
	*This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).						

**FCC Part 15.231(b)(3), Duty Cycle Determination  
Test Data**



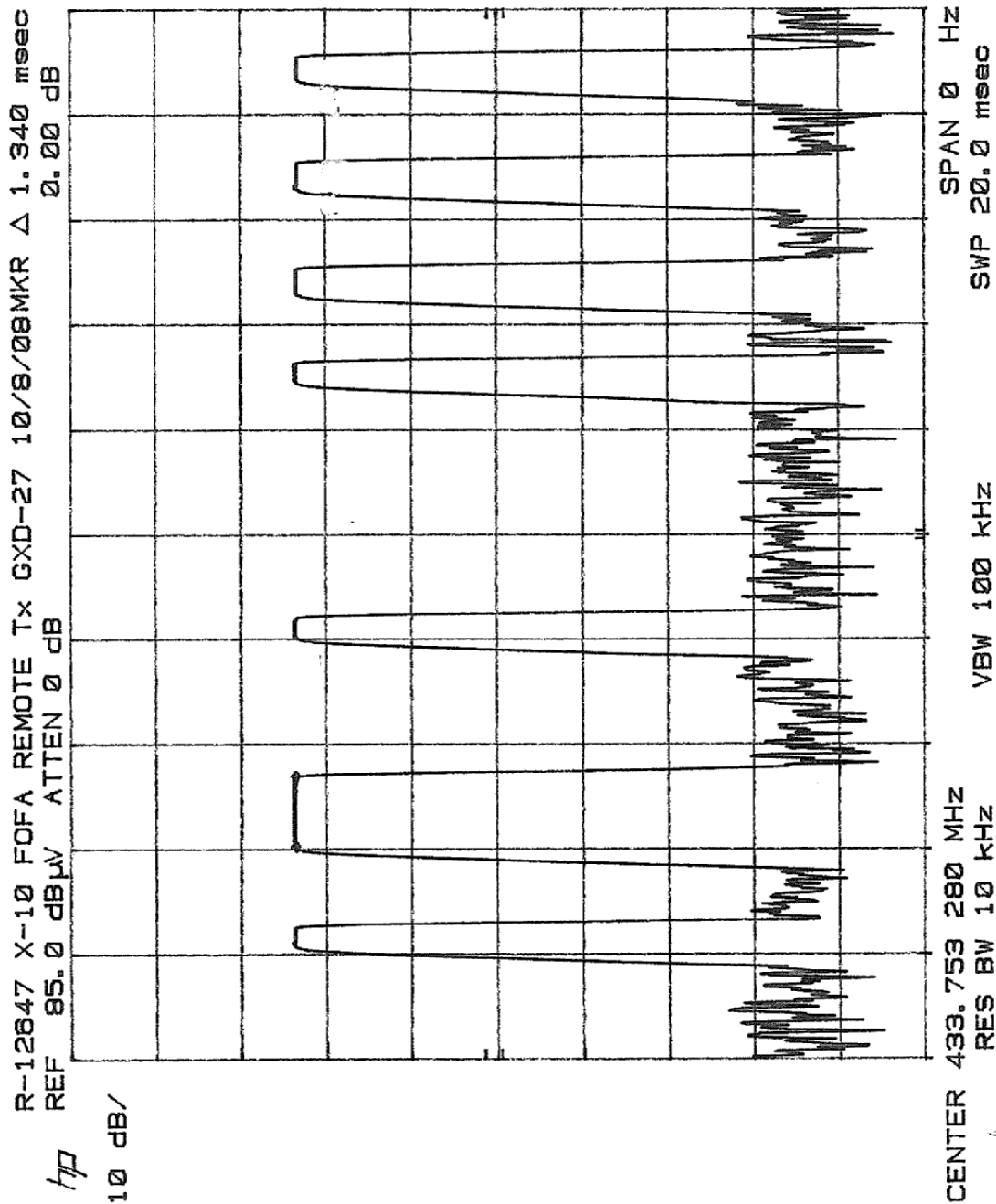
**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Measurement of cycle time = 116.6mSec.

**FCC ID.:** B4SGXD-27

Customer	X-10 (USA), Inc.		
Test Sample	Eyeglasses FOFA Remote		
Model No.:	GXD-27		
Date: October 8, 2008	Tech: R.Soodoo	Sheet 1 of 4	



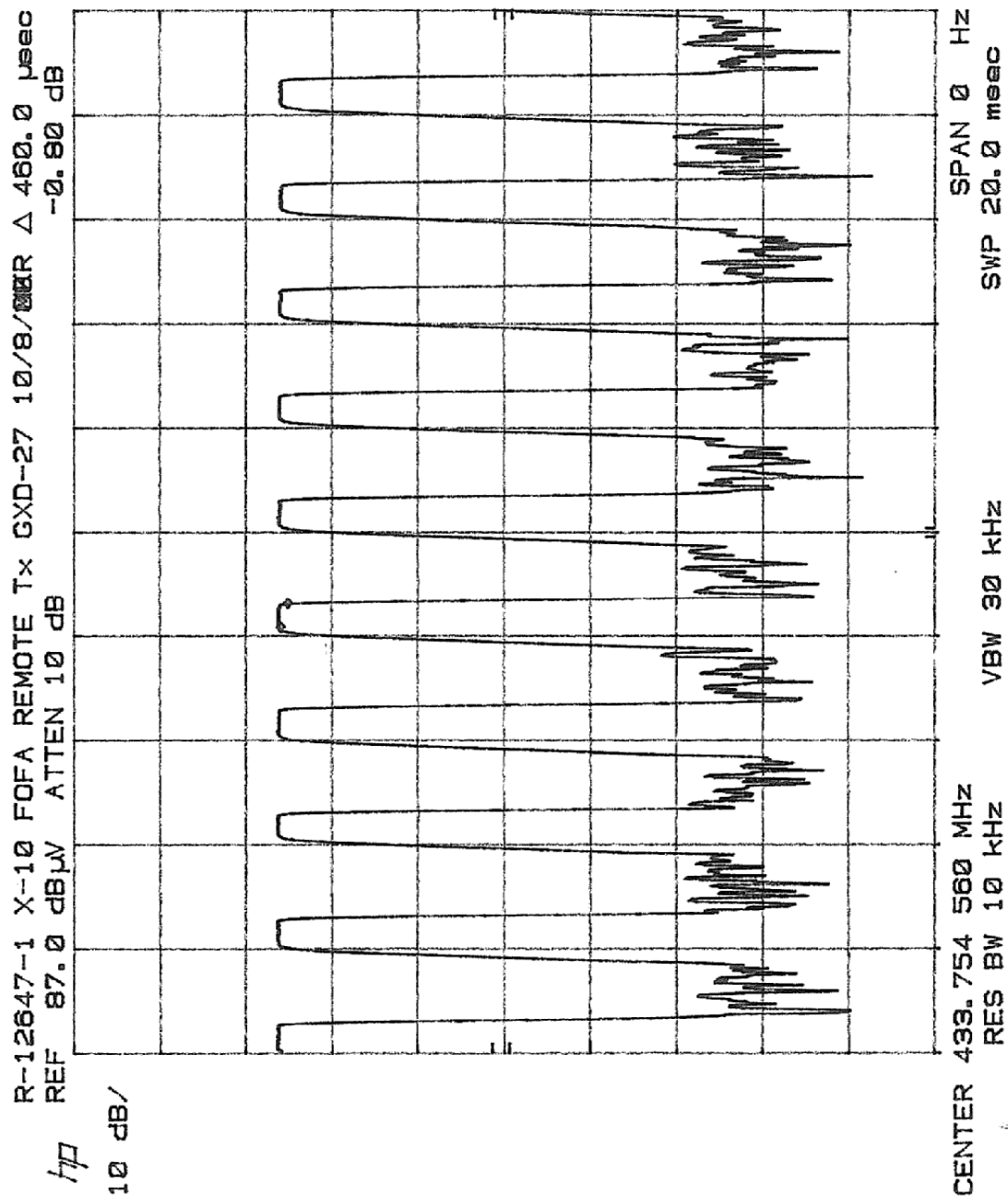


**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Measurement of 1 large pulse = 1.34 mSec.

**FCC ID.:** B4SGXD-27

Customer	X-10 (USA), Inc.		
Test Sample	Eyeglasses FOFA Remote		
Model No.:	GX-D-27		
Date: October 8, 2008	Tech: R.Soodoo	Sheet 2 of 4	



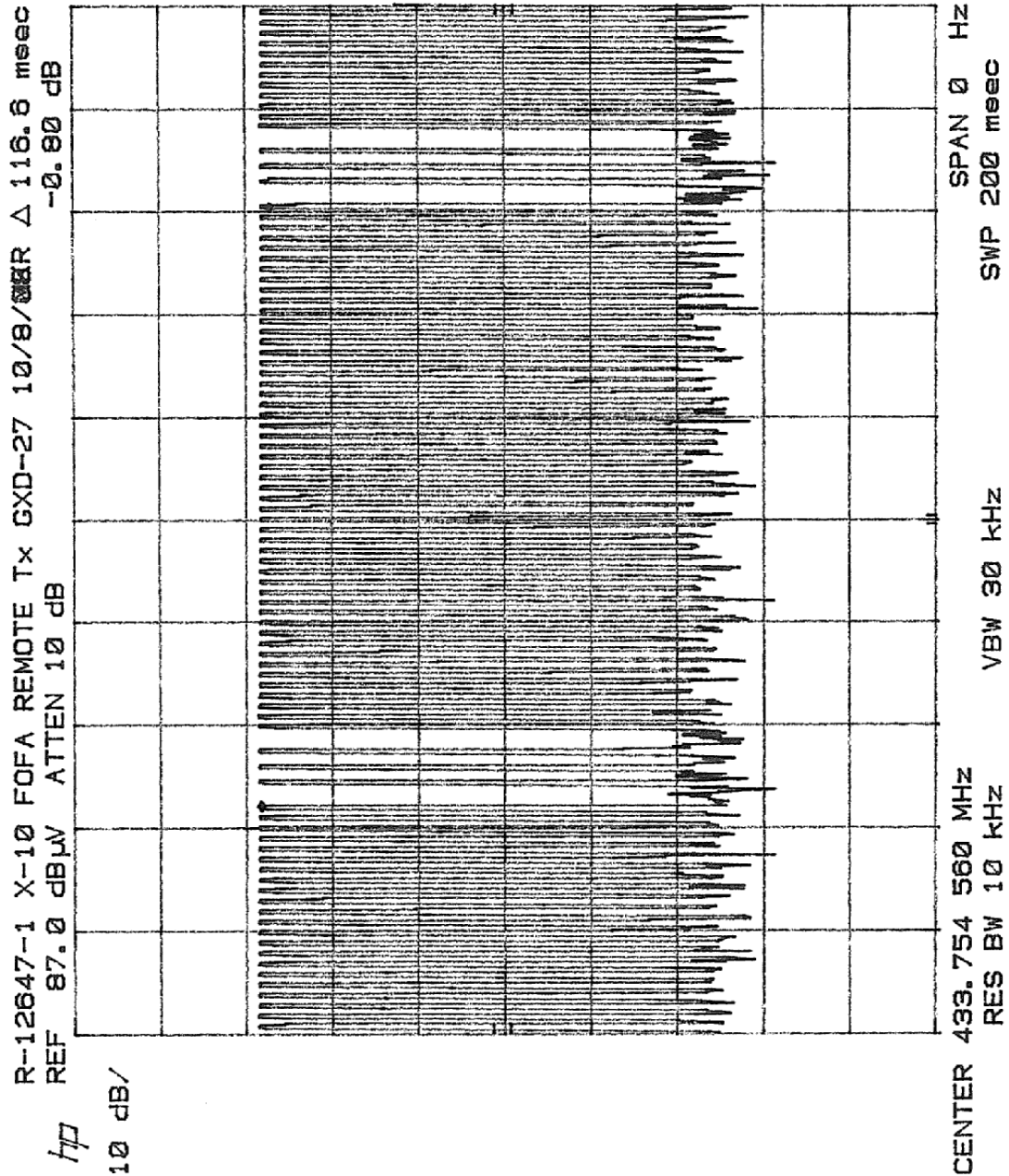
**Test Method:** FCC Part 15.35, Duty Cycle Determination.

**Notes:** Measurement of 1 small pulse = 460  $\mu$ Sec.

Measurements of 53 small pulses = 33(460 $\mu$ Sec) = 24.38mSec.

**FCC ID.:** B4SGXD-27

Customer	X-10 (USA), Inc.		
Test Sample	Eyeglasses FOFA Remote		
Model No.:	GXD-27		
Date: October 8, 2008	Tech: R.Soodoo	Sheet 3 of 4	



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

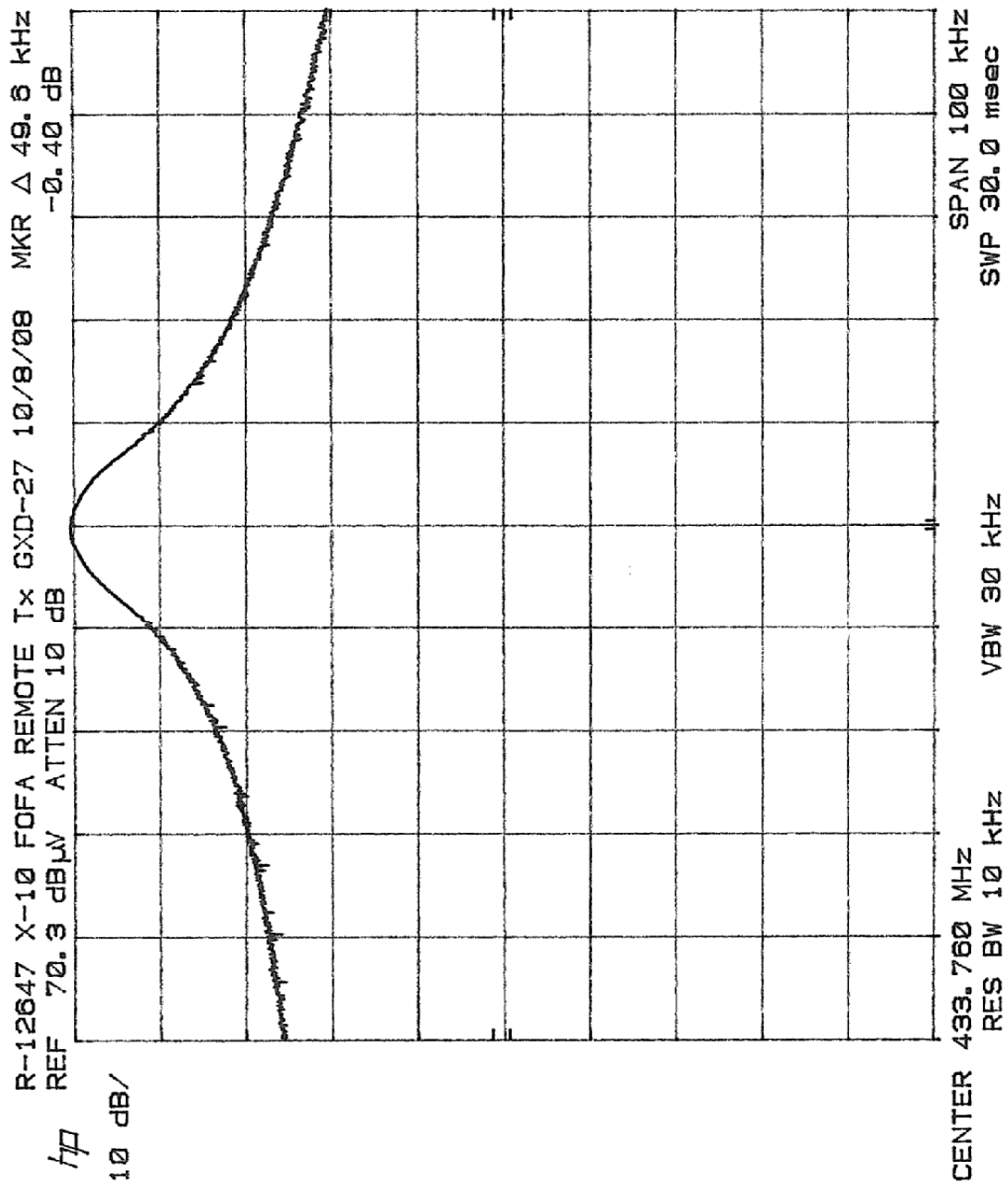
**Notes:** Duty cycle = (1) (1.34 mSec) + (53) (460  $\mu$ Sec) = 25.72 mSec.

Duty cycle = (25.72 mSec / 100 = 0.257)  $20 \log 0.257 = -11.8$  dB

**FCC ID.:** B4SGXD-27

Customer	X-10 (USA), Inc.		
Test Sample	Eyeglasses FOFA Remote		
Model No.:	GXD-27		
Date: October 8, 2008	Tech: R.Soodoo	Sheet 4 of 4	

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

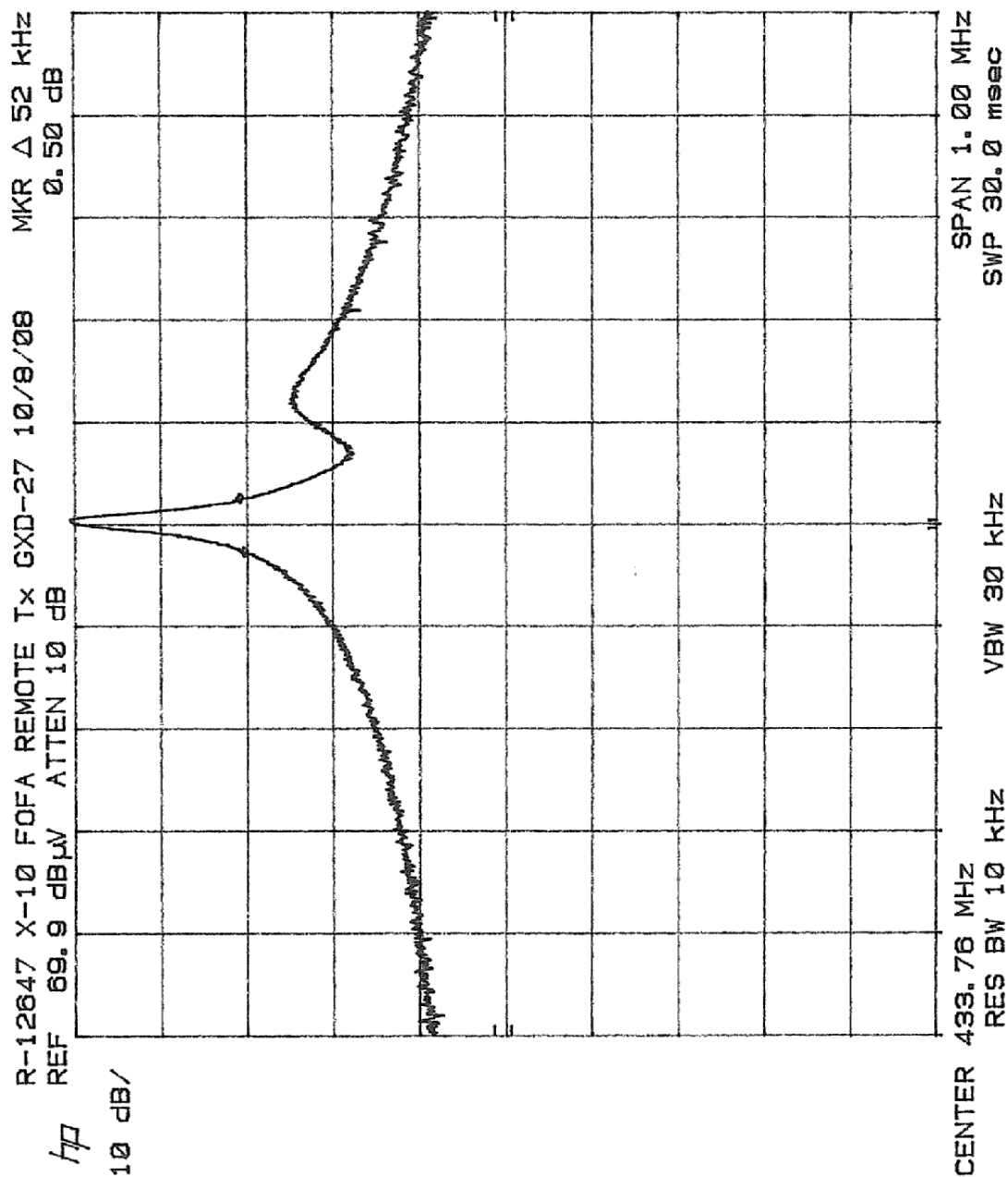


**Test Method:** FCC Part 15, Subpart C, 15.231(c), Occupied Bandwidth.

**Notes:** Occupied Bandwidth measured 49.6 kHz, does not exceed 0.25% of center frequency at the 20 dBc points ( 1.084 MHz)

**FCC ID.:** B4SGXD-27

Customer	X-10 (USA), Inc.		
Test Sample	Eyeglasses FOFA Remote		
Model No.:	GXD-27		
Date: October 8, 2008	Tech: R.Soodoo	Sheet 1 of 2	



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

**Notes:** Occupied Bandwidth measured 52.0 kHz, does not exceed 0.25% of center frequency at the 20 dBc points ( 1.084 MHz)

**FCC ID.:** B4SGXD-27

Customer	X-10 (USA), Inc.		
Test Sample	Eyeglasses FOFA Remote		
Model No.:	GXD-27		
Date: October 8, 2008	Tech: R.Soodoo	Sheet 2 of 2	

**FCC Part 15 Subpart B, Receiver Radiated Spurious Emissions,  
Test Data**

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