

<u>APPLICANT</u>	<u>MANUFACTURER</u>
X-10 USA, Inc. 91 Ruckman Road Closter, NJ 07624	X-10 Electronics Shenzhen Co. Ltd. X-10 Building Labour Industrial District Shenzhen, Xixiang, Bao An Guang Dong, China, 518102

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C

TEST PROCEDURE: ANSI C63.4:1992

TEST SAMPLE DESCRIPTION

BRANDNAME: X-10

MODEL: VT37A FCC ID: B4SVT37A

TYPE: 2.4 GHz FM Transmitter

FREQUENCY RANGE: 2410 to 2472 MHZ

POWER REQUIREMENTS: 5 VDC and 12 VDC derived from an AC Adapter, Model, NO-HKSD-01104, and Manufactured by Hon-Kwang

TESTS PERFORMED

- 15.249(a) Radiated Emissions, Fundamental and Harmonics
- 15.294(c) Occupied Bandwidth
- 15.249(c)/15.209 Radiated Emissions, Spurious Case
- 15.207(a) Conducted Emissions

REPORT OF MEASUREMENTS

Applicant: X-10 (USA), Inc.

Device: 2.4 GHz Transmitter

FCC ID: B4SVT37A

Power Requirements: 5 VDC and 12 VDC derived from an AC Adapter, Model, NO-HKSD-01104, and Manufactured by Hon-Kwang

Applicable Rule Section: Part 15, Subpart C, Section 15.249

TEST RESULTS

- 15.207(a): The radio frequency voltage that was conducted back on to the AC power line on any frequency/frequencies within the bandwidth of 450kHz to 30MHz did not exceed 250 microvolts.
- 15.249(a): The unit operates in the 2.4 to 2.4835 GHz band at 4 frequencies as follows:
1) Channel A, 2.410 GHz 2) Channel B, 2.433 GHz
3) Channel C, 2.453 GHz 4) Channel D, 2.472 GHz
Field strength readings were taken at 3 frequencies (low, middle and high) because the device operates over a range greater than 10 MHz
The field strength of the fundamental did not exceed 50 milliV/M AVERAGE. The field strength of the harmonics did not exceed 500 microV/M AVERAGE.
- 15.249(b): Field strength readings were taken at three meters unless otherwise noted.
- 15.249(c): Emissions radiated outside band edges were greater than 50 dB below the specified the level of the fundamental or met the general radiated emission requirements of 15.209(a), whichever provided the lesser attenuation.
- 15.249(d): The peak field strength of any emission did not exceed the maximum permitted average field strength by more than 20dB under any condition of modulation.

EXHIBIT 4

Radiated Emissions, Fundamental & Harmonics

Para. 15.249(a)

(See separate e-file attachments named REFundHarm.doc)

EXHIBIT 4

Spurious Emissions

Para. 15.249(c)

(See separate e-file attachment RESpur.doc)

EXHIBIT 4

Occupied Bandwidth

Para. 15.249(c)

(See separate e-file attachment named Occbw.pdf)

EXHIBIT 4

Conducted Emissions

Para. 15.207(a)

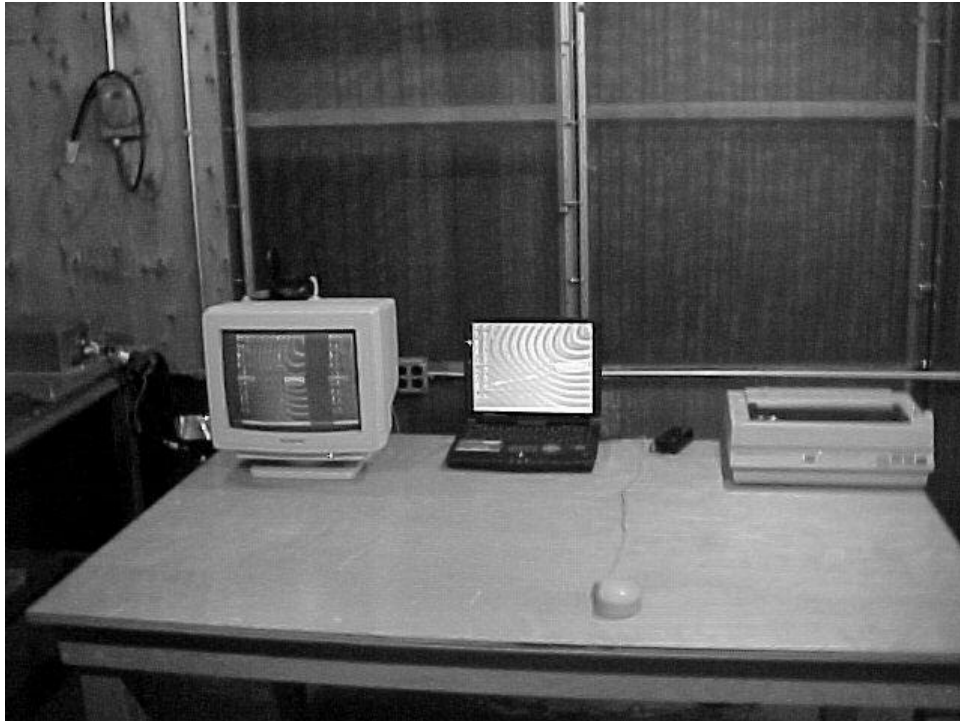
(See separate e-file attachment named CEdata.pdf)

EQUIPMENT LIST

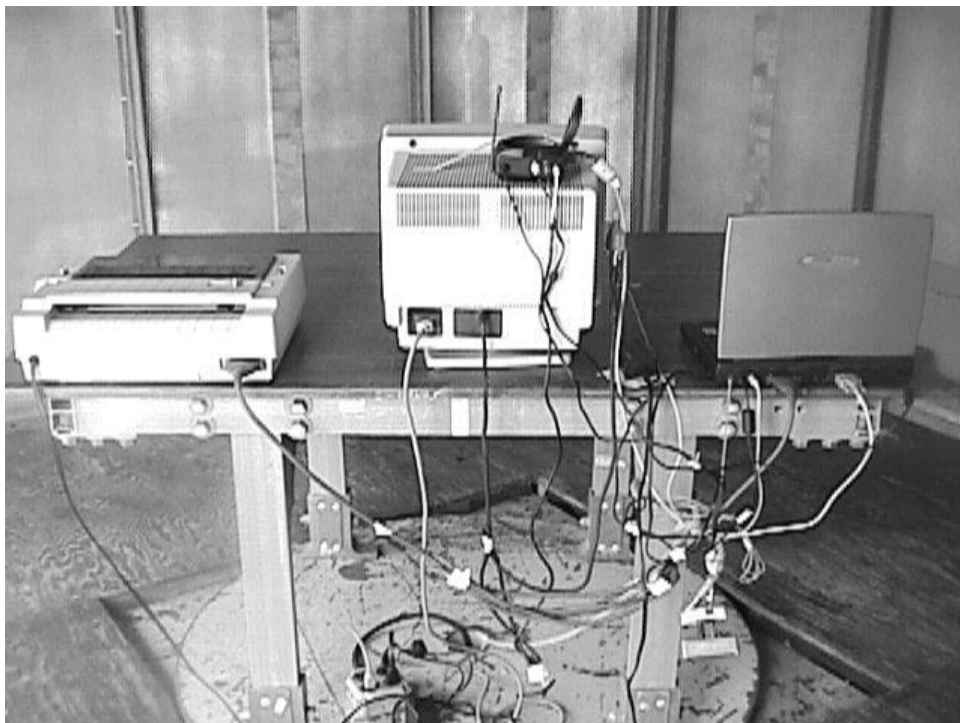
FCC 15.249 Compliance Testing

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
078	LISN	Solar Electronics	10 kHz - 30 MHz	8028-50-TS24BNC	5/2/01	5/2/02
091	Shielded Enclosure	Retlif	10 kHz - 1 GHz	Room 6	7/21/00	7/21/01
128C	Double Ridge Guide	Eaton Corporation	1 GHz - 18 GHz	96001	9/18/00	9/18/01
129E	High Gain Horn Antenna	Microlab/FXR	18 GHz - 26.5 GHz	K638A	9/18/00	9/18/01
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB		BPA-1000	6/13/00
6/13/01						
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/5/01	3/5/02
202	Transient Limiter	Hewlett Packard	.009 MHz - 200 MHz	11947A	7/24/00	7/24/01
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/13/00	6/13/01
420	Amplifier	Hewlett Packard	2.0 GHz - 18 GHz	11975A	9/29/00	9/29/01
421	Harmonic Mixer	Hewlett Packard	18 GHz - 26.5 GHz	11970K	9/29/00	9/29/01
456	LISN	Solar Electronics	DC - 60 Hz	9409-50-R-24	7/26/00	7/26/01
513	LISN	Solar Electronics	10 kHz - 30 MHz	8028-50-TS24BNC	5/1/01	5/1/02
523	Biconilog	Electro-Mechanics	26 - 2000 MHz	3142B	6/8/00	6/8/01
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	6/16/99	6/16/01
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	2/27/01	2/27/02
7016	EMC Analyzer	Hewlett Packard	9kHz - 1.8GHz	8591EM	3/6/01	3/6/02
712	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	3/1/00	7/1/01

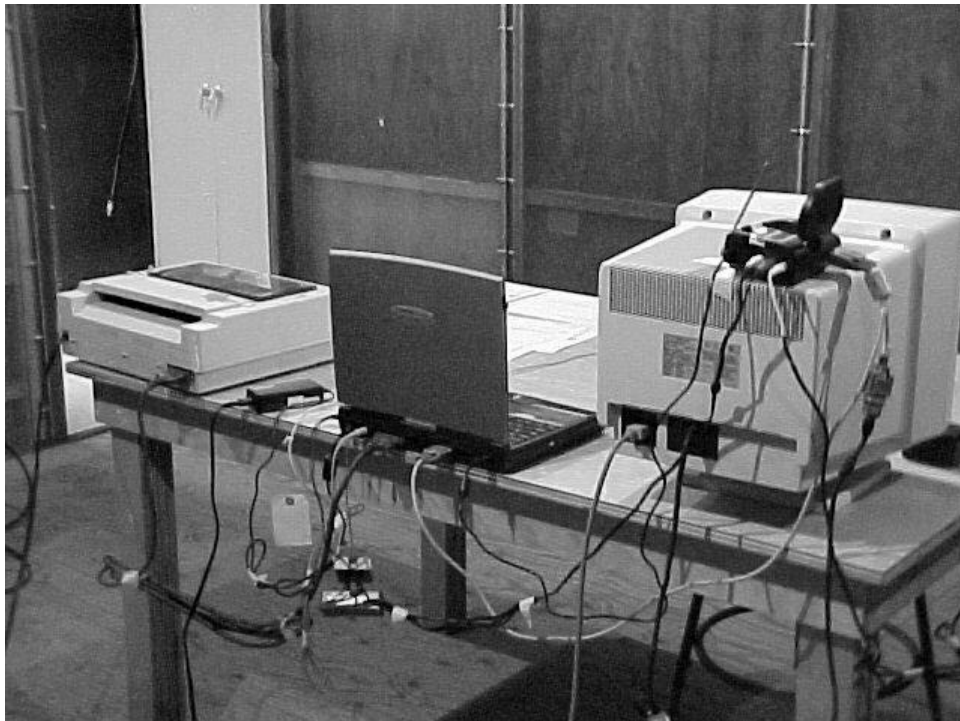
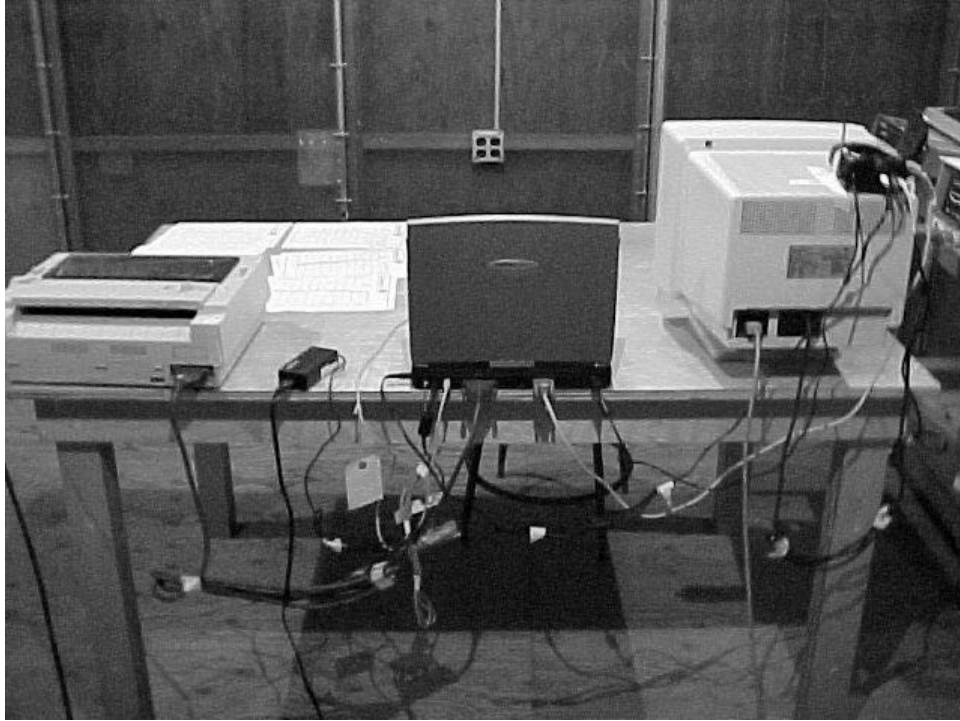
Test Setup Photographs



Test Setup Photographs



Test Setup Photographs



Test Setup Photographs



Test Method:		FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions					
Customer:		X-10 USA			Job No.		R-9037-1
Test Sample:		2.4GHz FM Transmitter			Paragraph:		15.249
Model No.:		VT37A			FCC ID:		B4SVT37A
Operating Mode:		Continuously Transmitting a 2.410 GHz Signal. Channel A					
Technician:		Peter Lananna			Date:		June 5, 2001
Notes:		Test Distance: 3 Meters Detector: Peak, Unless otherwise specified Channel A					
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit
GHz	(V/H)/Meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m
2.410	H / 2.3	X	80.9	3.0	83.9	15667.5	50000
	H / 2.3	Y	77.1	3.0	80.1	10115.8	
	H / 2.3	Z	76.4	3.0	79.4	9332.5	
	V / 2.3	X	78.9	3.0	81.9	12445.1	
	V / 2.0	Y	75.2	3.0	78.2	8128.3	
2.410	V / 1.8	Z	78.4	3.0	81.4	11749.0	50000
4.820	H / 1.0	X	32.0	-4.1	27.9	24.8*	500
	H / 1.0	Y	32.0	-4.1	27.9	24.8*	
	H / 1.0	Z	32.0	-4.1	27.9	24.8*	
	V / 1.0	X	32.0	-4.1	27.9	24.8*	
	V / 1.0	Y	32.0	-4.1	27.9	24.8*	
4.820	V / 1.0	Z	32.0	-4.1	27.9	24.8*	500
7.230	H / 1.0	X	32.0	-2.0	32.0	39.8*	500
	H / 1.0	Y	32.0	-2.0	30.0	31.6*	
	H / 1.0	Z	32.0	-2.0	30.0	31.6*	
	V / 1.0	X	32.0	-2.0	30.0	31.6*	
	V / 1.0	Y	32.0	-2.0	30.0	31.6*	
7.230	V / 1.0	Z	32.0	-2.0	30.0	31.6*	500
9.640	H / 1.0	X	33.0	-1.9	31.1	35.9*	500
	H / 1.0	Y	33.0	-1.9	31.1	35.9*	
	H / 1.0	Z	33.0	-1.9	31.1	35.9*	
	V / 1.0	X	33.0	-1.9	31.1	35.9*	
	V / 1.0	Y	33.0	-1.9	31.1	35.9*	
9.640	V / 1.0	Z	33.0	-1.9	31.1	35.9*	500
12.05	H / 1.0	X	33.0	3.8	36.8	69.2*	500
	H / 1.0	Y	33.0	3.8	36.8	69.2*	
	H / 1.0	Z	33.0	3.8	36.8	69.2*	
	V / 1.0	X	33.0	3.8	36.8	69.2*	
	V / 1.0	Y	33.0	3.8	36.8	69.2*	
12.05	V / 1.0	Z	33.0	3.8	36.8	69.2*	500
	The frequency range was scanned from 30 MHz to 25GHz. All emissions not recorded were more						
	Than 10 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements (Minimum system sensitivity)						



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:		FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions						
Customer:		X-10 USA			Job No.		R-9037-1	
Test Sample:		2.4GHz FM Transmitter			Paragraph:		15.249	
Model No.:		VT37A			FCC ID:		B4SVT37A	
Operating Mode:		Continuously Transmitting a 2.410 GHz Signal. Channel A						
Technician:		Peter Lananna			Date:		June 5, 2001	
Notes:		Test Distance: 3 Meters **=Readings taken @ 1 meter, correction factors includes test distance correction. Detector: Peak, Unless otherwise specified Channel A						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit	
GHz	(V/H)-Meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m	
14.46	H / 1.0	X	33.0	10.8	43.8	154.9*	500	
	H / 1.0	Y	33.0	10.8	43.8	154.9*		
	H / 1.0	Z	33.0	10.8	43.8	154.9*		
	V / 1.0	X	33.0	10.8	43.8	154.9*		
	V / 1.0	Y	33.0	10.8	43.8	154.9*		
14.46	V / 1.0	Z	33.0	10.8	43.8	154.9*	500	
16.87	H / 1.0	X	33.0	15.5	48.5	266.1*	500	
	H / 1.0	Y	33.0	15.5	48.5	266.1*		
	H / 1.0	Z	33.0	15.5	48.5	266.1*		
	V / 1.0	X	33.0	15.5	48.5	266.1*		
	V / 1.0	Y	33.0	15.5	48.5	266.1*		
16.87	V / 1.0	Z	33.0	15.5	48.5	266.1*	500	
19.28	H / 1.0	X	30.0	22.9	52.9	441.6**	500	
	H / 1.0	Y	30.0	22.9	52.9	441.6**		
	H / 1.0	Z	30.0	22.9	52.9	441.6**		
	V / 1.0	X	30.0	22.9	52.9	441.6**		
	V / 1.0	Y	30.0	22.9	52.9	441.6**		
19.28	V / 1.0	Z	30.0	22.9	52.9	441.6**	500	
21.69	H / 1.0	X	30.0	23.2	53.2	457.1**	500	
	H / 1.0	Y	30.0	23.2	53.2	457.1**		
	H / 1.0	Z	30.0	23.2	53.2	457.1**		
	V / 1.0	X	30.0	23.2	53.2	457.1**		
	V / 1.0	Y	30.0	23.2	53.2	457.1**		
21.69	V / 1.0	Z	30.0	23.2	53.2	457.1**	500	
24.10	H / 1.0	X	30.0	23.4	53.4	467.7**	500	
	H / 1.0	Y	30.0	23.4	53.4	467.7**		
	H / 1.0	Z	30.0	23.4	53.4	467.7**		
	V / 1.0	X	30.0	23.4	53.4	467.7**		
	V / 1.0	Y	30.0	23.4	53.4	467.7**		
24.10	V / 1.0	Z	30.0	23.4	53.4	467.7**	500	
	The frequency range was scanned from 30 MHz to 25GHz. All emissions not recorded were more							
	Than 10 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							
	*=Noise Floor Measurements (Minimum system sensitivity)							



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:	FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions						
Customer:	X-10 USA				Job No.	R-9037-1	
Test Sample:	2.4GHz FM Transmitter				Paragraph:	15.249	
Model No.:	VT37A				FCC ID:	B4SVT36A	
Operating Mode:	Continuously Transmitting a 2.433 GHz Signal. Channel B						
Technician:	Peter Lananna				Date:	June 5, 2001	
Notes:	Test Distance: 3 Meters Detector: Peak, Unless otherwise specified						
	Channel B						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit
GHz	(V/H)/Meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m
2.433	H / 2.0	X	81.1	3.0	84.1	16032.5	50000
	H / 2.0	Y	76.9	3.0	79.9	9885.5	
	H / 2.5	Z	79.1	3.0	82.1	12735.0	
	V / 1.8	X	78.8	3.0	81.8	12302.7	
	V / 2.0	Y	74.2	3.0	77.2	7244.4	
2.433	V / 1.8	Z	78.5	3.0	81.5	11885.0	50000
4866	H / 1.0	X	32.0	-4.1	27.9	24.8*	500
	H / 1.0	Y	32.0	-4.1	27.9	24.8*	
	H / 1.0	Z	32.0	-4.1	27.9	24.8*	
	V / 1.0	X	32.0	-4.1	27.9	24.8*	
	V / 1.0	Y	32.0	-4.1	27.9	24.8*	
4.866	V / 1.0	Z	32.0	-4.1	27.9	24.8*	500
7.299	H / 1.0	X	32.0	-2.0	32.0	39.8*	500
	H / 1.0	Y	32.0	-2.0	30.0	31.6*	
	H / 1.0	Z	32.0	-2.0	30.0	31.6*	
	V / 1.0	X	32.0	-2.0	30.0	31.6*	
	V / 1.0	Y	32.0	-2.0	30.0	31.6*	
7.299	V / 1.0	Z	32.0	-2.0	30.0	31.6*	500
9.732	H / 1.0	X	33.0	-1.9	31.1	35.9*	500
	H / 1.0	Y	33.0	-1.9	31.1	35.9*	
	H / 1.0	Z	33.0	-1.9	31.1	35.9*	
	V / 1.0	X	33.0	-1.9	31.1	35.9*	
	V / 1.0	Y	33.0	-1.9	31.1	35.9*	
9.732	V / 1.0	Z	33.0	-1.9	31.1	35.9*	500
12.17	H / 1.0	X	33.0	3.8	36.8	69.2*	500
	H / 1.0	Y	33.0	3.8	36.8	69.2*	
	H / 1.0	Z	33.0	3.8	36.8	69.2*	
	V / 1.0	X	33.0	3.8	36.8	69.2*	
	V / 1.0	Y	33.0	3.8	36.8	69.2*	
12.17	V / 1.0	Z	33.0	3.8	36.8	69.2*	500
	The frequency range was scanned from 30 MHz to 25GHz. All emissions not recorded were more						
	Than 10 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements (Minimum system sensitivity)						



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:		FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions						
Customer:		X-10 USA			Job No.		R-9037-1	
Test Sample:		2.4GHz FM Transmitter			Paragraph:		15.249	
Model No.:		VT37A			FCC ID:		B4SVT37A	
Operating Mode:		Continuously Transmitting a 2.433 GHz Signal. Channel B						
Technician:		Peter Lananna			Date:		June 5, 2001	
Notes:		Test Distance: 3 Meters **=Readings taken @ 1 meter, correction factors includes test distance correction. Detector: Peak, Unless otherwise specified Channel B						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit	
GHz	(V/H)-Meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m	
14.60	H / 1.0	X	33.0	10.8	43.8	154.9*	500	
	H / 1.0	Y	33.0	10.8	43.8	154.9*		
	H / 1.0	Z	33.0	10.8	43.8	154.9*		
	V / 1.0	X	33.0	10.8	43.8	154.9*		
	V / 1.0	Y	33.0	10.8	43.8	154.9*		
14.60	V / 1.0	Z	33.0	10.8	43.8	154.9*	500	
17.03	H / 1.0	X	33.0	15.5	48.5	266.1*	500	
	H / 1.0	Y	33.0	15.5	48.5	266.1*		
	H / 1.0	Z	33.0	15.5	48.5	266.1*		
	V / 1.0	X	33.0	15.5	48.5	266.1*		
	V / 1.0	Y	33.0	15.5	48.5	266.1*		
17.03	V / 1.0	Z	33.0	15.5	48.5	266.1*	500	
19.46	H / 1.0	X	30.0	22.9	52.9	441.6**	500	
	H / 1.0	Y	30.0	22.9	52.9	441.6**		
	H / 1.0	Z	30.0	22.9	52.9	441.6**		
	V / 1.0	X	30.0	22.9	52.9	441.6**		
	V / 1.0	Y	30.0	22.9	52.9	441.6**		
19.46	V / 1.0	Z	30.0	22.9	52.9	441.6**	500	
21.90	H / 1.0	X	30.0	23.2	53.2	457.1**	500	
	H / 1.0	Y	30.0	23.2	53.2	457.1**		
	H / 1.0	Z	30.0	23.2	53.2	457.1**		
	V / 1.0	X	30.0	23.2	53.2	457.1**		
	V / 1.0	Y	30.0	23.2	53.2	457.1**		
21.90	V / 1.0	Z	30.0	23.2	53.2	457.1**	500	
24.33	H / 1.0	X	30.0	23.4	53.4	467.7**	500	
	H / 1.0	Y	30.0	23.4	53.4	467.7**		
	H / 1.0	Z	30.0	23.4	53.4	467.7**		
	V / 1.0	X	30.0	23.4	53.4	467.7**		
	V / 1.0	Y	30.0	23.4	53.4	467.7**		
24.33	V / 1.0	Z	30.0	23.4	53.4	467.7**	500	
	The frequency range was scanned from 30 MHz to 25GHz. All emissions not recorded were more							
	Than 10 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							
	*=Noise Floor Measurements (Minimum system sensitivity)							



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:	FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions						
Customer:	X-10 USA				Job No.	R-9037-1	
Test Sample:	2.4GHz FM Transmitter				Paragraph:	15.249	
Model No.:	VT37A				FCC ID:	B4SVT37A	
Operating Mode:	Continuously Transmitting a 2.472 GHz Signal. Channel D						
Technician:	Peter Lananna				Date:	June 5, 2001	
Notes:	Test Distance: 3 Meters						
	Detector: Peak, Unless otherwise specified				Channel D		
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit
GHz	(V/H)/Meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m
2.472	H / 1.8	X	82.2	3.0	85.2	18197.0	50000
	H / 1.8	Y	80.9	3.0	83.9	15667.5	
	H / 2.5	Z	80.4	3.0	83.4	14791.1	
	V / 1.3	X	82.0	3.0	85.0	17782.8	
	V / 1.8	Y	78.3	3.0	81.3	11614.5	
2.472	V / 2.3	Z	79.2	3.0	82.2	12882.5	50000
4.944	H / 1.0	X	32.0	-4.1	27.9	24.8*	500
	H / 1.0	Y	32.0	-4.1	27.9	24.8*	
	H / 1.0	Z	32.0	-4.1	27.9	24.8*	
	V / 1.0	X	32.0	-4.1	27.9	24.8*	
	V / 1.0	Y	32.0	-4.1	27.9	24.8*	
4.944	V / 1.0	Z	32.0	-4.1	27.9	24.8*	500
7.416	H / 1.0	X	32.0	-2.0	32.0	39.8*	500
	H / 1.0	Y	32.0	-2.0	30.0	31.6*	
	H / 1.0	Z	32.0	-2.0	30.0	31.6*	
	V / 1.0	X	32.0	-2.0	30.0	31.6*	
	V / 1.0	Y	32.0	-2.0	30.0	31.6*	
7.416	V / 1.0	Z	32.0	-2.0	30.0	31.6*	500
9.888	H / 1.0	X	33.0	-1.9	31.1	35.9*	500
	H / 1.0	Y	33.0	-1.9	31.1	35.9*	
	H / 1.0	Z	33.0	-1.9	31.1	35.9*	
	V / 1.0	X	33.0	-1.9	31.1	35.9*	
	V / 1.0	Y	33.0	-1.9	31.1	35.9*	
9.888	V / 1.0	Z	33.0	-1.9	31.1	35.9*	500
12.36	H / 1.0	X	33.0	3.8	36.8	69.2*	500
	H / 1.0	Y	33.0	3.8	36.8	69.2*	
	H / 1.0	Z	33.0	3.8	36.8	69.2*	
	V / 1.0	X	33.0	3.8	36.8	69.2*	
	V / 1.0	Y	33.0	3.8	36.8	69.2*	
12.36	V / 1.0	Z	33.0	3.8	36.8	69.2*	500
	The frequency range was scanned from 30 MHz to 25GHz. All emissions not recorded were more						
	Than 10 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.						
	*=Noise Floor Measurements (Minimum system sensitivity)						



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:		FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions						
Customer:		X-10 USA			Job No.		R-9037-1	
Test Sample:		2.4GHz FM Transmitter			Paragraph:		15.249	
Model No.:		VT37A			FCC ID:		B4SVT37A	
Operating Mode:		Continuously Transmitting a 2.472 GHz Signal. Channel D						
Technician:		Peter Lananna			Date:		June 5, 2001	
Notes:		Test Distance: 3 Meters **=Readings taken @ 1 meter, correction factors includes test distance correction. Detector: Peak, Unless otherwise specified Channel D						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit	
GHz	(V/H)-Meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m	
14.83	H / 1.0	X	33.0	10.8	43.8	154.9*	500	
	H / 1.0	Y	33.0	10.8	43.8	154.9*		
	H / 1.0	Z	33.0	10.8	43.8	154.9*		
	V / 1.0	X	33.0	10.8	43.8	154.9*		
	V / 1.0	Y	33.0	10.8	43.8	154.9*		
14.83	V / 1.0	Z	33.0	10.8	43.8	154.9*	500	
17.30	H / 1.0	X	33.0	15.5	48.5	266.1*	500	
	H / 1.0	Y	33.0	15.5	48.5	266.1*		
	H / 1.0	Z	33.0	15.5	48.5	266.1*		
	V / 1.0	X	33.0	15.5	48.5	266.1*		
	V / 1.0	Y	33.0	15.5	48.5	266.1*		
17.30	V / 1.0	Z	33.0	15.5	48.5	266.1*	500	
19.78	H / 1.0	X	30.0	22.9	52.9	441.6**	500	
	H / 1.0	Y	30.0	22.9	52.9	441.6**		
	H / 1.0	Z	30.0	22.9	52.9	441.6**		
	V / 1.0	X	30.0	22.9	52.9	441.6**		
	V / 1.0	Y	30.0	22.9	52.9	441.6**		
19.78	V / 1.0	Z	30.0	22.9	52.9	441.6**	500	
22.25	H / 1.0	X	30.0	23.2	53.2	457.1**	500	
	H / 1.0	Y	30.0	23.2	53.2	457.1**		
	H / 1.0	Z	30.0	23.2	53.2	457.1**		
	V / 1.0	X	30.0	23.2	53.2	457.1**		
	V / 1.0	Y	30.0	23.2	53.2	457.1**		
22.25	V / 1.0	Z	30.0	23.2	53.2	457.1**	500	
24.72	H / 1.0	X	30.0	23.4	53.4	467.7**	500	
	H / 1.0	Y	30.0	23.4	53.4	467.7**		
	H / 1.0	Z	30.0	23.4	53.4	467.7**		
	V / 1.0	X	30.0	23.4	53.4	467.7**		
	V / 1.0	Y	30.0	23.4	53.4	467.7**		
24.72	V / 1.0	Z	30.0	23.4	53.4	467.7**	500	
	The frequency range was scanned from 30 MHz to 25GHz. All emissions not recorded were more							
	Than 10 dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							
	*=Noise Floor Measurements (Minimum system sensitivity)							



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:	FCC Part 15 Radiated Emissions Spurious Case, 30 MHz to 25 GHz, Paragraph 15.209(a)		
Customer:	X-10 (USA)	Job No.	R-9037-1
Test Sample:	2.4GHz FM Transmitter		
Model No.:	VT37A	FCC ID:	B4SVT37A
Operating Mode:	Continuously transmitting an FM signal at 2.410 GHz. Channel A		
Technician:	Peter Lananna	Date:	June 5, 2001

Notes: Test Distance: 3 Meters Temp:28C Humidity:21%
 Detector: Quasi-Peak below 1 GHz, Peak above 1 GHz

Test Freq.	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
33.0	V/1.0	225	28	-3.1	24.9	17.6	
36.5	V/1.0	180	29	-5.1	23.9	15.7	
44.5	V/1.0	180	37	-8.9	28.1	25.4	
48.0	V/1.0	180	43	-9.7	33.3	46.2	
54.1	V/1.0	180	39	-10.8	28.2	25.7	
83.9	V/1.0	112	36	-12.1	23.9	15.7	
88.00							100
88.00							150
100.3	V/1.0	157	45	-10.3	34.7	54.3	
109.4	V/1.0	180	33	-10.4	22.6	13.5	
118.6	V/1.0	157	32	-11.0	21.0	11.2	
124.9	V/1.0	338	30	-11.6	18.4	8.3	
130.0	V/1.0	135	33	-11.7	21.3	11.6	
144.2	H/1.0	022	42	-10.7	31.3	36.7	
216.00							150
216.00							200
236.8	V/1.5	180	31	-6.4	24.6	17.0	

315.1	V/1.3	180	47	-3.8	43.2	144.5	
394.3	V/1.0	157	40	-1.4	38.6	85.1	
401.8	V/1.0	180	38	-1.3	36.7	68.4	
458.0	V/1.0	022	32	-0.5	31.5	37.6	
585.2	V/1.0	135	34	2.6	36.6	67.6	
627.0	H/1.3	135	41	4.1	45.1	179.9	
710.8	V/1.0	090	37	5.5	42.5	133.4	
960.00							200
960.00							500
1204.0	V/1.8	135	56	-3.3	52.7	431.5	
2400.0	V/1.5	157	34	3.0	37.0	70.8	
25000.00							500

The EUT was scanned from 30 MHz to 25 GHz

The emissions observed from the EUT do not exceed the specified limits. Emissions not recorded were more than 10dB under the specified limit



Retlif Testing Laboratories

Retlif Job Number R-9037-1

Test Method:	FCC Part 15 Radiated Emissions Spurious Case, 30 MHz to 25 GHz, Paragraph 15.209(a)		
Customer:	X-10 (USA)	Job No.	R-9037-1
Test Sample:	2.4GHz FM Transmitter		
Model No.:	VT37A	FCC ID:	B4SVT37A
Operating Mode:	Continuously transmitting an FM signal at 2.433 GHz. Channel B		
Technician:	Peter Lananna	Date:	June 5, 2001

Notes: Test Distance: 3 Meters Temp:28C Humidity:21%
 Detector: Quasi-Peak below 1 GHz, Peak above 1 GHz

Test Freq.	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
33.0	V/1.0	225	28	-3.1	24.9	17.6	
36.5	V/1.0	180	29	-5.1	23.9	15.7	
44.5	V/1.0	180	37	-8.9	28.1	25.4	
48.0	V/1.0	180	43	-9.7	33.3	46.2	
54.1	V/1.0	180	39	-10.8	28.2	25.7	
83.9	V/1.0	112	36	-12.1	23.9	15.7	
88.00							100
88.00							150
100.3	V/1.0	157	45	-10.3	34.7	54.3	
109.4	V/1.0	180	33	-10.4	22.6	13.5	
118.6	V/1.0	157	32	-11.0	21.0	11.2	
124.9	V/1.0	338	30	-11.6	18.4	8.3	
130.0	V/1.0	135	33	-11.7	21.3	11.6	
144.2	H/1.0	022	42	-10.7	31.3	36.7	
216.00							150
216.00							200
236.8	V/1.5	180	31	-6.4	24.6	17.0	

315.1	V/1.3	180	47	-3.8	43.2	144.5	
394.3	V/1.0	157	40	-1.4	38.6	85.1	
401.8	V/1.0	180	38	-1.3	36.7	68.4	
458.0	V/1.0	022	32	-0.5	31.5	37.6	
585.2	V/1.0	135	34	2.6	36.6	67.6	
627.0	H/1.3	135	41	4.1	45.1	179.9	
710.8	V/1.0	090	37	5.5	42.5	133.4	
960.00							200
960.00							500
1204.0	V/1.8	135	56	-3.3	52.7	431.5	
25000.00							500

The EUT was scanned from 30 MHz to 25 GHz

The emissions observed from the EUT do not exceed the specified limits. Emissions not recorded were more than 10dB under the specified limit



Retlif Testing Laboratories

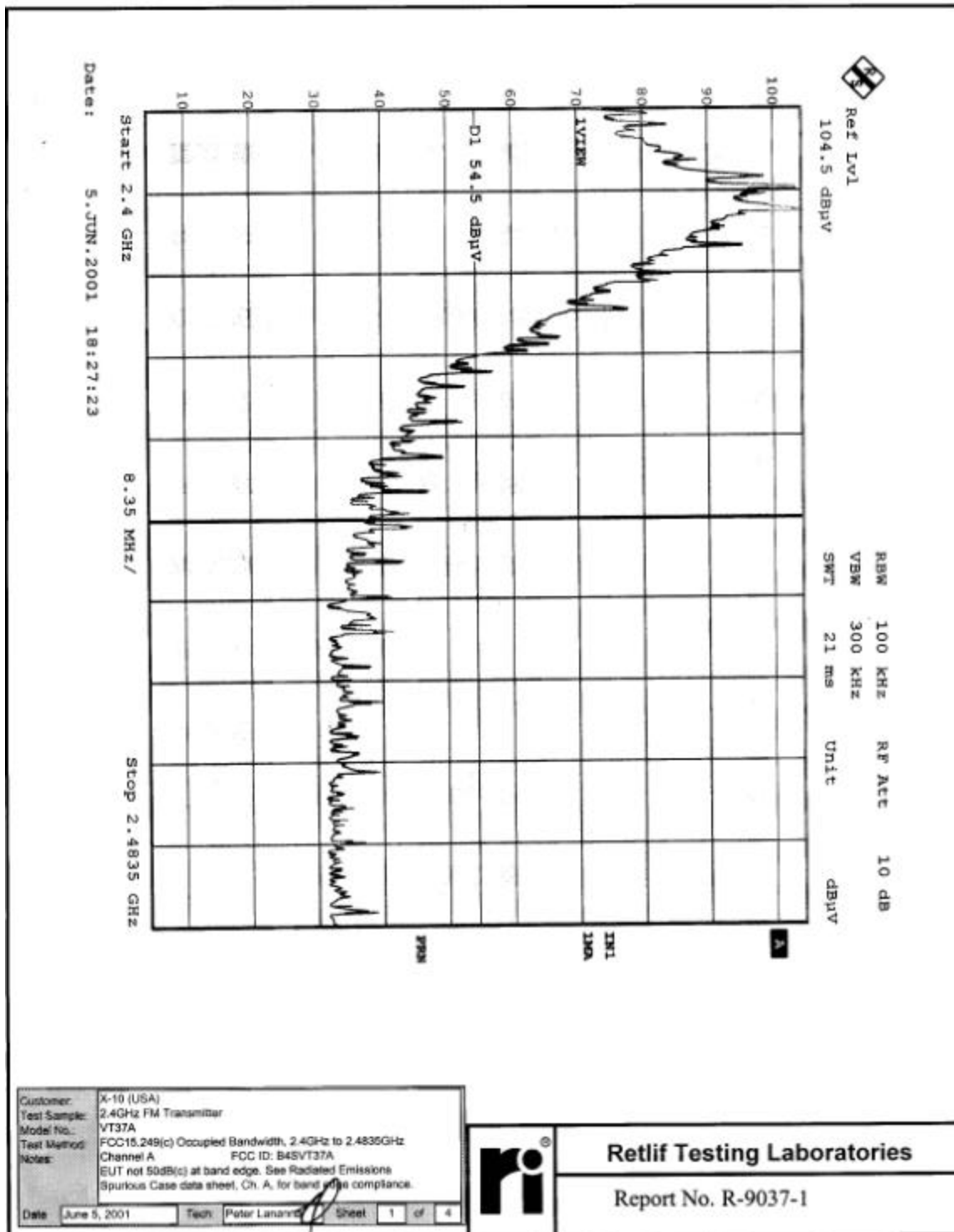
Retlif Job Number R-9037-1

Test Method:	FCC Part 15 Radiated Emissions Spurious Case, 30 MHz to 25 GHz, Paragraph 15.209(a)						
Customer:	X-10 (USA)				Job No.	R-9037-1	
Test Sample:	2.4GHz FM Transmitter						
Model No.:	VT37A				FCC ID:	B4SVT37A	
Operating Mode:	Continuously transmitting an FM signal at 2.472 GHz. Channel D						
Technician:	Peter Lananna				Date:	June 5, 2001	
Notes:	Test Distance: 3 Meters Temp:28C Humidity:21% Detector: Quasi-Peak below 1 GHz, Peak above 1 GHz						
Test Freq.	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
33.0	V/1.0	225	28	-3.1	24.9	17.6	
36.5	V/1.0	180	29	-5.1	23.9	15.7	
44.5	V/1.0	180	37	-8.9	28.1	25.4	
48.0	V/1.0	180	43	-9.7	33.3	46.2	
54.1	V/1.0	180	39	-10.8	28.2	25.7	
83.9	V/1.0	112	36	-12.1	23.9	15.7	
88.00							100
88.00							150
100.3	V/1.0	157	45	-10.3	34.7	54.3	
109.4	V/1.0	180	33	-10.4	22.6	13.5	
118.6	V/1.0	157	32	-11.0	21.0	11.2	
124.9	V/1.0	338	30	-11.6	18.4	8.3	
130.0	V/1.0	135	33	-11.7	21.3	11.6	
144.2	H/1.0	022	42	-10.7	31.3	36.7	
216.00							150
216.00							200
236.8	V/1.5	180	31	-6.4	24.6	17.0	
315.1	V/1.3	180	47	-3.8	43.2	144.5	
394.3	V/1.0	157	40	-1.4	38.6	85.1	
401.8	V/1.0	180	38	-1.3	36.7	68.4	
458.0	V/1.0	022	32	-0.5	31.5	37.6	
585.2	V/1.0	135	34	2.6	36.6	67.6	
627.0	H/1.3	135	41	4.1	45.1	179.9	
710.8	V/1.0	090	37	5.5	42.5	133.4	
960.00							200
960.00							500
1204.0	V/1.8	135	56	-3.3	52.7	431.5	
2483.5	V/1.8	225	50	3.0	53.0	446.7	
25000.00							500
	The EUT was scanned from 30 MHz to 25 GHz						
	The emissions observed from the EUT do not exceed the specified limits. Emissions not recorded						
	were more than 10dB under the specified limit						



Retlif Testing Laboratories

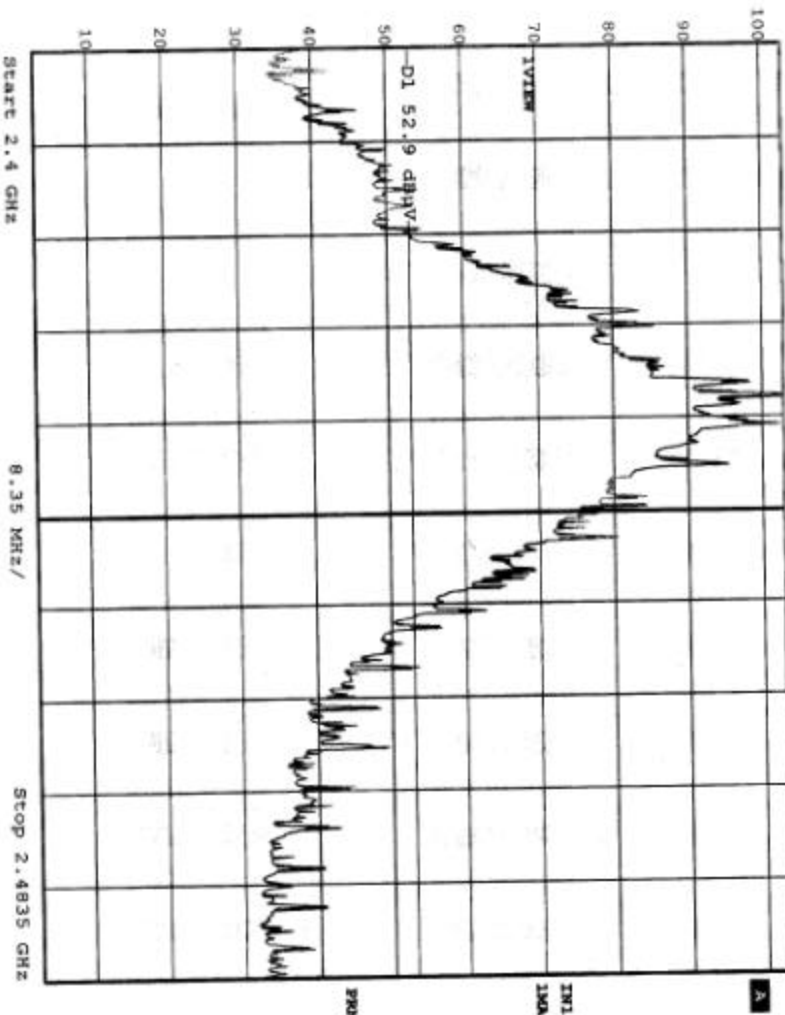
Retlif Job Number R-9037-1





Ref Lvl
102.9 dBuV

RBW 100 kHz RF Att 10 dB
VBW 300 kHz
SWT 21 ms Unit dBuV



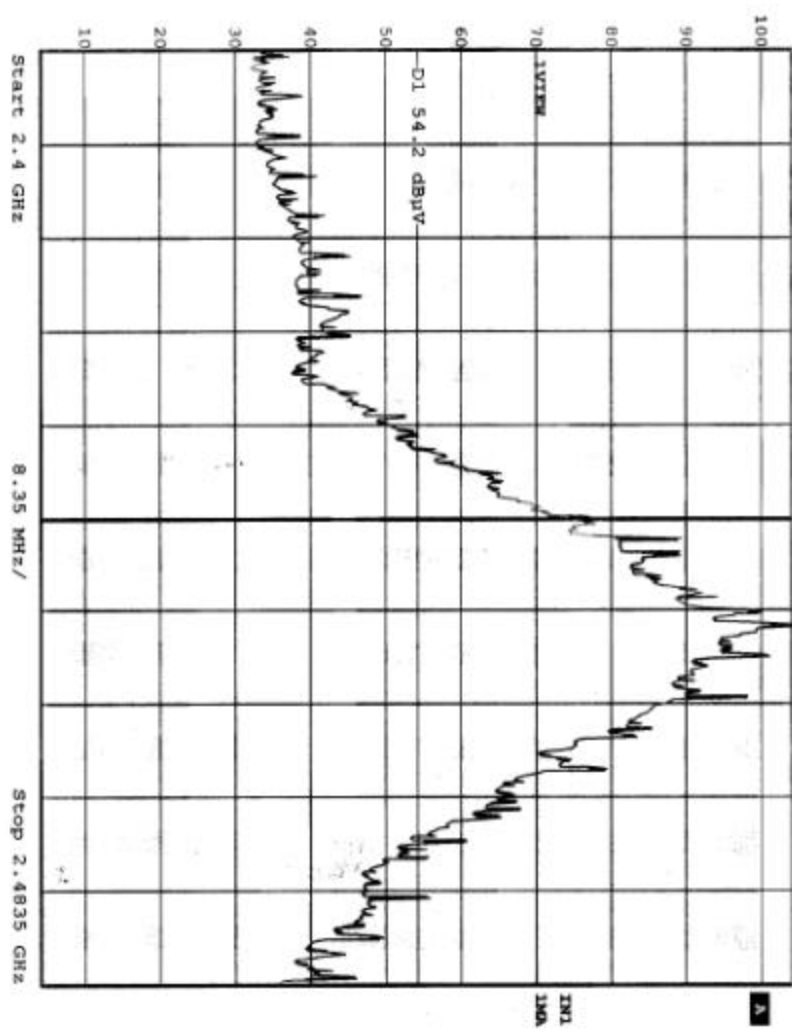
Customer:	X-15 (USA)
Test Sample:	2.4GHz FM Transmitter
Model No.:	VT37A
Test Method:	FCC15.249(c) Occupied Bandwidth, 2.4GHz to 2.4835GHz
Notes:	Channel B FCC ID B45VT37A EUT 50dB(c) at band edge
Date:	June 5, 2001
Tech:	Peter Lanning
Sheet:	2 of 4



Retlif Testing Laboratories

Report No. R-9037-1

Date: 5 JUN 2001 18:03:01



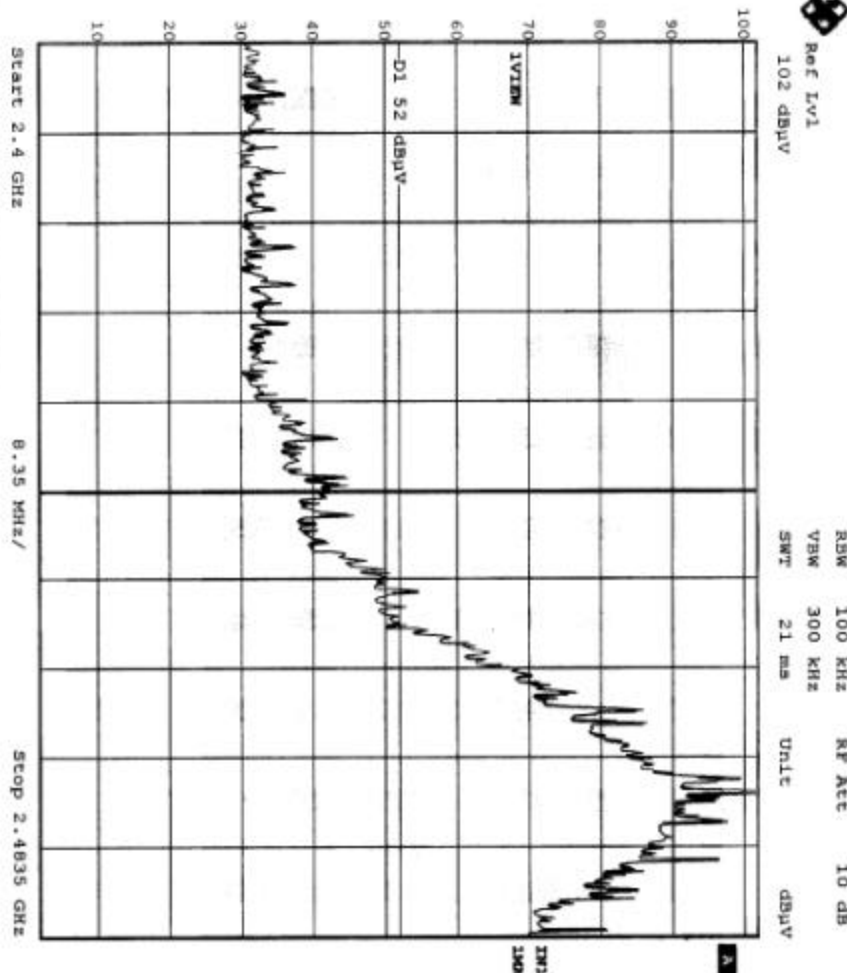
Customer: X-10 (USA)
 Test Sample: 2.4GHz FM Transmitter
 Model No.: VT37A
 Test Method: FCC15.249(c) Occupied Bandwidth, 2.4GHz to 2.4835GHz
 Notes: Channel C
 FCC ID: B4SVT37A
 EUT 500B(c) at band edge

Date: June 5, 2001 Tech: Peter Lannan Sheet 3 of 4



Retlif Testing Laboratories
 Report No. R-9037-1

Date: 5 JUN 2001 18:05:56



Customer: X-10 (USA)
 Test Sample: 2.4GHz FM Transmitter
 Model No.: VT37A
 Test Method: FCC15.249(c) Occupied Bandwidth, 2.4GHz to 2.4835GHz
 Notes: Channel D FCC ID: B4BVT37A
 EUT not 50dB(c) at band edge. See Radiated Emissions
 Spurious Case data sheet, Ch. D, for band edge compliance.

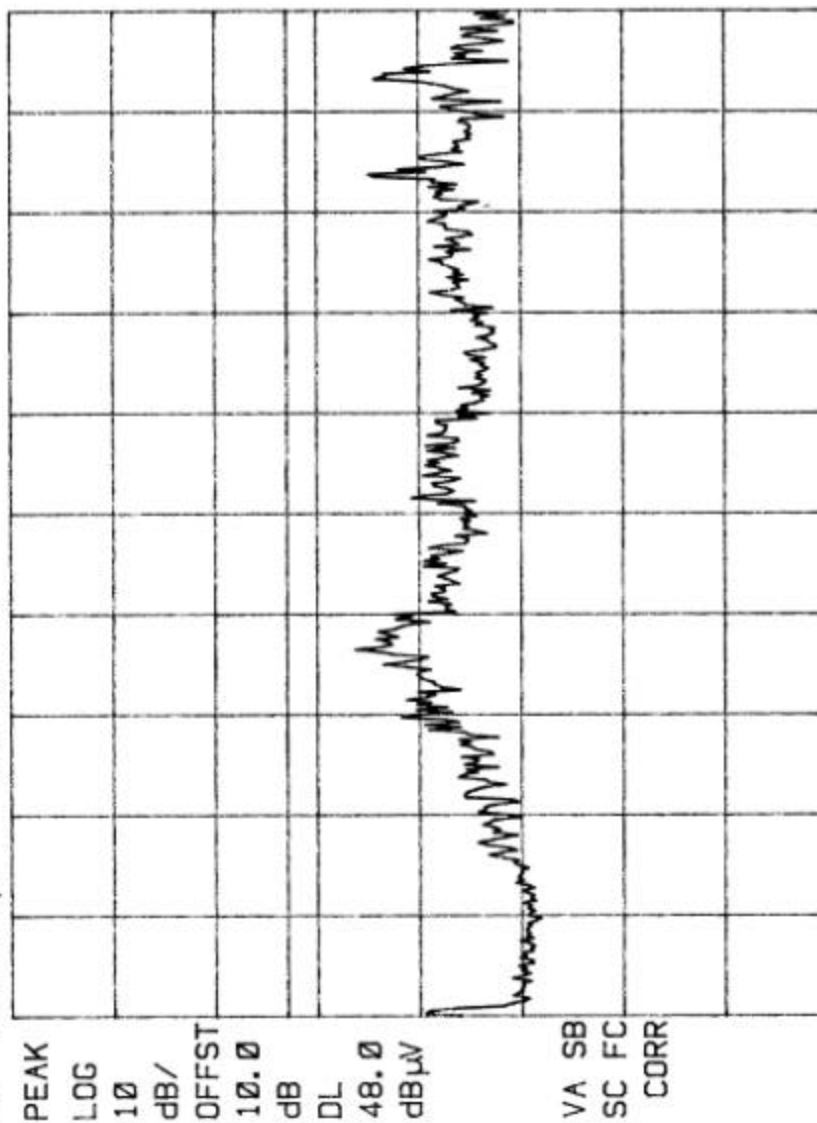
Date: June 5, 2001 Tech: Peter Laramie Sheet: 4 of 4



Retlif Testing Laboratories

Report No. R-9037-1

09:45:22 MAY 31, 2001
 R90 - X10 VT37A Conducted Emissions CH.A LEAD-46+
 REF 75.0 dBμV #AT 10 dB



START 450 kHz STOP 30.00 MHz
 #RES BW 10 kHz #SWP 20.0 sec
 VBW 30 kHz

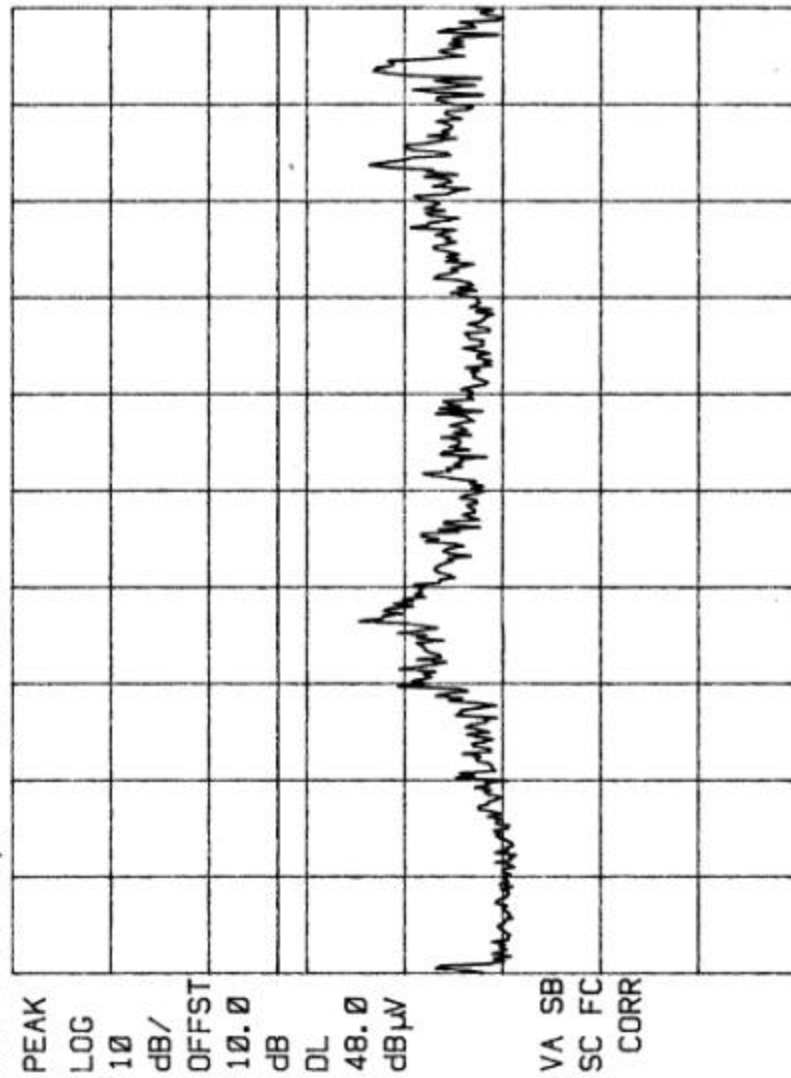
Customer:	X-10 (USA)
Test Sample:	2.4GHz FM Transmitter
Model No.:	VT37A
Test Method:	FCC 15.207(a), Conducted Emissions, 450kHz to 30MHz
Notes:	FCC ID: B45VT37A Channel A
	Lead-HOT
	Detector=Peak
Date:	June 5, 2001
Tech:	Peter Lamas
Sheet:	1 of 6



Retlif Testing Laboratories

Report No. R-9037-1

09:40:06 MAY 31, 2001
 R90 - X10 VT37A Conducted Emissions CH.A LEAD-Neutral
 REF 75.0 dBμV #AT 10 dB



START 450 kHz STOP 30.00 MHz
 #RES BW 10 kHz #SWP 20.0 sec
 VBW 30 kHz

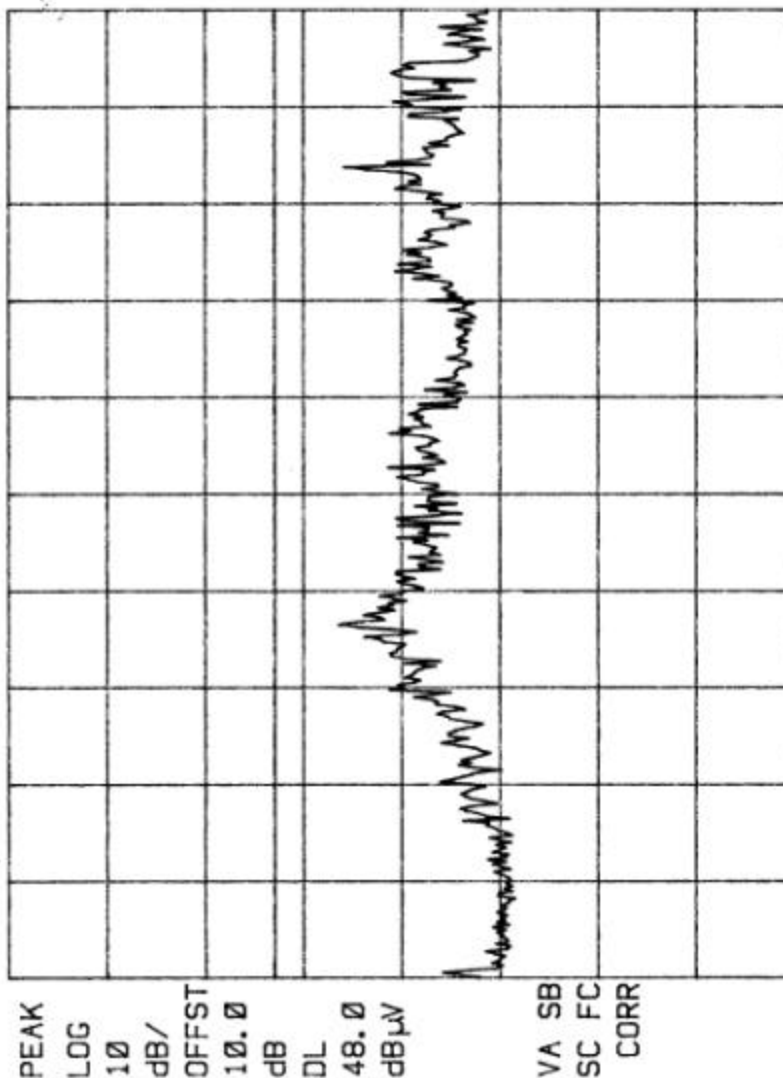
Customer:	X-10 (USA)
Test Sample:	2.4GHz FM Transmitter
Model No.:	VT37A
Test Method:	FCC 15.207(a), Conducted Emissions, 450kHz to 30MHz
Notes:	FCC ID: B4SVT37A Channel A
	Lead-NEUTRAL
	Detector: Peak
Date:	June 5, 2001
Tech:	Peter Lananna
Sheet:	2 of 6



Retlif Testing Laboratories

Report No. R-9037-1

09:49:47 MAY 31, 2001
 R90 - X10 VT37A Conducted Emissions CH3 LEAD-467
 REF 75.0 dBμV #AT 10 dB



START 450 kHz STOP 30.00 MHz
 #RES BW 10 kHz #SWP 20.0 sec
 VBW 30 kHz

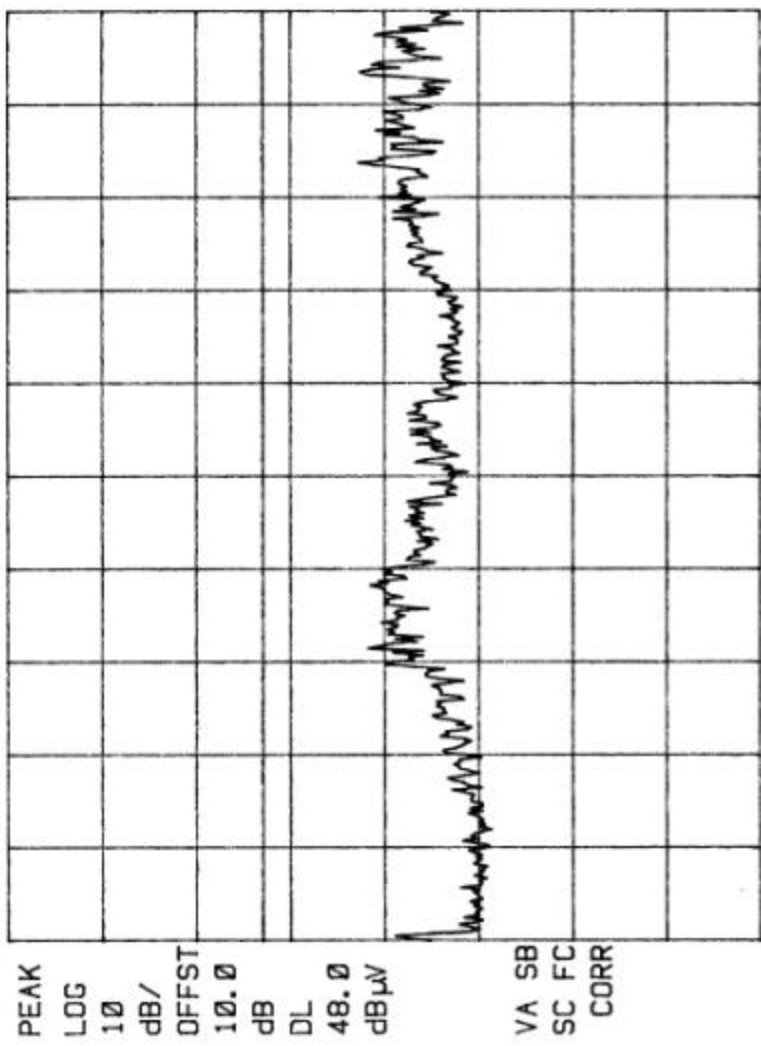
Customer:	X-10 (USA)
Test Sample:	2.4GHz FM Transmitter
Model No.:	VT37A
Test Method:	FCC 15.207(a), Conducted Emissions, 450kHz to 30MHz
Notes:	FCC ID: B4SVT37A Channel B
	Lead-HOT
	Detector=Peak
Date:	June 5, 2001
Techn:	Peter Lianzhong
Sheet:	3 of 8



Retlif Testing Laboratories

Report No. R-9037-1

09:55:18 MAY 31, 2001
 R90 - X10 VT37A ConductedEmissions CH.8 LEAD-Neutral/
 REF 75.0 dBμV #AT 10 dB



START 450 kHz #RES BW 10 kHz
 STOP 30.00 MHz #SWP 20.0 sec
 VBW 30 kHz

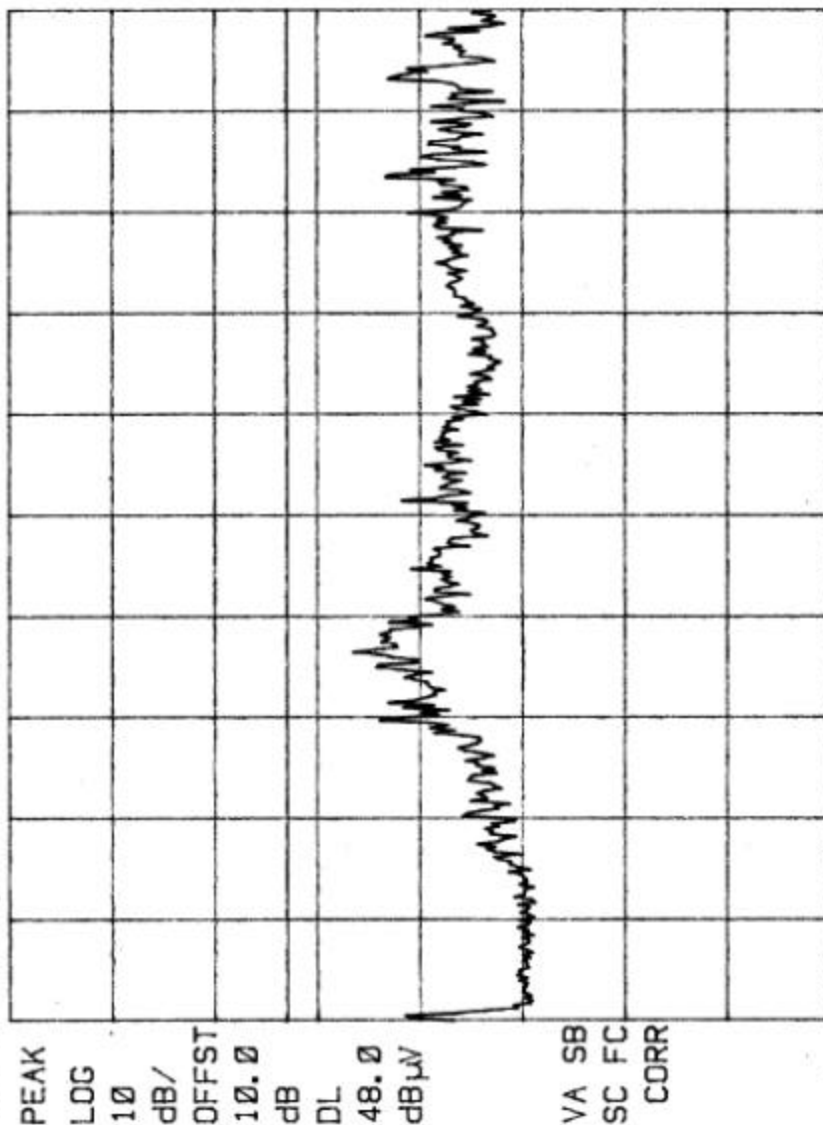
Customer:	X-10 (USA)
Test Sample:	2.4GHz FM Transmitter
Model No.:	VT37A
Test Method:	FCC 15.207(a), Conducted Emissions, 450kHz to 30MHz
Notes:	FCC ID B45VT37A Channel B
	Lead-NEUTRAL
	Detector=Peak
Date	June 5, 2001
Tech:	Peter Lianina
Sheet	4 of 6



Retlif Testing Laboratories

Report No. R-9037-1

10:23:48 MAY 31, 2001
 R90 - X10 VT37A Conducted Emissions CH.D LEAD-HOT
 REF 75.0 dBμV #AT 10 dB



START 450 kHz STOP 30.00 MHz
 #RES BW 10 kHz #SWP 20.0 sec
 VBW 30 kHz

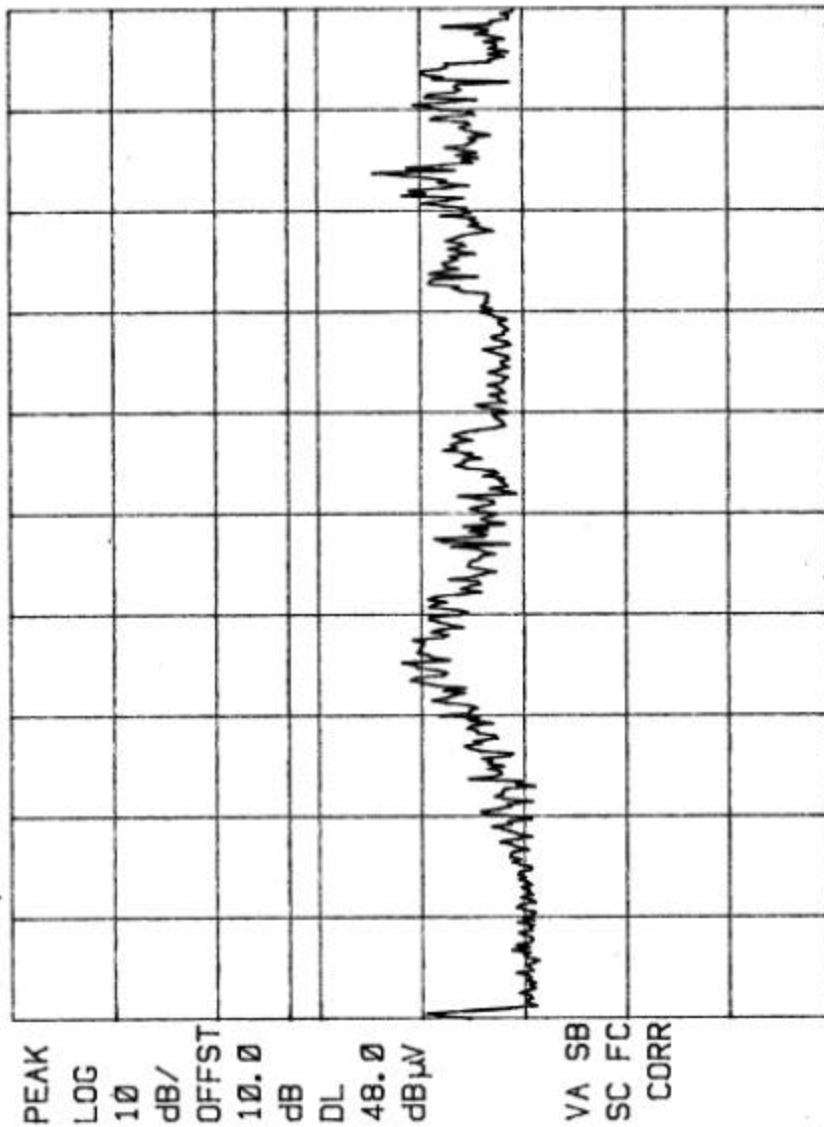
Customer:	X-10 (USA)
Test Sample:	2.4GHz FM Transmitter
Model No.:	VT37A
Test Method:	FCC 15.207(a), Conducted Emissions 450kHz to 30MHz
Notes:	FCC ID:B4SVT37A Channel D
	Lead-HOT
	Detector=Peak
Date:	June 5, 2001
Tech:	Peter Lannino
Sheet:	5 of 6



Retlif Testing Laboratories

Report No. R-9037-1

09:59:33 MAY 31, 2001
 R90 - X10 VT37A Conducted Emissions CH.1 LEAD-Neutral
 REF 75.0 dBμV #AT 10 dB



START 450 kHz #RES BW 10 kHz
 STOP 30.00 MHz #SWP 20.0 sec
 VBW 30 kHz

Customer: X-10 (USA)
 Test Sample: 2.4GHz FM Transmitter
 Model No.: VT37A
 Test Method: FCC 15.207(a), Conducted Emissions, 450kHz to 30MHz
 Notes: FCC ID: B45VT37A Channel D
 Lead-NEUTRAL
 Detector=Peak
 Date: June 5, 2001 Tech: Peter Laranas Sheet 5 of 5



Retlif Testing Laboratories

Report No. R-9037-1