

| <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: VT32A FCC ID: B4SVT32A

TYPE: Audio / Video Extreme Sender

FREQUENCY RANGE: 2413 MHz to 2476 MHz

POWER REQUIREMENTS: 12 VDC derived from AC Adapter, Model: PT30A

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: B4SVT32A
Power Requirements: 12 VDC derived from AC Adapter, Model PT30A
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 2400-2483.5MHz band at 4 frequencies as follows:
1) 2413 MHz 2) 2437.6 MHz
3) 2455 MHz 4) 2476 MHz
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 50mV/M AVERAGE. The field strength of the harmonics did not exceed 500 V/M AVERAGE.
- 15.249(b): Field strength readings were taken at three meters unless otherwise noted.
- 15.249(c): Emissions radiated outside band edges are greater than 50 dB below the specified the level of the fundamental.
- 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 RE Fund Harm.doc)

EXHIBIT 4

Spurious Emissions

Para. 15.249(c)

(See separate e-file attachment RE Spur.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

Conducted Emissions, Tx & Rx, 450kHz to 30MHz

| EN | Type | Manufacturer | Description. | Model No. | Cal Date | Due Date |
|------|--------------------|-------------------|-----------------|-----------------|------------|------------|
| 078 | LISN | Solar Electronics | 10 kHz - 30 MHz | 8028-50-TS24BNC | 05/11/1999 | 05/11/2000 |
| 088A | Conical Log Spiral | Electro-Mechanics | 200 MHz - 1 GHz | 3101 | 01/04/2000 | 01/04/2001 |
| 338 | Signal Generator | Hewlett Packard | 500 kHz - 1 GHz | 8640B | 03/09/2000 | 03/09/2001 |
| 513 | LISN | Solar Electronics | 10 kHz - 30 MHz | 8028-50-TS24BNC | 11/02/1999 | 11/02/2000 |
| 575 | Graphics Plotter | Hewlett Packard | N/A | 7470A | 04/22/1999 | 04/22/2000 |
| 7016 | EMC Analyzer | Hewlett Packard | 9kHz - 1.8GHz | 8591EM | 02/18/2000 | 02/18/2001 |
| 7017 | Transient Limiter | Hewlett Packard | 9kHz - 200MHz | 11947A | 04/22/1999 | 04/22/2000 |

Occupied Bandwidth, 2.4GHz to 2.4835GHz

| EN | Type | Manufacturer | Description. | Model No. | Cal Date | Due Date |
|------|--------------------|-----------------|-----------------|-----------|------------|------------|
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 03/20/2000 | 09/20/2000 |
| 141A | Graphics Plotter | Hewlett Packard | N/A | 7470A | 03/08/2000 | 03/08/2001 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 03/20/2000 | 09/20/2000 |

Fundamental, Harmonics, and Spurious Emissions, Radiated, 30MHz to 25GHz

| EN | Type | Manufacturer | Description. | Model No. | Cal Date | Due Date |
|------|-------------------------|-------------------|----------------------|--------------|------------|------------|
| 062 | High Gain Horn Antenna | Microlab/FXR | 1.7 GHz - 2.6 GHz | R638A | 01/25/2000 | 01/25/2001 |
| 064 | High Gain Horn Antenna | Microlab/FXR | 3.95 GHz - 5.85 GHz | H638A | 01/26/2000 | 01/26/2001 |
| 065 | High Gain Horn Antenna | Microlab/FXR | 5.85 GHz - 8.2 GHz | C638A | 01/26/2000 | 01/26/2001 |
| 066 | High Gain Horn Antenna | Microlab/FXR | 8.2 GHz - 12.4 GHz | X638A | 01/26/2000 | 01/26/2001 |
| 067 | Open Area Test Site | Retlif | 3 Meter | RNY | 10/15/1997 | 10/15/2000 |
| 129D | High Gain Horn Antenna | Microlab/FXR | 12.4 GHz - 18 GHz | Y638A | 01/26/2000 | 01/26/2001 |
| 133 | Broadband Pre-Amplifier | Electro-Metrics | 10 kHz - 1 GHz, 26dB | BPA-1000 | 06/22/1999 | 06/22/2000 |
| 141 | Spectrum Analyzer | Hewlett Packard | 100 Hz - 40 GHz | 8566B | 03/20/2000 | 09/20/2000 |
| 141A | Graphics Plotter | Hewlett Packard | N/A | 7470A | 03/08/2000 | 03/08/2001 |
| 141B | Quasi-Peak Adaptor | Hewlett Packard | 100 Hz - 1 GHz | 85650A | 03/20/2000 | 09/20/2000 |
| 206B | 6.0 dB Attenuator | Texscan | 0 - 1.0 GHz | FP-50 - 6 dB | 06/22/1999 | 06/22/2000 |
| 523 | Biconilog | Electro-Mechanics | 26 - 2000 MHz | 3142B | 10/22/1998 | 04/22/2000 |
| 543 | Preamplifier | Hewlett Packard | 1.0 GHz - 26.5 GHz | 8449B | 06/16/1999 | 06/16/2001 |
| 617 | Interference Analyzer | Electro-Metrics | 10 kHz - 1 GHz | EMC-30 | 01/17/2000 | 01/17/2001 |