TEST NUMBER - 357-00

TESTING TO

INDUSTRY CANADA RSS 210 SECTION 8.6 CATEGORY II
FEDERAL COMMUNICATIONS COMMISSION CFR47 PART15.235

Low Power License-Exempt Radiocummunication Devices
Intentional Radiators

for

Safety 1st, Inc.
45 Dan Road
Canton,MA 02021
1-800-962-7233

of

49MHz Two Way Intercom Monitor

49.82-49.90 MHz Transceiver

49270TX

FCC ID#: MNJ49270T

on

11/6/2000

Tested by

_____
Clifton P. Brick

Reviewed by

_____
Larry K. Stillings

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Compliance Worldwide, Inc. – 357 Main Street – Sandown, NH 03873
(603) 887 3903 Fax 887 6445
http://www.cw-inc.com

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TEST DESCRIPTION

1. TEST OBJECTIVE

To test the 49MHz Two Way Intercom Monitor 49270TX to RSS 210 / Part 15 Subpart C Rules and write a report.

2. E.U.T. DESCRIPTION

GENERAL

The 49MHz Two Way Intercom Monitor 49270TX is the Baby's room component in a Baby Monitor/Intercom wireless system.

SERIAL NUMBERS:

Pre Production Prototype

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TEST RESULTS AND CONCLUSIONS

PRODUCT TESTED - 49MHz Two Way Intercom Monitor

MODEL NUMBER - 49270TX

RADIATED TEST RESULTS

The test results show that the emissions radiated from this equipment are in compliance with IC Rules RSS 210 / FCC Rules Part 15 Subpart C.

OCCUPIED BANDWIDTH & OUTPUT POWER

The test results show that the occupied bandwidth and output power of this equipment are in compliance with IC Rules RSS 210 / FCC Rules Part 15 Subpart C .

CONDUCTED TEST RESULTS

The test results show that the emissions conducted through the power line from this equipment are in compliance with IC Rules RSS 210 / FCC Rules Part 15 Subpart C.

ANALYSIS AND CONCLUSIONS

Based upon the radiated and conducted measurements we find that this equipment is within the limits of the IC Rules RSS 210 / FCC Rules Part 15 Subpart C. All results are based on a test of one sample, and represent other production units, only in as much as a sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required.

NOTES (Special conditions unique to this test)

The antenna wire is soldered to the PCB, no connector is used.
The FCC Label information will be engraved in the mold.
Power input was varied +/-15% with no change in output power.

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TEST PROCEDURES

1. TEST EQUIPMENT

A. HP 8546A (9 kHz - 6.5 GHz) EMI Receiver w/ RF Filter Section, S/N 3704A00323 / 3650A00360. Calibration Date 7-18-2000, calibrated annually.

B. Electro-Metrics BiConical Antenna, Model EM6912A, S/N 149. Calibration Date 2-22-2000, calibrated annually.

C. Electro-Metrics Log Periodic Antenna, Model EM-6950, S/N 1017. Calibration Date: 2-22-2000, calibrated annually.

D. LISN, Compliance Worldwide, Model 50 µH / 50 ohm, S/N 100. Calibration Date 2-22-2000, calibrated annually.

2. FREQUENCY RANGE TO BE SCANNED.

A. Radiated Test from 30 MHz to 40 GHz (or the 10^{th} harmonic of the highest frequency whichever is lower).

B. Conducted Test from 450 kHz to 30 MHz.

3. TEST PROCEDURES.

Radiated test procedure:

The EUT, associated cables and peripheral devices are placed on the supporting table and any support equipment is placed off the site. The EUT is turned on and any necessary operating or test software installed and allowed to warm up. The frequency band from 30 MHz to 40 GHz is scanned. When an emission is found the emission is maximized by varying the bundle position of the connecting cables, the antenna height, the antenna polarization (vertical and horizontal) and the table orientation (360 degrees). The maximum reading is recorded and the next signal is searched for.

Conducted test procedure:

The power line of the EUT is connected to the LISN (Line Impedance Stabilization Network). A measurement of the emissions are made from the power line for both phase and neutral on the analyzer in the frequency range from 450 kHz to 30 MHz. The maximum readings are recorded for each phase.

All measurements are made according to the procedures defined in: "ANSI C63.4-1992 Standard Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronics Equipment in the Range of 9 kHz to 40 GHz, American National Standard for (ISBN 1-55937-215-5).

RSS 210 TEST LIMITS

1. RSS 210 Section 6.2.2, Table 3 Radiation Limits (Quasi-Peak):
   FCC Part 15.209, 15.235, 15.249 Radiation Limits (Quasi-Peak):

Frequency MHz	Distance meters	Limit dBμV/m	Limit μV/m
1.705 - 30	30	29.5*	30*
30 - 88	3	40.0	100
49.82 - 49.90	3	80.0*	10,000*
88 - 216	3	43.5	150
216 - 960	3	46.0	200
902 - 928	3	94.0*	50,000*
960 - 1000	3	54.0	500
1000 - 40000	3	54.0*	500*

*NOTE: Average Limits

2. RSS 210 Section 6.6a Conduction Limits (Quasi-Peak):
   FCC Part 15.207 Conduction Limits (Quasi-Peak)

Frequency MHz	Limit dBμV/m	Limit μV/m
0.450 - 30.0	48.0	250

TEST FACILITY DESCRIPTION

Compliance Worldwide is located on 357 Main Street in Sandown, New Hampshire. The conducted and radiated test sites, located at C.W. are used for Federal Communications Commission (FCC) testing and Industry Canada Testing. A site description is on file with the FCC in Columbia, MD USA. Site information is also on file with Industry Canada, anyone wishing to review this Test Facility Description is referred to file number **IC 3023**. This is currently on file at Industry Canada, 1241 Clyde Avenue, Ottawa, ON K2C 1Y3.

The radiated site is a 3/10 meter indoor site with an enclosure for the product and a basement for the personnel, support equipment and test equipment.

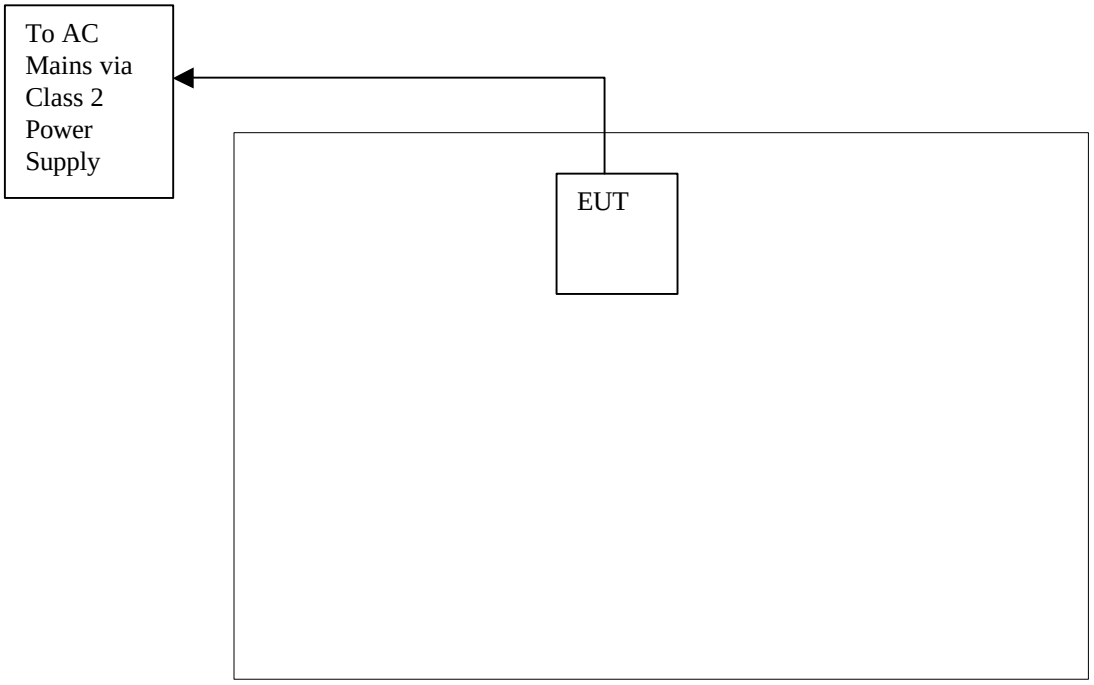
The conducted site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical metal wall required by EN 55022.

Both sites are designed to test products or systems 1.5 meter x 1.0 meter, floor standing or table top.

DATE ON FILE FCC: August 10, 2000

DATE ON FILE IC: August 11, 2000

TEST SET UP
AND
PERIPHERAL CONNECTION INFORMATION



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PLEASE NOTE - EUT (equipment under test) is 49MHz Two Way Intercom Monitor.

The cables directly connected to this equipment are listed below. Please see below for a complete list of FCC ID's etc. on the supporting equipment.

Connection Descriptions

1. _____Power Cable_____
(description)

_____EUT _____
(from device)

_____AC Mains Via Class 2 Power Supply_____
(to device)

CABLE LENGTH __2M__ (S) SHIELDED or (U) UNSHIELDED _U__

2. _____N/A_____
(description)

_____
(from device)

_____
(to device)

CABLE LENGTH _____ (S) SHIELDED or (U) UNSHIELDED ____

3. _____N/A_____
(description)

_____
(from device)

_____
(to device)

CABLE LENGTH _____ (S) SHIELDED or (U) UNSHIELDED ____

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RADIATED TEST RESULTS

Frequency Range:	30 - 1000 MHz.
Measurement Distance:	3.0 Meters.
Bandwidth:	120 kHz, Per ANSI C63.4-1992.*
Detector Functions:	Peak, Quasi Peak, Average
Video Filter:	300 kHz
Table Height:	0.8 meters
Antenna Height Variation:	1 - 4 Meters.

Horizontal and Vertical Polarization Measurements Taken.

*Measurement Bandwidth is 1 MHz above 1 GHz

PLEASE SEE NEXT PAGE FOR RADIATED TEST DATA

All Data includes corrections for Antenna Factor, Preamplifier Gain and Cable Loss

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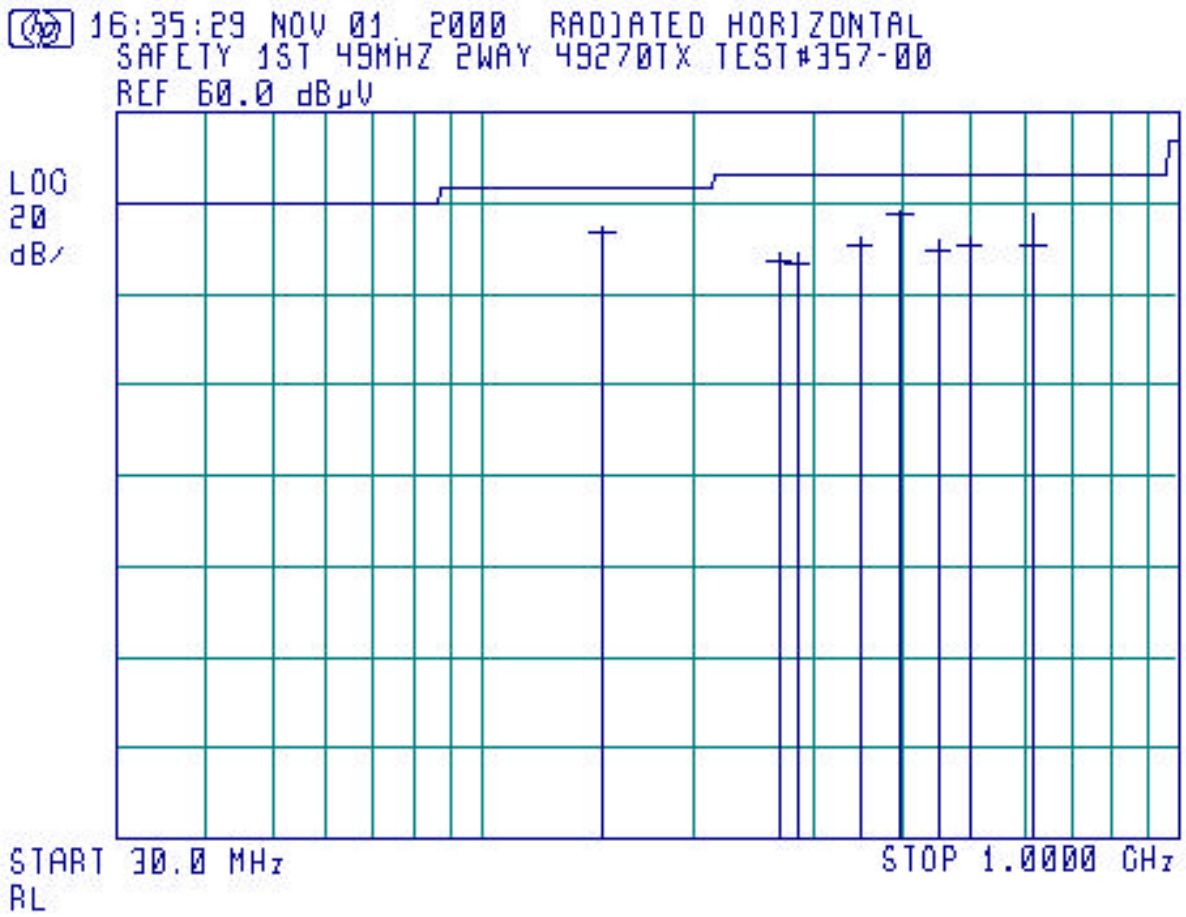
Radiated Horizontal Data Log Plot



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Radiated Horizontal Tabular Data

Freq (MHz)	Azimuth (Degrees)	Antenna Height (Meters)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
149.492841	225	1.8	34.51	34.01	43.50	-9.49
265.770044	90	1.3	29.09	27.65	46.00	-18.35
282.376313	90	1.0	28.84	27.01	46.00	-18.99
348.830841	0	1.0	32.76	31.47	46.00	-14.53
398.663903	170	1.0	38.75	37.89	46.00	-8.11
448.504569	185	2.4	31.93	30.33	46.00	-15.67
498.317907	135	2.4	32.76	31.26	46.00	-14.74
614.588856	140	2.4	37.94	30.40	46.00	-15.60

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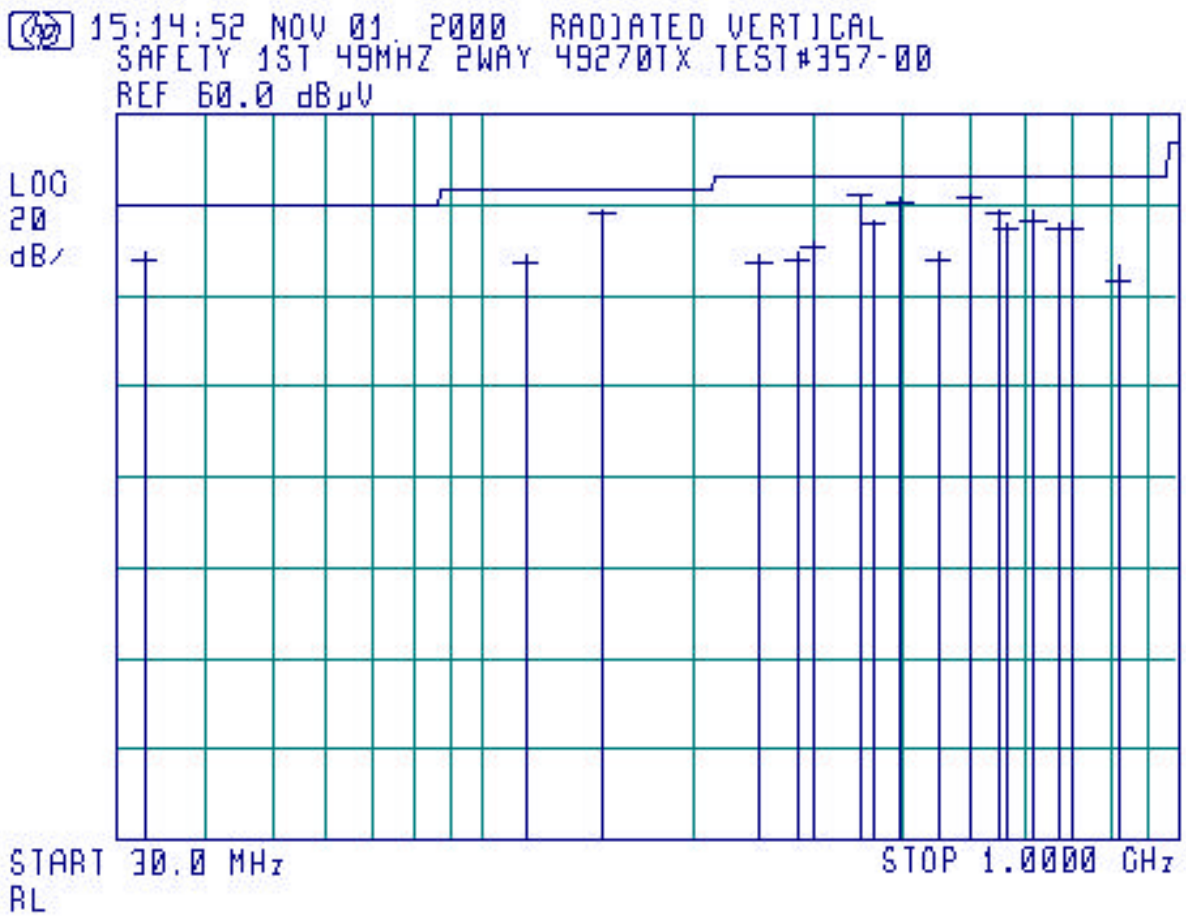
Radiated Vertical Data Log Plot



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Radiated Vertical Tabular Data

Freq (MHz)	Azimuth (Degrees)	Antenna Height (Meters)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
33.219482	0	1.0	29.99	28.03	40.00	-11.97
116.276706	225	1.0	29.33	27.29	43.50	-16.21
149.499429	135	1.0	39.31	38.84	43.50	-4.66
249.163785	225	1.0	28.86	27.39	46.00	-18.61
282.384288	270	1.0	29.84	28.21	46.00	-17.79
299.002751	90	1.3	32.42	31.36	46.00	-14.64
348.828360	180	1.6	42.51	42.06	46.00	-3.94
365.440342	150	1.3	36.80	35.97	46.00	-10.03
398.658769	150	1.4	41.50	40.84	46.00	-5.16
448.479447	90	2.8	30.18	28.06	46.00	-17.94
498.323769	225	1.3	42.33	41.58	46.00	-4.42
548.154600	260	1.0	39.61	38.61	46.00	-7.39
564.770254	180	1.0	36.53	35.42	46.00	-10.58
614.600447	160	1.0	39.38	36.79	46.00	-9.21
664.432744	270	1.0	36.11	34.51	46.00	-11.49
697.652213	90	1.0	37.05	35.62	46.00	-10.38
813.921888	270	1.0	26.45	23.34	46.00	-22.66

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RADIATED OUTPUT POWER & OCCUPIED BANDWIDTH TEST RESULTS

Frequency Range:	49.82-49.90 MHz
Measurement Distance:	3.0 Meters.
Bandwidth:	As Noted, Per ANSI C63.4-1992.
Detector Functions:	Peak, Quasi Peak, Average.
Video Filter:	300 kHz
Table Height:	0.8 meters
Antenna Height Variation:	1 - 4 Meters.

Horizontal and Vertical Polarization Measurements Taken, Worst Case Reported.

All Data includes corrections for Antenna Factor, Preamplifier Gain and Cable Loss.

PLEASE SEE NEXT PAGE(S) FOR OCCUPIED BANDWIDTH RADIATED TEST DATA

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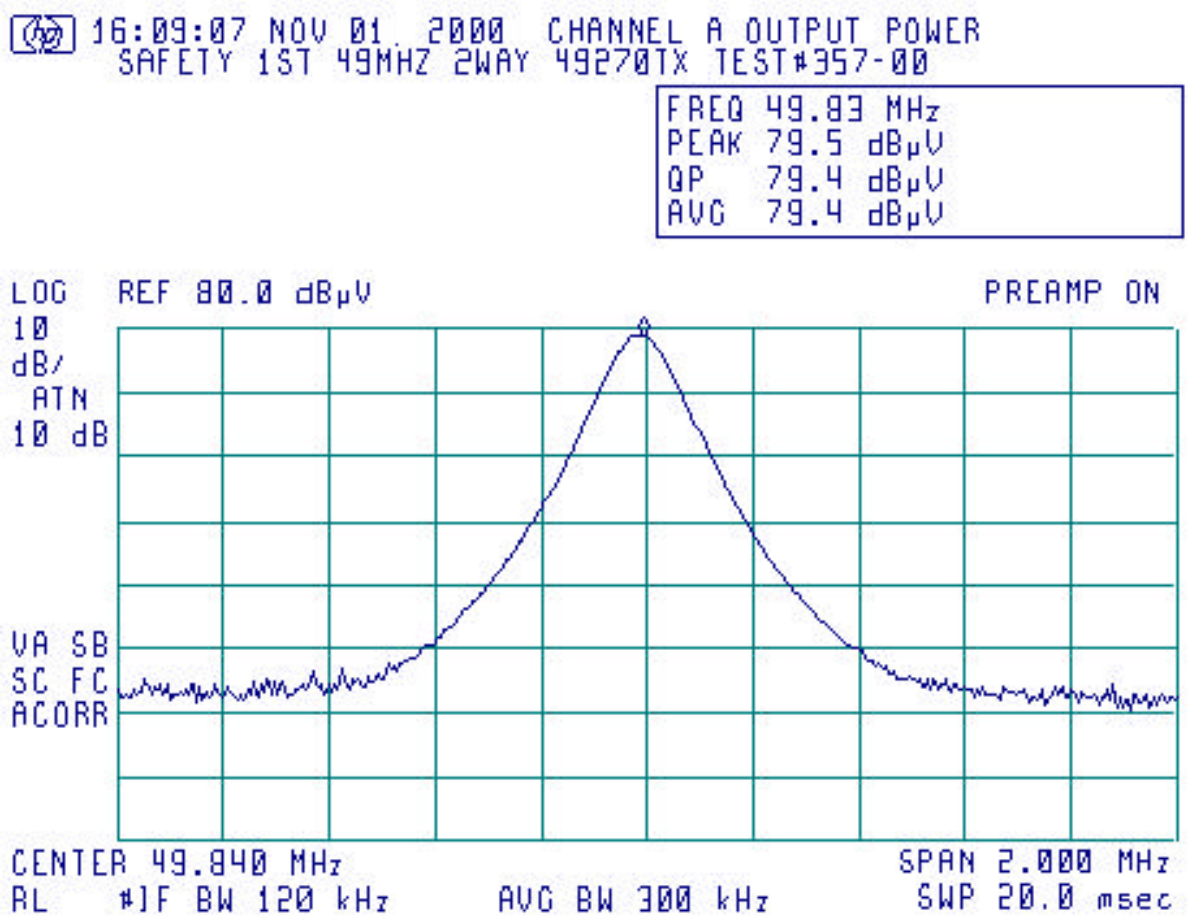
Channel A Output Power Plot



Freq (MHz)	Azimuth (Degrees)	Antenna Height (Meters)	Peak Amp (dBuV/m)	Avg Amp (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)
49.83	0	1.0	79.5	79.4	80.0	-0.6

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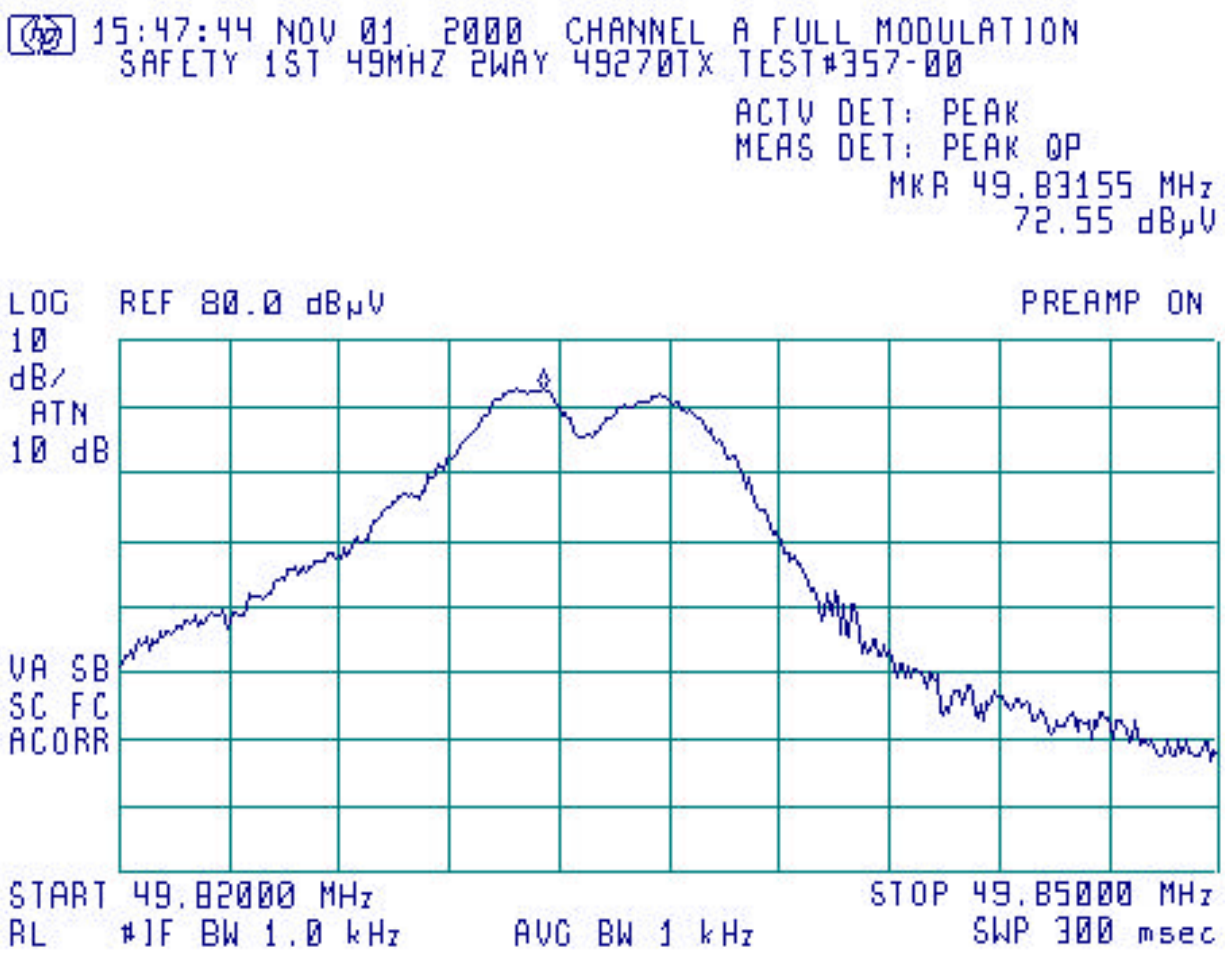
Channel A Occupied Bandwidth Plot



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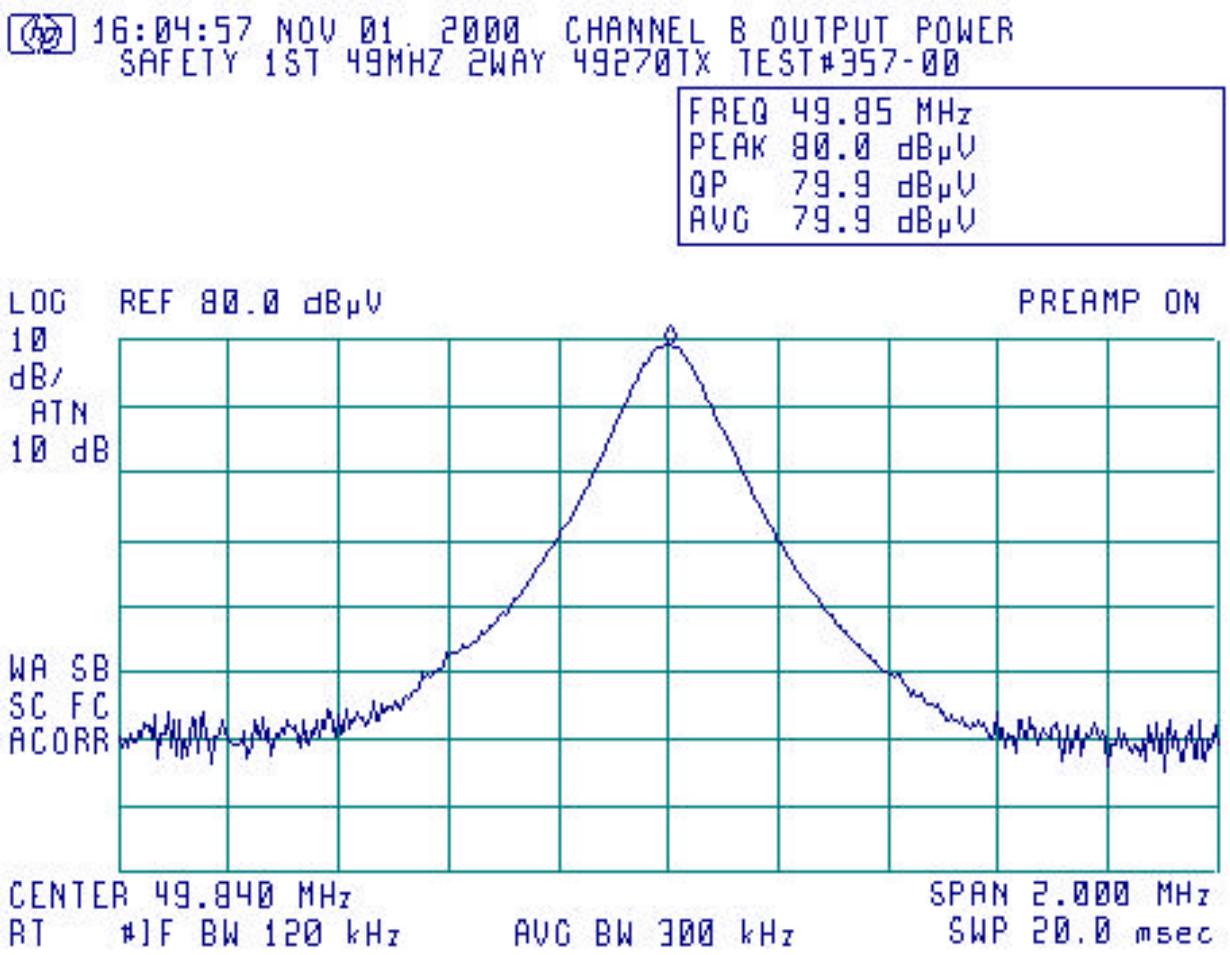
Channel B Output Power Plot



Freq (MHz)	Azimuth (Degrees)	Antenna Height (Meters)	Peak Amp (dBuV/m)	Avg Amp (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)
49.85	0	1.0	80.0	79.9	80.00	-0.1

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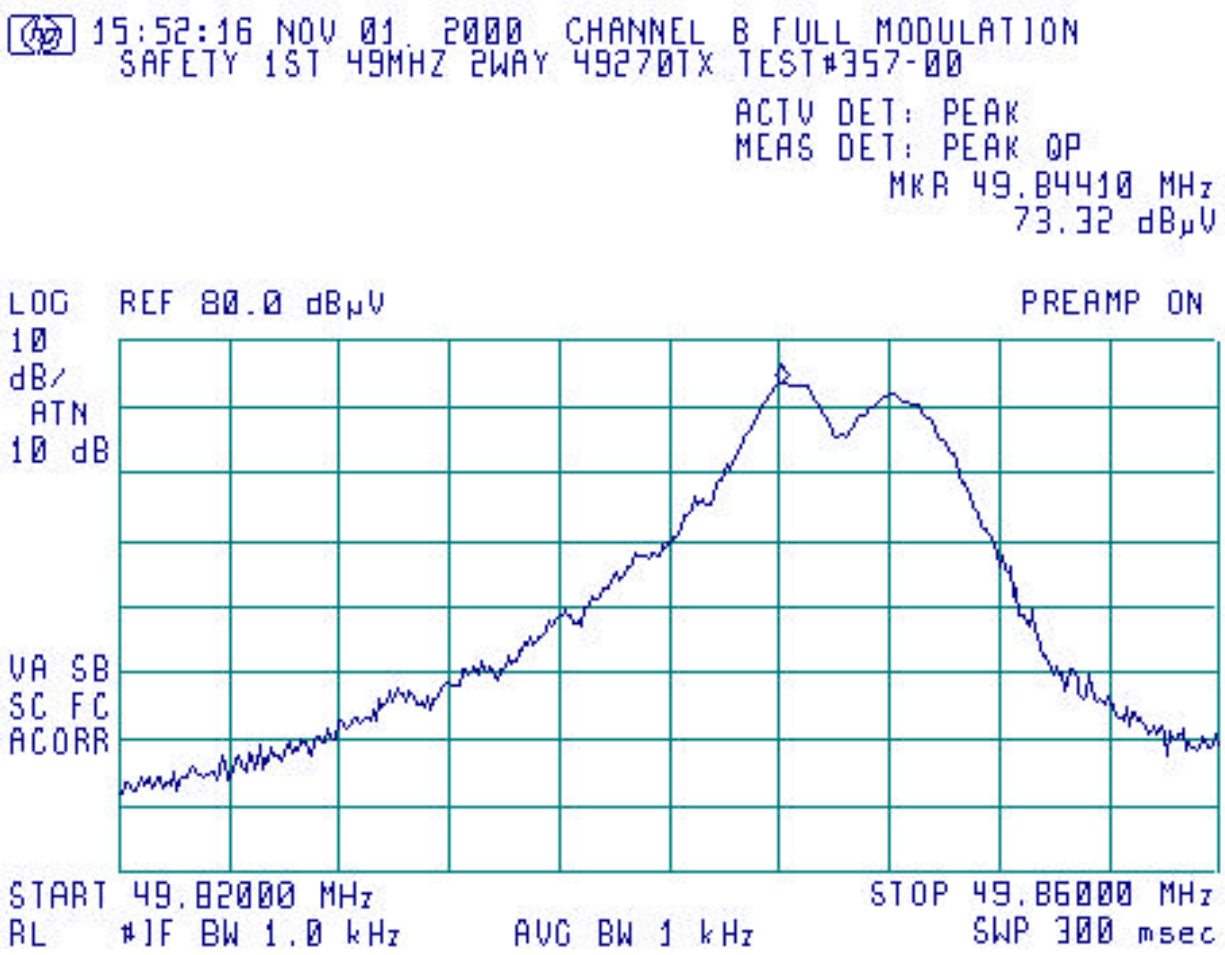
Channel B Occupied Bandwidth Plot



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CONDUCTED TEST RESULTS

Frequency Range:	450 kHz to 30.0 MHz.
Bandwidth:	9 kHz per ANSI C63.4-1992.
Detector Functions:	Peak, Quasi-Peak, Average
Table Height:	0.8 meters
Video Bandwidth:	30 kHz.

Phase and Neutral Measurements Taken.

All Data includes corrections for LISN and Cable Loss.

PLEASE SEE NEXT PAGE FOR CONDUCTED TEST DATA

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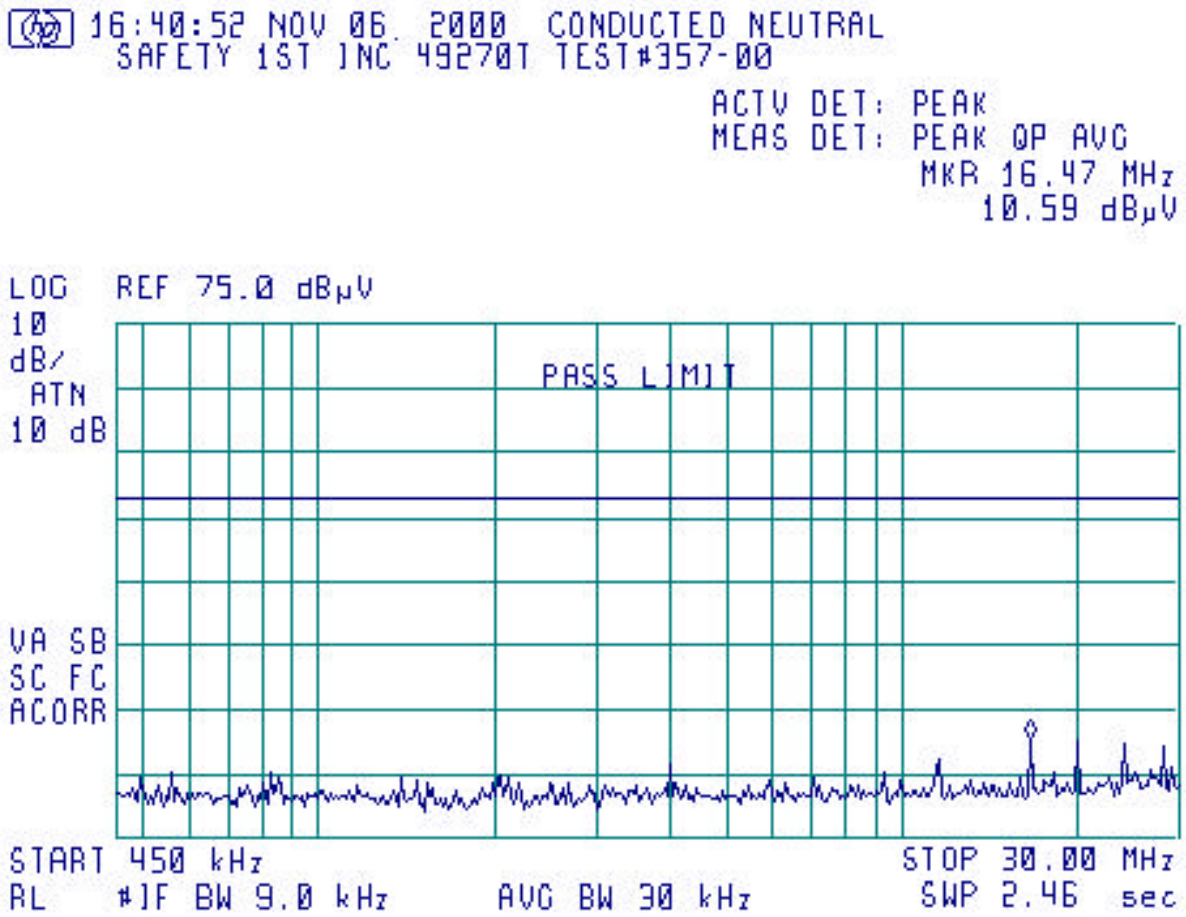
Conducted 120V 60Hz Neutral Data Log Plot



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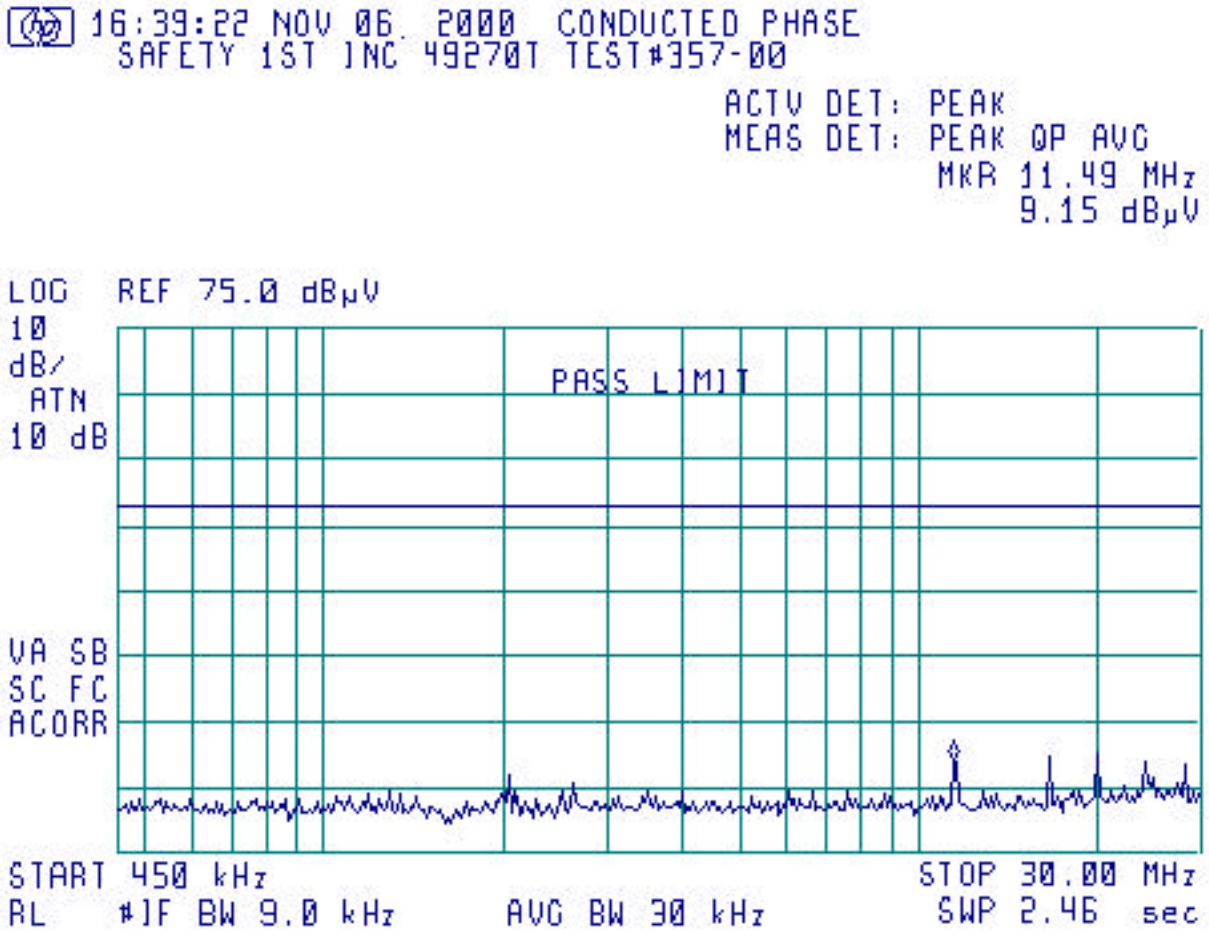
Conducted 120V 60Hz Phase Data Log Plot



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NOTES AND COMMENTS

(Special conditions unique to this test)

None.

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