

TEST NUMBER - 264-05

TEST REPORT TO

INDUSTRY CANADA RSS 210 issue 5 SECTION 8.6.2
INDUSTRY CANADA RSS 310
FEDERAL COMMUNICATIONS COMMISSION CFR47 PART15.235

Low Power License-Exempt Radio communication Devices
Intentional Radiators

for

Dorel Juvenile Group
Canton Commerce Center
45 Dan Road
Canton, MA 02021
800-909-7133

of

49MHz Baby Monitor

Model 08051

FCC ID: MNJ08051T

on

9/12/2005

Tested by

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Reviewed by

Larry K. Stillings

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TEST DESCRIPTION

1. TEST OBJECTIVE

To test the 49MHz Baby Monitor 08051 to RSS 210 / Part 15 Subpart C Rules and write a report.

2. E.U.T. DESCRIPTION

GENERAL

The 49MHz Baby Monitor 08051 is a 49 MHz band 2 channel baby monitor.

SERIAL NUMBERS:

Production Prototype

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TEST RESULTS AND CONCLUSIONS

PRODUCT TESTED - 49MHz Baby Monitor

MODEL NUMBER - 08051

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)

None.

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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 1-5-2005, calibrated annually.
- B. Com-Power Biconilog Antenna, Model AC220, S/N 25509. Calibration Date 7-11-2005, calibrated annually.
- C. EMCO LISN, Model EM 3825/2, S/N 9109-1860. Calibration Date: 12-15-2004, calibrated annually.

2. FREQUENCY RANGE TO BE SCANNED.

- A. Radiated Test from 30 MHz to 40 GHz (or the 10th harmonic of the highest frequency whichever is lower).
- B. Conducted Test from 150 kHz to 30 MHz.

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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 EUT is pre-scanned in our ferrite tile lined chamber where it is rotated 360 degrees and examined in both horizontal and vertical polarization, all emission frequencies are identified and recorded. The EUT is then moved to the OATS and the frequency band from 30 MHz to 40 GHz is scanned, all frequencies identified in the chamber are investigated, as well as harmonic frequencies of the EUT. 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 150 kHz to 30 MHz. The maximum readings are recorded for each phase.

All measurements are made according to the procedures defined in: "ANSI C63.4-2003 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" (ISBN 0-7381-3844-4).

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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	Quasi-Peak Limit dBμV	Average Limit dBμV
0.150 - 0.500	66 to 56	56 to 46
0.500 - 5.0	56	46
5.0 - 30.0	60	50

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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.

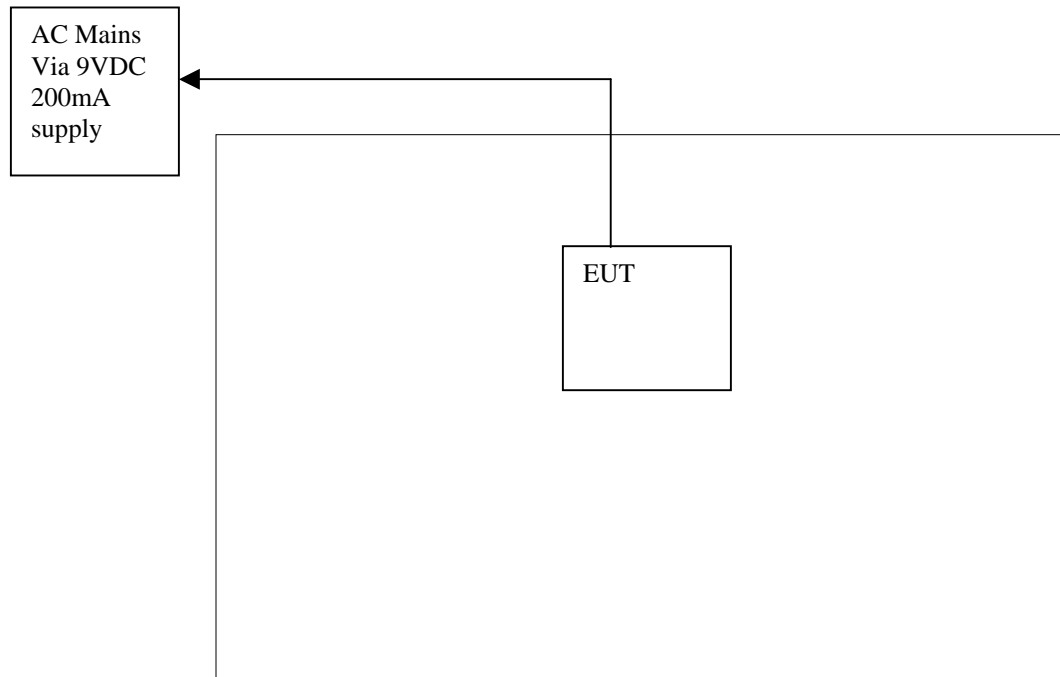
The radiated site is a 3/10 meter indoor site with an enclosure for the product and a basement for the personnel, support equipment and test equipment.

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.

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TEST SET UP
AND
PERIPHERAL CONNECTION INFORMATION



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PLEASE NOTE - EUT (equipment under test) is 49MHz Baby Monitor.
The cables directly connected to this equipment are listed below.

Connection Descriptions

1. Power Cable _____
(description)
EUT _____
(from device)
AC Mains Via Class 2 power supply block _____
(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

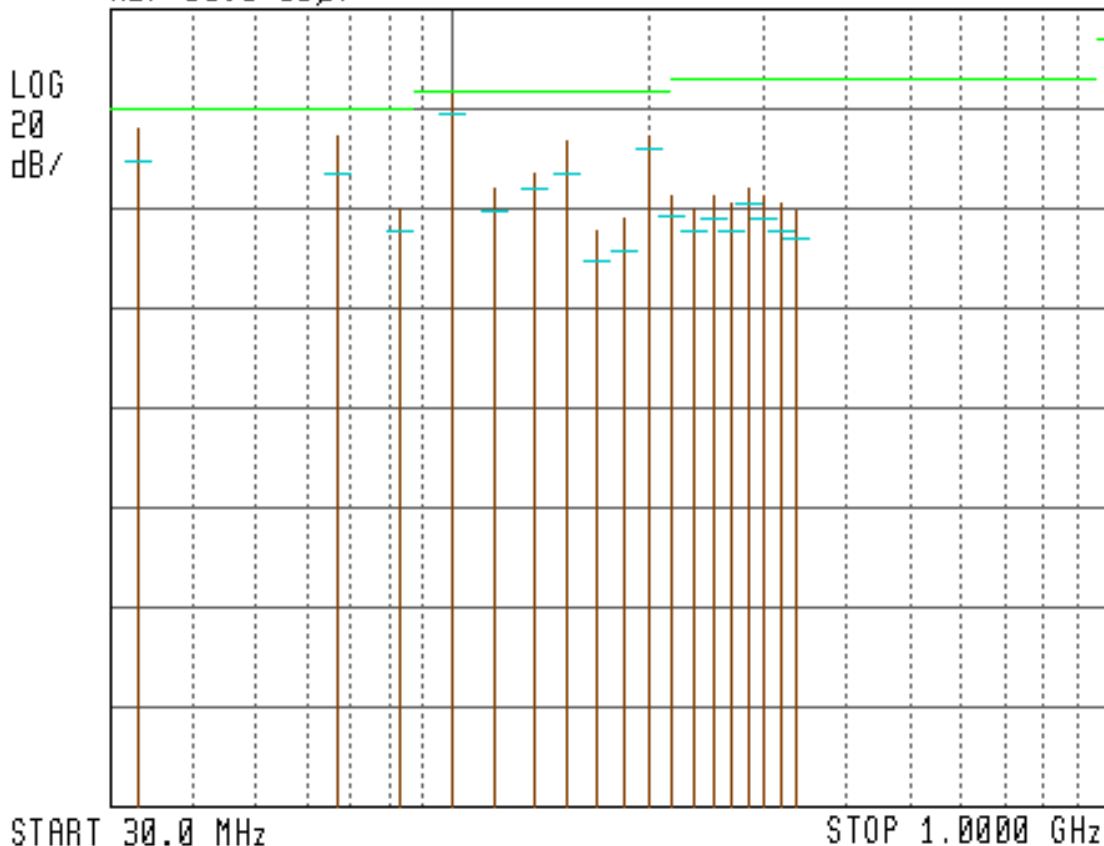
All Harmonics of the 16 MHz crystal, including harmonics of the 49MHz fundamental were examined, all signals greater than 26dBuV/m were recorded.

Ch A and B were examined in our anechoic chamber, channel A was determined to be worst case and was used for the radiated measurements.

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Radiated Worst Case Data Log Plot

14:37:23 SEP 12, 2005
264-05 SAFETY 1ST 08051T
REF 60.0 dB μ V



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Radiated Worst Case Tabular Data

Frequency (MHz)	Polarization (H/V)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	Margin (dB)
33.27	V	36.05	29.77	40.00	-10.23
66.52	V	34.70	27.84	40.00	-12.16
83.14	V	20.21	15.73	40.00	-24.27
99.66	V	43.58	39.13	43.50	-4.37
116.28	V	24.11	19.71	43.50	-23.79
132.93	V	27.64	24.59	43.50	-18.91
149.55	V	33.51	27.67	43.50	-15.83
166.16	V	16.01	10.03	43.50	-33.47
182.77	V	18.31	11.92	43.50	-31.58
199.38	V	34.29	32.08	43.50	-11.42
216.02	V	23.19	18.99	46.00	-27.01
232.63	V	20.57	16.20	46.00	-29.80
249.24	V	23.09	18.60	46.00	-27.40
265.85	V	21.23	15.93	46.00	-30.07
282.47	V	24.84	21.24	46.00	-24.76
299.08	V	22.67	18.22	46.00	-27.78
315.69	V	21.01	15.70	46.00	-30.30
332.31	V	20.13	14.00	46.00	-32.00

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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.

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

Worst Case Polarization was Vertical for Channels 1 and 2.

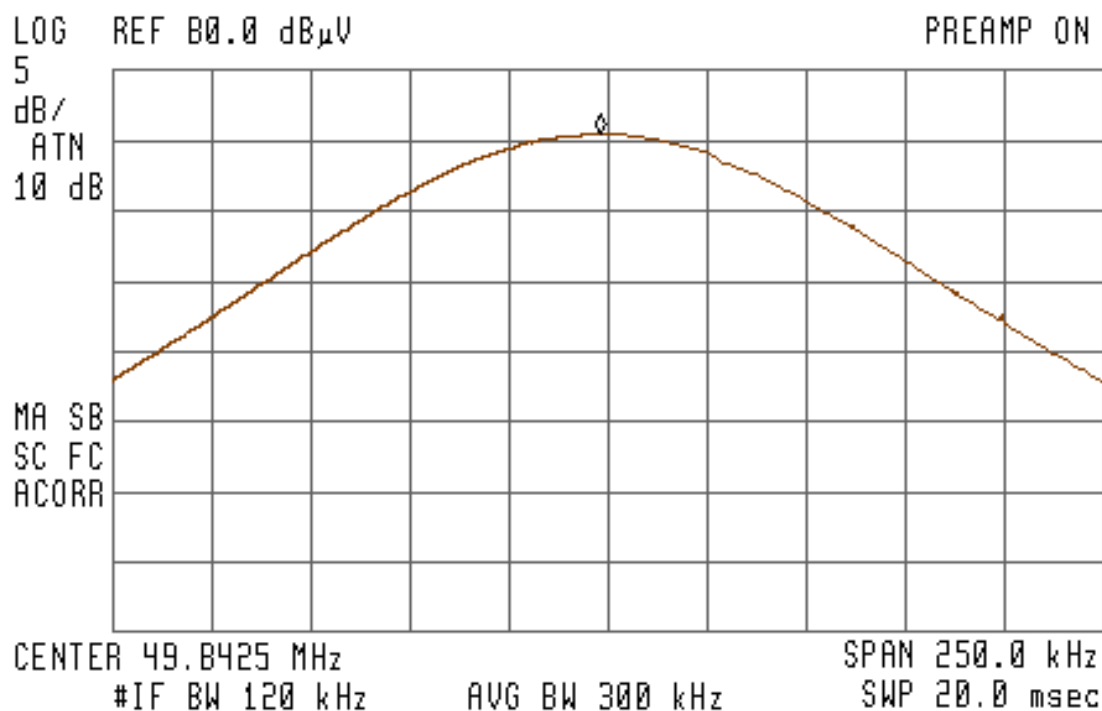
99% power bandwidth was found to be 22.3kHz.

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Channel A Output Power Plot

15:02:34 SEP 12, 2005
264-05 SAFETY 1ST 08051T

FREQ	49.84 MHz
PEAK	75.2 dB μ V
QP	75.1 dB μ V
AVG	75.2 dB μ V



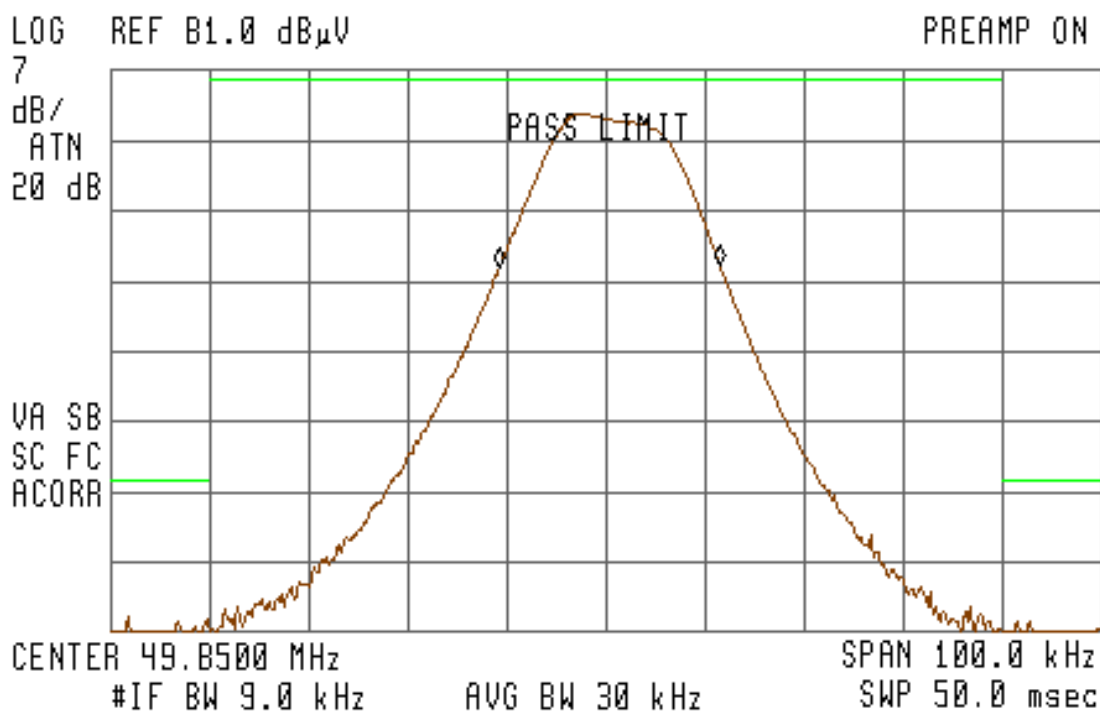
Freq (MHz)	Pol. (H/V)	Peak Amp (dBuV/m)	Avg Amp (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)
49.84	V	75.2	75.2	80.0	-4.8

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Channel A Occupied Bandwidth Plot

16:06:00 SEP 12, 2005
264-05 SAFETY 1ST 08051T

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR Δ 22.3 kHz
.39 dB



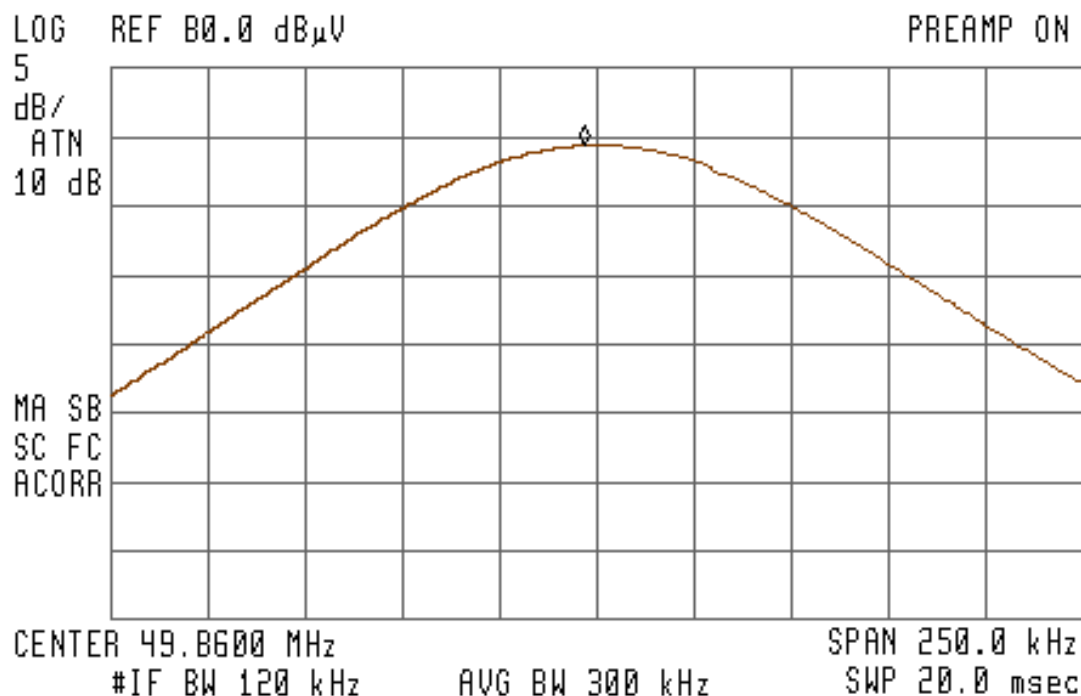
Plot shows in band limit and 15.209 limit with edges at 49.82 and 49.90. 1kHz tone at 100dB SPL at 10cm from the microphone was used for bandwidth measurement. 99% power Bandwidth is 22.3kHz.

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Channel B Output Power Plot

15:40:37 SEP 12, 2005
264-05 SAFETY 1ST 08051T

FREQ	49.86 MHz
PEAK	73.5 dB μ V
QP	73.4 dB μ V
AVG	73.4 dB μ V



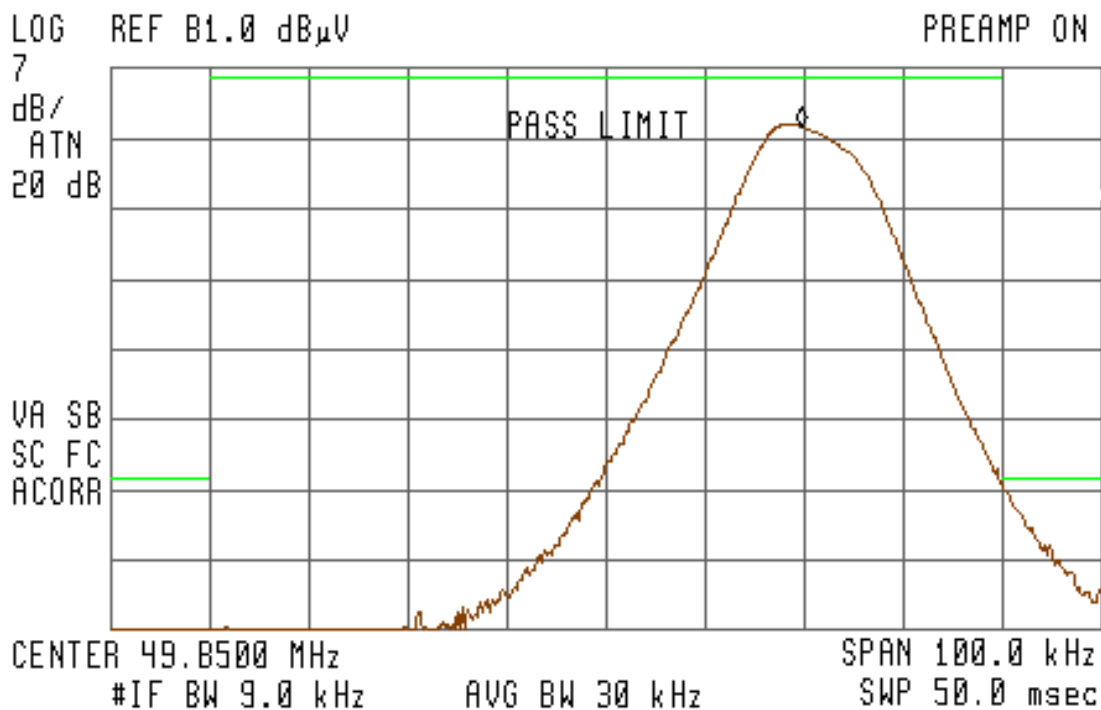
Freq (MHz)	Pol (H/V)	Peak Amp (dBuV/m)	Avg Amp (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)
49.86	V	73.5	73.4	80.0	-6.6

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Channel B Occupied Bandwidth Plot

15:57:39 SEP 12, 2005
264-05 SAFETY 1ST 08051T

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 49.8697 MHz
75.05 dB μ V



Plot shows in band limit and 15.209 limit with edges at 49.82 and 49.90. 1kHz tone at 100dB SPL at 10cm from the microphone was used for bandwidth measurement. 99% power Bandwidth is 22.3kHz.

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CONDUCTED TEST RESULTS

Frequency Range:	150 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.

PLEASE SEE NEXT PAGE FOR CONDUCTED TEST DATA

Channel A and B were found to be similar, Channel A was used for final data.

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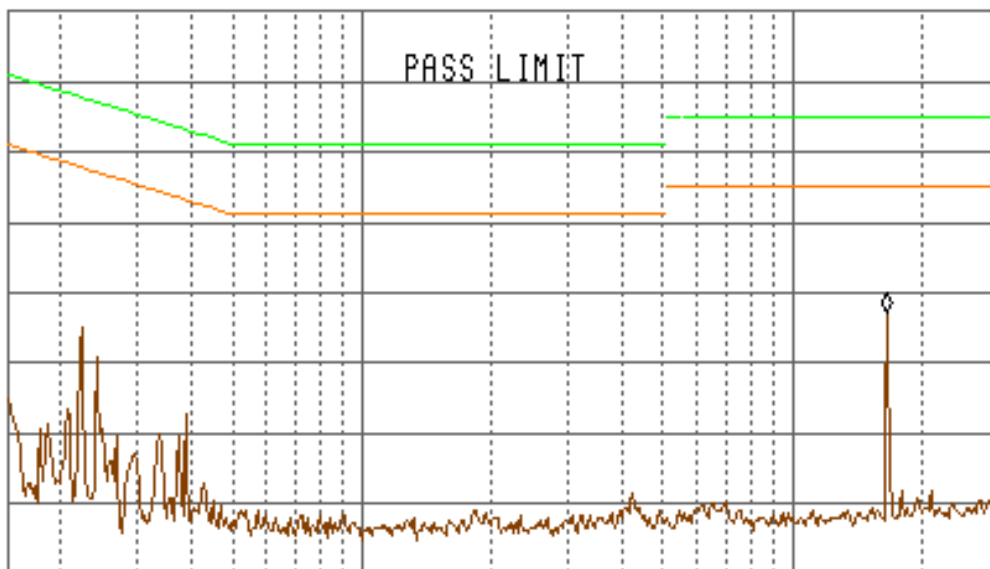
Conducted Channel A 120V 60Hz Phase Data Log Plot

15:14:33 AUG 17, 2005 CONDUCTED PHASE
TEST#264-05 08051T SAFET1ST 49MHZ TX

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKA 16.37 MHz
31.97 dBμV

LOG REF 75.0 dBμV

10
dB/
ATN
10 dB



START 150 kHz

#IF BW 9.0 kHz

AVG BW 30 kHz

STOP 30.00 MHz

SWP 2.49 sec

VA SB
SC FC
ACORR

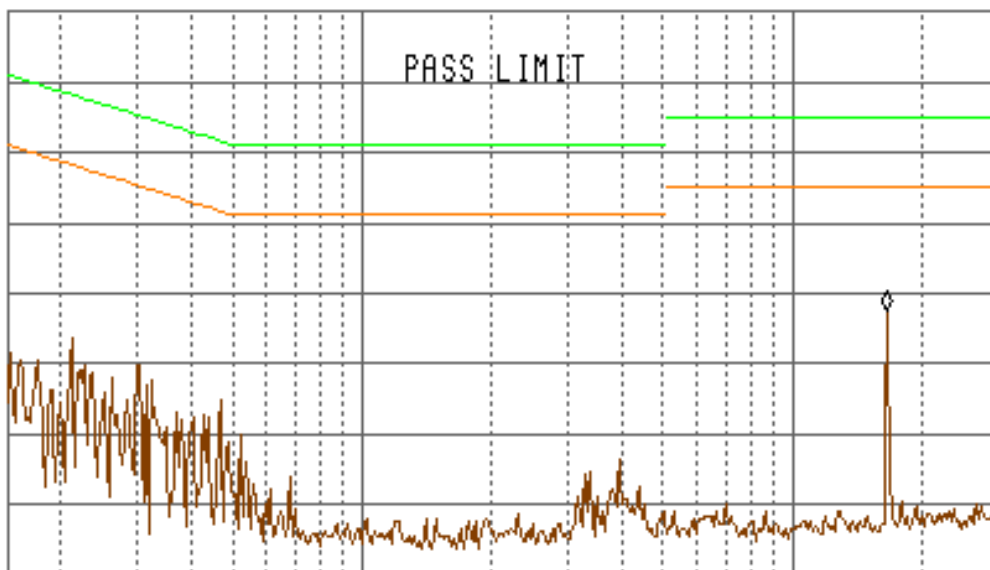
Conducted Channel A 120V 60Hz Neutral Data Log Plot

15:06:28 AUG 17, 2005 CONDUCTED NEUTRAL
TEST#264-05 08051T SAFET1ST 49MHZ TX

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 16.37 MHz
32.49 dB μ V

LOG REF 75.0 dB μ V

10
dB/
ATN
10 dB



START 150 kHz

#IF BW 9.0 kHz

AVG BW 30 kHz

STOP 30.00 MHz

SWP 2.49 sec

VA SB
SC FC
ACORR

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NOTES AND COMMENTS

(Special conditions unique to this test)

None.