TEST NUMBER - 207-04

TEST REPORT TO

INDUSTRY CANADA RSS 210 SECTION 6.2.2
FEDERAL COMMUNICATIONS COMMISSION CFR47 PART15.249

Low Power License-Exempt Radio Communication Devices
Intentional Radiators

for

Summer Infant Products
6 Blackstone Valley Place
Lincoln, RI 02865
(401) 334 9966

of

2 channel video baby monitor

02010A

FCC ID: PZK201AT

on

4/14/2004

Tested by

Andrew Mertinooke

Reviewed by

Clifton P. Brick

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TEST DESCRIPTION

1. TEST OBJECTIVE

To test the 2 channel video baby monitor 02010A to RSS 210 / Part 15 Subpart C Rules and write a report.

2. E.U.T. DESCRIPTION

GENERAL

The 02010A is a 2 channel video baby monitor that operates in the 902-928 MHz Frequency Band. Its 2 channels are centered on 910 and 921 MHz, with Audio carrier 4.5 MHz spacing from the center video channel. The Audio and Video is frequency modulated.

SERIAL NUMBERS:

production prototype

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(603) 887 3903 Fax 887 6445
http://www.cw-inc.com

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TEST RESULTS AND CONCLUSIONS

PRODUCT TESTED - 2 channel video baby monitor

MODEL NUMBER - 02010A

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 1-16-2004, calibrated annually.

B. HP 8593E (9 kHz - 26.5 GHz) Spectrum Analyzer, S/N 3829A03887. Calibration Date 11-21-2003, calibrated annually.

C. Com-Power Biconilog Antenna, Model AC220, S/N 25509. Calibration Date 7-17-2003, calibrated annually.

D. Electro-Metrics Double Ridged Guide Antenna, Model EM-6961, S/N 6337. Calibration Date: 6-24-2003, calibrated annually.

E. HP 1 - 26.5 GHz Preamplifier, Model 08449B, S/N 3008A01323. Calibration Date: 1-7-2004, calibrated annually.

F. EMCO LISN, Model EM 3825/2, S/N 9109-1860. Calibration Date: 3-10-2004, 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 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, the equipment was examined in three orthogonal planes, examined at 85 and 115 percent of input voltage or if battery operated new batteries were used. 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 C63.4-1992 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	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

TEST FACILITY DESCRIPTION

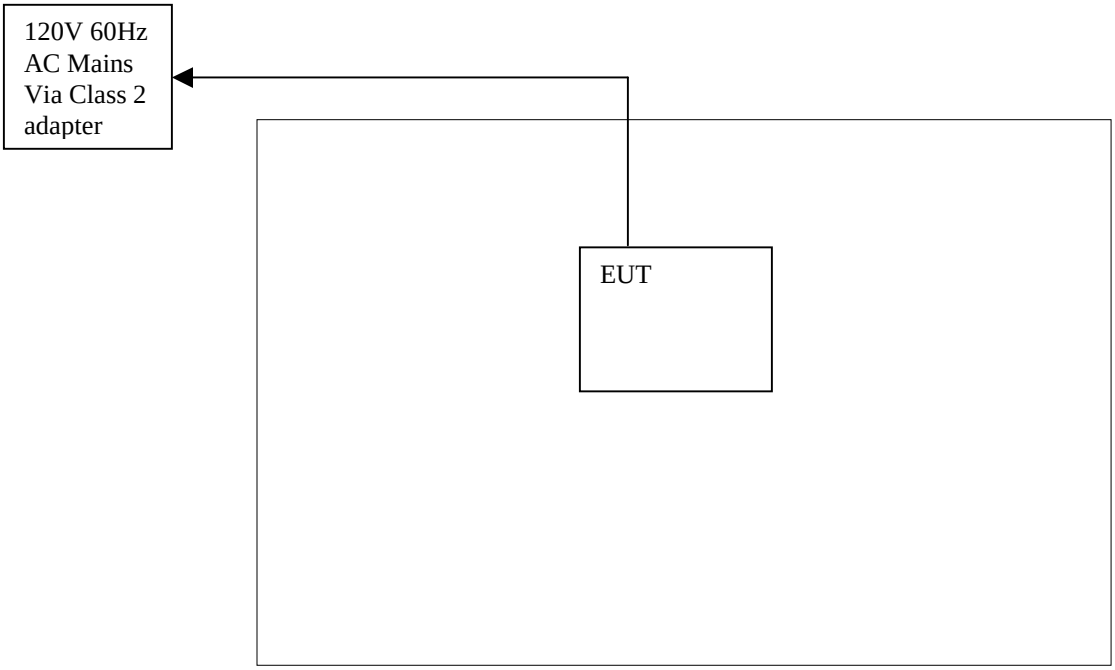
Compliance Worldwide is located on 357 Main Street in Sandown, New Hampshire. The conducted and radiated test sites, located at C.W. are used for Federal Communications Commission (FCC) testing and Industry Canada Testing. A site description is on file with the FCC in Columbia, MD USA. Site information 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.

TEST SET UP
AND
PERIPHERAL CONNECTION INFORMATION



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PLEASE NOTE - EUT (equipment under test) is 02010A 3 channel video 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 adapter 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 – 10,000 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

Radiated Channel A Tabular Data

Pol. (H/V)	Frequency (MHz)	QP/Avg Amplitude (dBuV/m)	QP/Avg Limit (dBuV/m)	QP/Avg Margin (dBuV/m)
H	1.820 GHz	46.9*	54	-7.1
H	2.730 GHz	41.9*	54	-12.1
4^{th} Through the 10^{th} harmonic, all are greater than 15 dB below limit.				

* Denotes an average detector value.

Radiated channel B Tabular Data

Pol. (H/V)	Frequency (MHz)	QP/Avg Amplitude (dBuV/m)	QP/Avg Limit (dBuV/m)	QP/Avg Margin (dBuV/m)
H	1.842 GHz	45.2*	54	-8.8
H	2.763 GHz	44.1*	54	-9.9
4^{th} Through the 10^{th} harmonic, all are greater than 15 dB below limit.				

* Denotes an average detector value.

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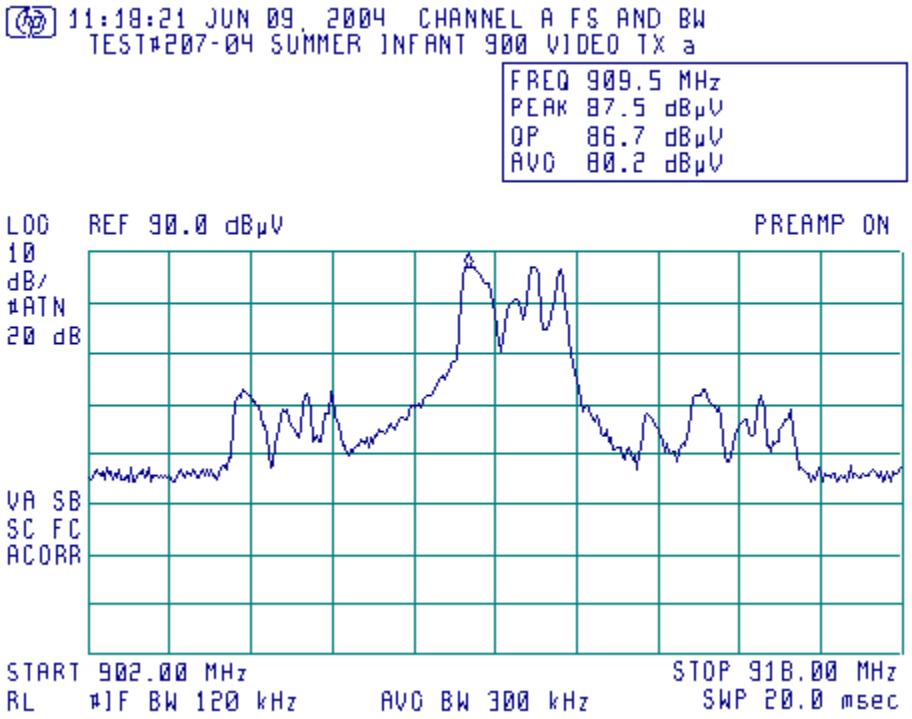
RADIATED OUTPUT POWER & OCCUPIED BANDWIDTH TEST RESULTS

Frequency Range:	902 - 928 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

Channel A Output Power Plot
(at max. modulation EUT transmission is within the band)



Frequency (MHz)	QP Amplitude (dBuV/m)	QP Limit (dBuV/m)	QPeak Margin (dBuV/m)
909.5	86.7	94.0	-7.3
905.0	60.8	94.0	-33.2
914.0	60.4	94.0	-33.6

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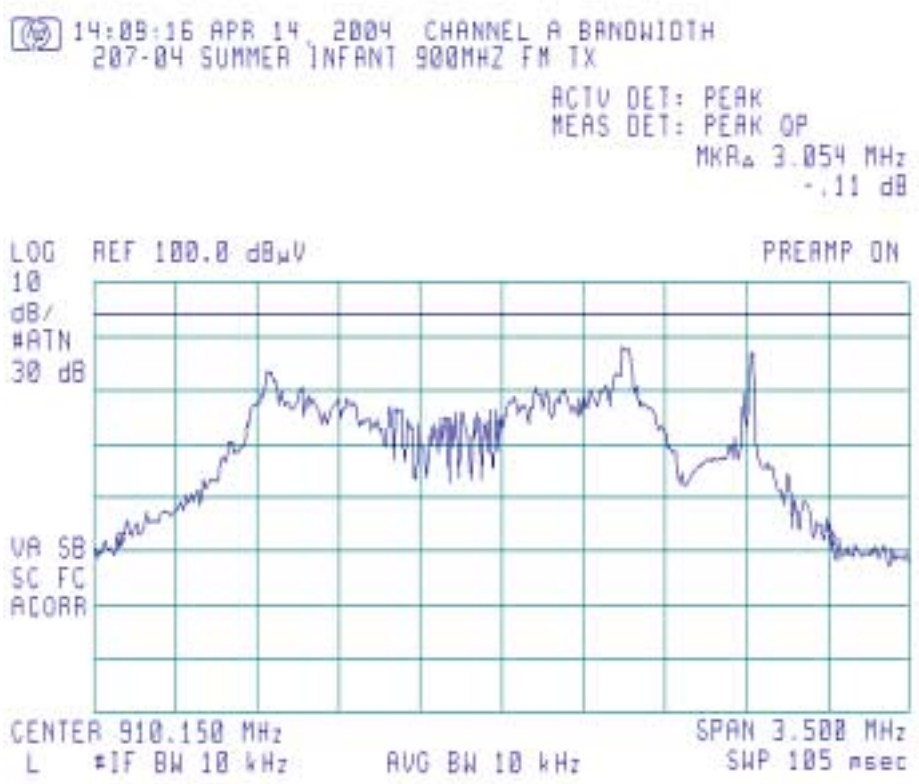
Channel A BW of Main Carrier



99% BW = 3.054MHz

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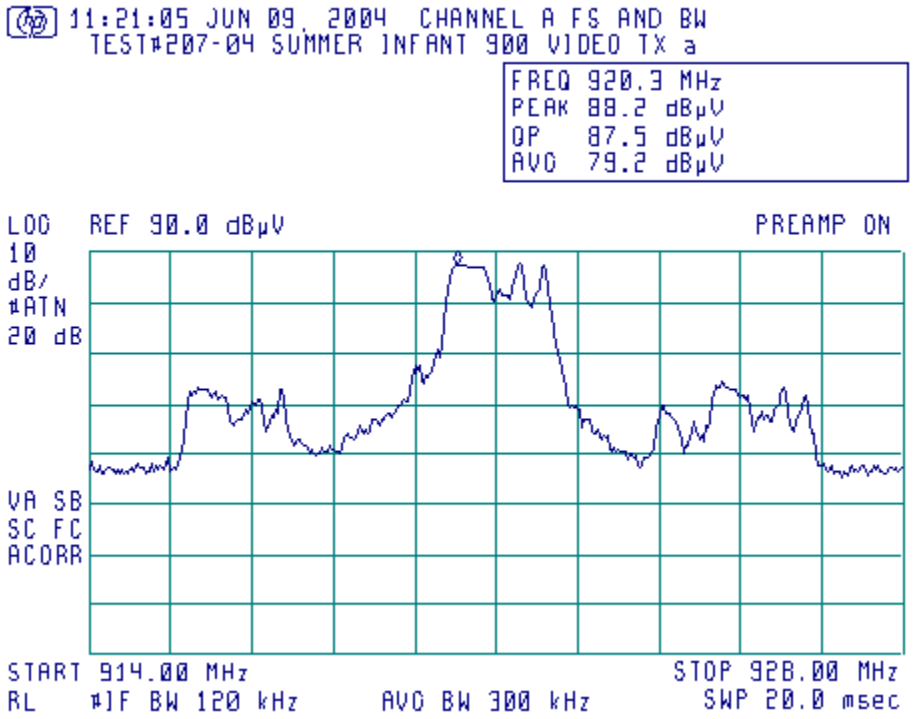
Channel B Output Power Plot
(at max. modulation EUT transmission is within the band)



Frequency (MHz)	QP Amplitude (dBuV/m)	QP Limit (dBuV/m)	QPeak Margin (dBuV/m)
915.1	87.5	94.0	-6.5
912.1	60.4	94.0	-33.6
918.1	59.5	94.0	-34.5

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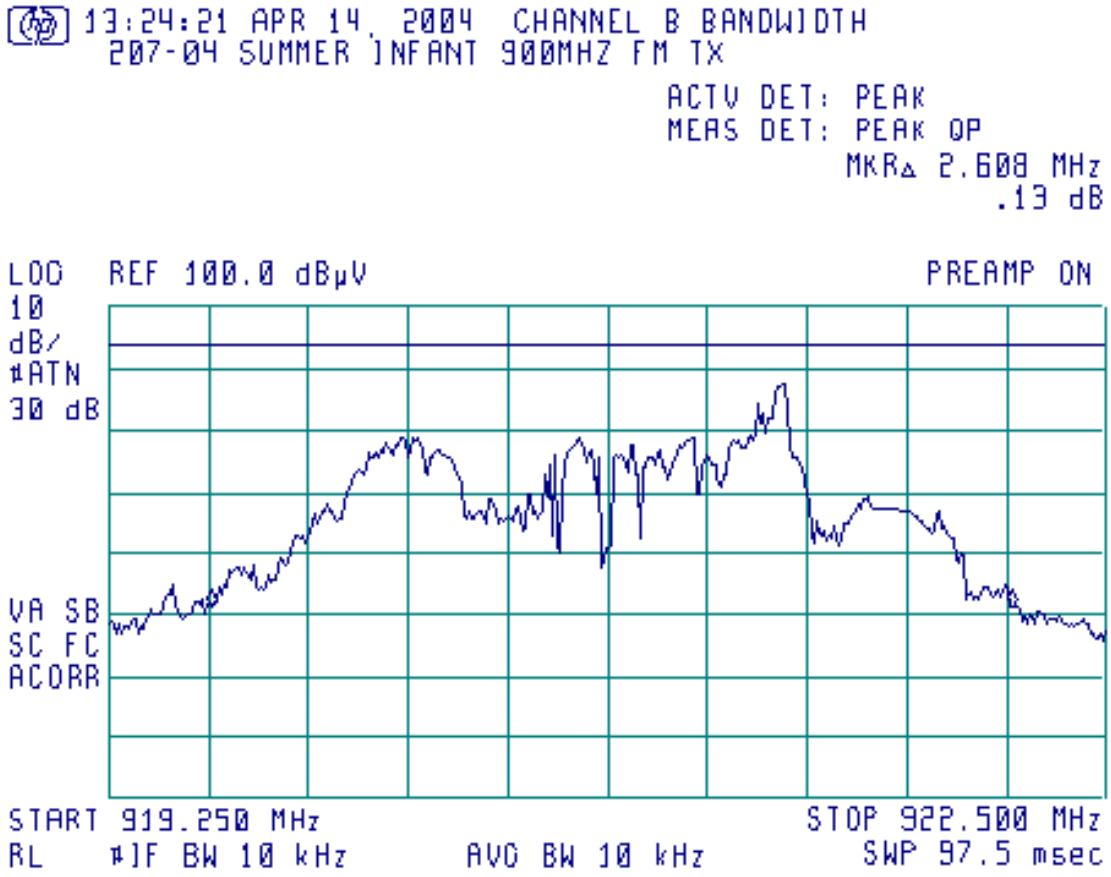
Channel B BW of Main Carrier



99% BW = 2.608MHz

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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.

PLEASE SEE NEXT PAGE FOR CONDUCTED TEST DATA

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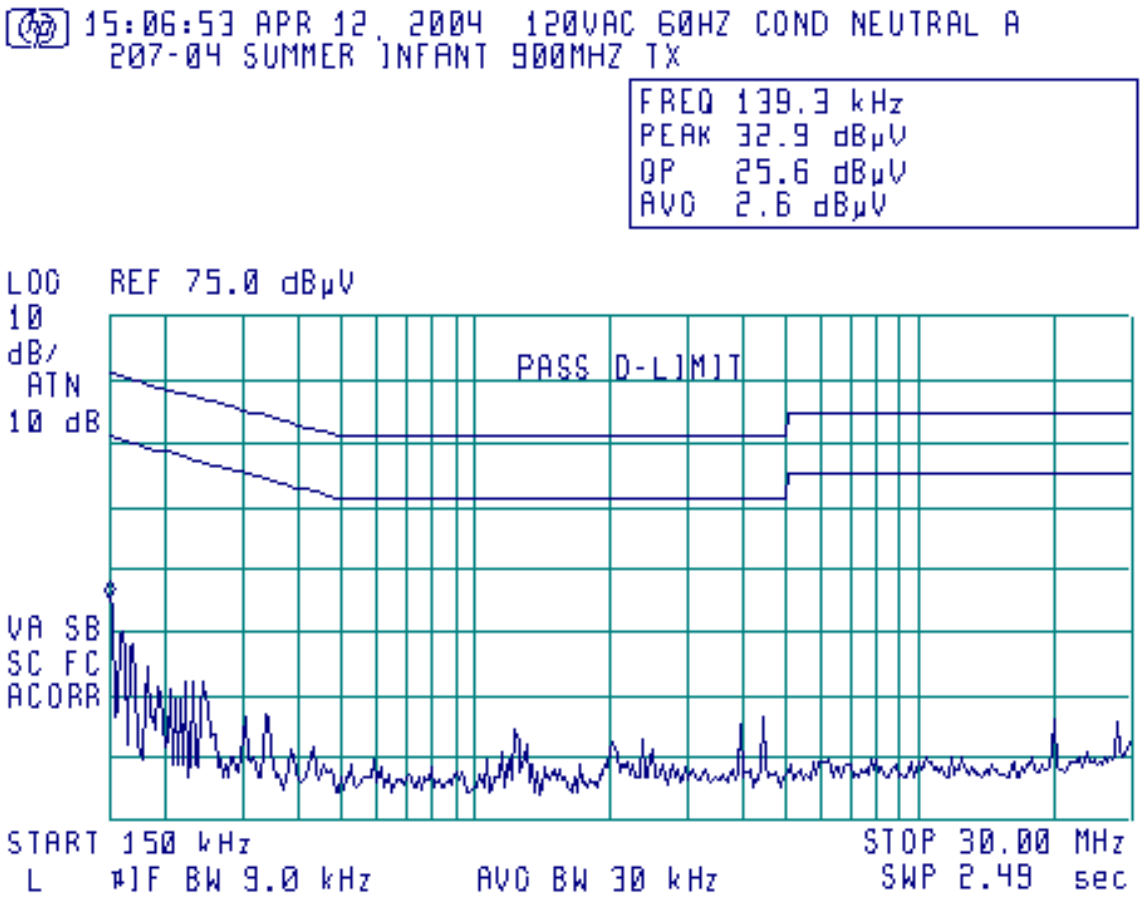
Conducted 120V 60Hz Neutral Data Log Plot



Peak Detector Used, Max Held.

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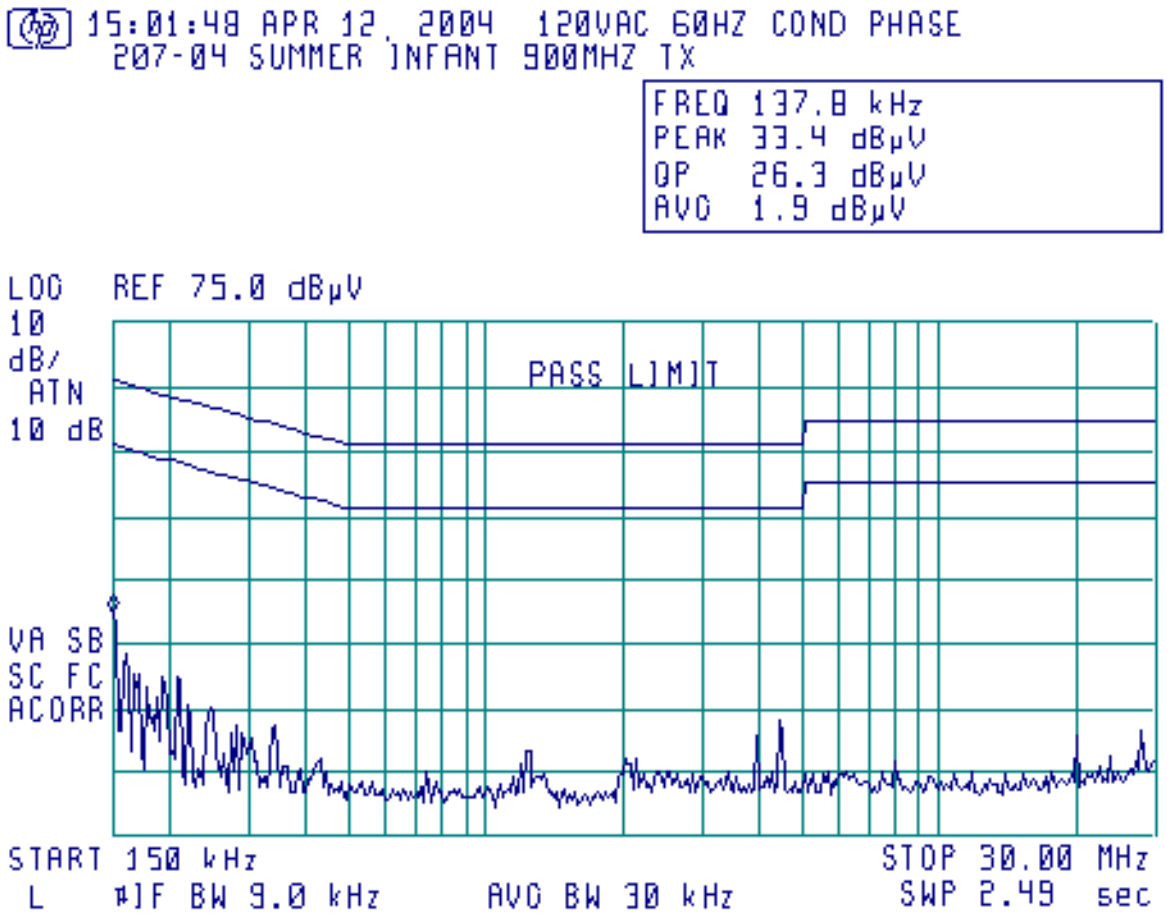
Conducted 120V 60Hz Phase Data Log Plot



Peak Detector Used, Max held.

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NOTES AND COMMENTS

(Special conditions unique to this test)

None

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