TEST NUMBER - 334-02

TEST REPORT TO

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

Low Power License-Exempt Radio communication Devices
Intentional Radiators

for

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

of

49 MHz Sound and Movement Monitor

02020

FCC ID: PZK-02020T

on

11/20/02

Tested by

Clifton P. Brick

Reviewed by

Larry K. Stillings

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TEST DESCRIPTION

1. TEST OBJECTIVE

To test the 49 MHz Sound and Movement 02020 Tx to RSS 210 / Part 15 Subpart C Rules and write a report.

2. E.U.T. DESCRIPTION

GENERAL

The 49 MHz Sound and Movement 02020 Tx is a Baby Monitor Audio and Motion sensing system.

SERIAL NUMBERS:

production prototype

TEST RESULTS AND CONCLUSIONS

PRODUCT TESTED - 49 MHz Sound and Movement

MODEL NUMBER - 02020 Tx

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)

Please note the last paragraph on page 6.

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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 10-25-2002, calibrated annually.

B. Com-Power Biconilog Antenna, Model AC220, S/N 25509. Calibration Date 12-14-2001, calibrated annually.

C. EMCO LISN, Model EM 3825/2, S/N 9109-1860. Calibration Date: 3-11-2002, 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 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 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).

FCC PART 15 and
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

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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.

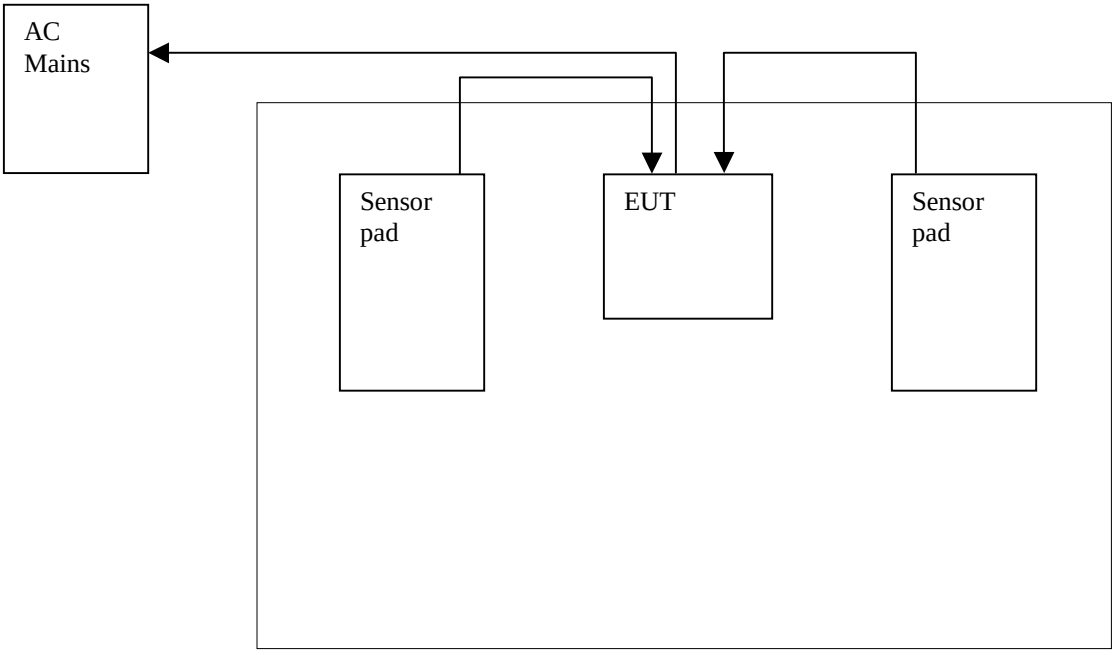
The conducted site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical metal wall required by EN 55022.

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

DATE ON FILE FCC: August 10, 2000

DATE ON FILE IC: August 11, 2000

TEST SET UP
AND
PERIPHERAL CONNECTION INFORMATION



Sensor pad is a vinyl bag with a foam insert, connected to a plastic hose, then to an unshielded 2 wire audio cable.

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PLEASE NOTE - EUT (equipment under test) is 49 MHz Sound and Movement Monitor.

The cables directly connected to this equipment are listed below.

Connection Descriptions

1. ___Power Cord with Class 2 transformer._____
(description)

____EUT_____
(from device)

____AC Mains via 9VDC 200mA transformer_____
(to device)

CABLE LENGTH __13'_ (S) SHIELDED or (U) UNSHIELDED _U__

2. ___Sensor Cable (2)_____
(description)

_____EUT_____
(from device)

____Sensor Pad_____
(to device)

CABLE LENGTH _ 7' _ (S) SHIELDED or (U) UNSHIELDED _U__

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

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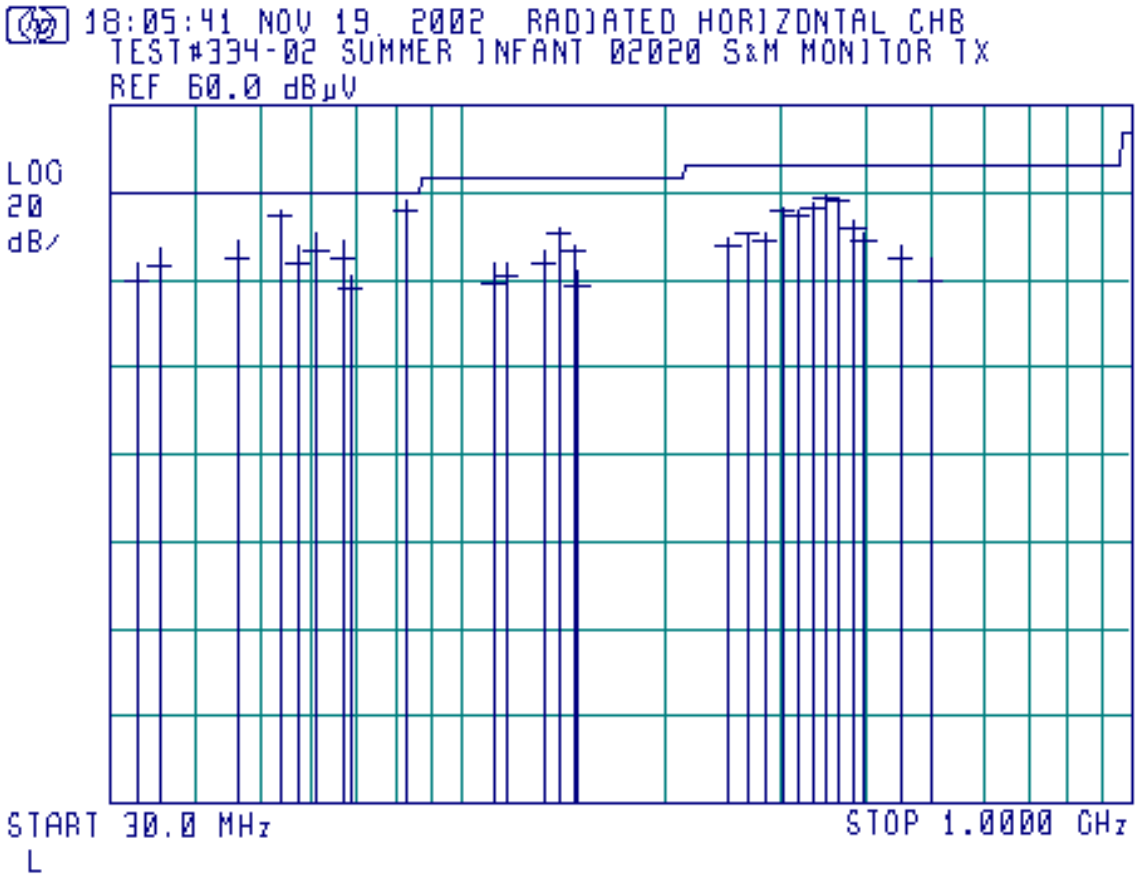
Radiated Horizontal Data Log Plot



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Radiated Horizontal Tabular Data

Freq (MHz)	Azimuth (Degrees)	Antenna Height (Meters)	Peak Amp (dBuV)	QP Amp (dBuV)	QP Limit (dBuV)	QP Margin (dB)
33.248163	4	1.0	24.62	20.56	40.00	-19.44
36.042013	354	1.0	27.25	23.64	40.00	-16.36
46.850063	300	1.9	28.80	25.58	40.00	-14.42
54.048525	4	2.9	36.15	34.78	40.00	-5.22
57.660925	4	1.9	28.42	24.70	40.00	-15.30
61.261425	234	2.4	31.08	26.97	40.00	-13.03
66.490850	44	3.2	29.36	25.06	40.00	-14.94
68.462300	220	1.7	21.41	17.92	40.00	-22.08
83.256225	354	2.2	38.43	36.17	40.00	-3.83
111.722450	50	1.6	24.30	19.49	43.50	-24.01
116.368300	254	2.8	24.22	21.03	43.50	-22.47
133.017063	250	3.1	26.79	24.85	43.50	-18.65
140.527913	40	3.1	32.34	30.42	43.50	-13.08
147.732563	58	2.4	28.56	26.56	43.50	-16.94
149.601963	268	2.5	22.49	18.64	43.50	-24.86
249.377288	240	1.1	30.18	28.47	46.00	-17.53
265.979238	324	1.3	31.78	30.71	46.00	-15.29
282.626888	268	1.4	30.67	29.01	46.00	-16.99
299.235700	84	1.2	37.27	36.17	46.00	-9.83
315.867763	250	1.3	36.23	34.88	46.00	-11.12
332.470738	80	1.0	37.48	36.64	46.00	-9.36
349.099763	50	1.7	40.28	39.26	46.00	-6.74
365.747188	84	1.7	39.64	38.21	46.00	-7.79
382.335263	74	1.0	33.75	32.13	46.00	-13.87
398.956800	254	1.0	30.95	28.79	46.00	-17.21
448.842600	78	1.0	28.12	25.56	46.00	-20.44
498.696900	20	1.1	25.04	20.59	46.00	-25.41

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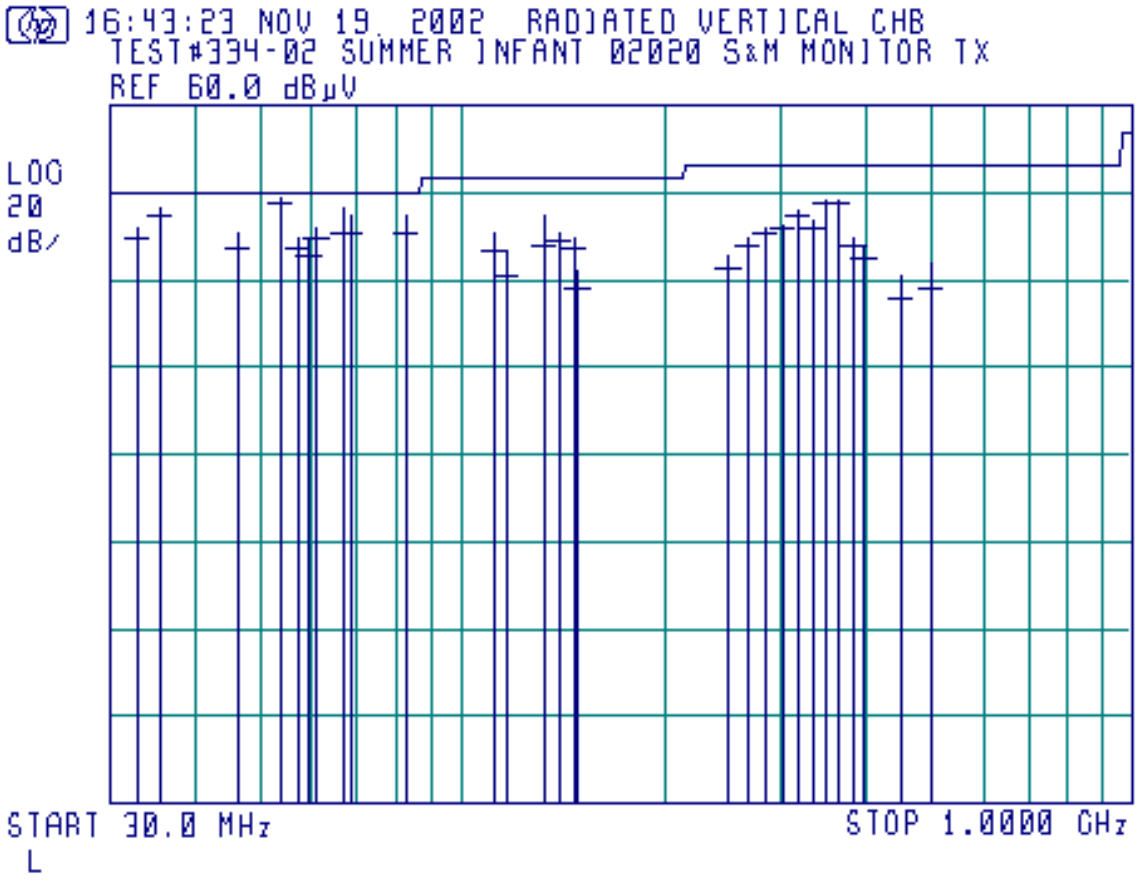
Radiated Vertical Data Log Plot



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Radiated Vertical Tabular Data

Freq (MHz)	Azimuth (degrees)	Antenna Height (Meters)	Peak Amp (dBuV)	QP Amp (dBuV)	QP limit (dBuV)	QP Margin (dB)
33.248163	238	1.0	32.14	29.94	40.00	-10.06
36.042013	244	1.0	37.02	34.47	40.00	-5.53
46.850063	118	1.0	30.91	27.58	40.00	-12.42
54.048525	100	1.0	39.22	38.02	40.00	-1.98
57.660925	150	1.0	30.05	27.58	40.00	-12.42
59.463675	84	1.0	28.91	25.71	40.00	-14.29
61.261425	120	1.0	32.31	29.66	40.00	-10.34
66.490850	330	1.0	37.01	31.39	40.00	-8.61
68.462300	220	1.0	34.56	31.32	40.00	-8.68
83.256225	354	1.6	34.71	30.86	40.00	-9.14
111.722450	340	1.0	31.42	26.78	43.50	-16.72
116.368300	4	1.0	26.91	21.39	43.50	-22.11
133.017063	4	1.0	34.98	28.72	43.50	-14.78
140.527913	234	1.0	30.92	29.47	43.50	-14.03
147.732563	178	1.0	29.64	27.90	43.50	-15.60
149.601963	4	1.0	22.23	18.58	43.50	-24.92
249.377288	284	1.0	25.98	23.19	46.00	-22.81
265.979238	194	1.0	29.92	28.17	46.00	-17.83
282.626888	60	1.0	32.42	31.39	46.00	-14.61
299.235700	74	2.0	33.29	32.01	46.00	-13.99
315.867763	240	1.9	35.81	34.51	46.00	-11.49
332.470738	284	1.0	33.57	32.28	46.00	-13.72
349.099763	354	1.9	38.85	37.80	46.00	-8.20
365.747188	4	2.0	38.45	37.49	46.00	-8.51
382.335263	354	1.7	30.30	28.35	46.00	-17.65
398.956800	160	1.5	27.73	25.25	46.00	-20.75
448.842600	354	1.5	21.01	16.02	46.00	-29.98
498.696900	220	1.5	24.16	18.11	46.00	-27.89

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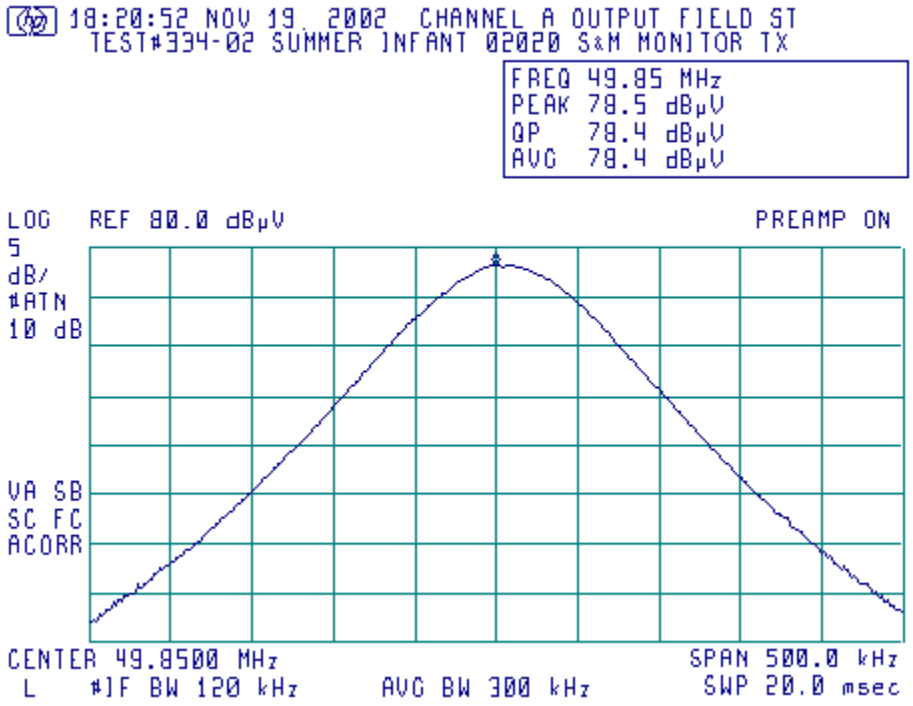
RADIATED OUTPUT POWER & OCCUPIED BANDWIDTH TEST RESULTS

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.

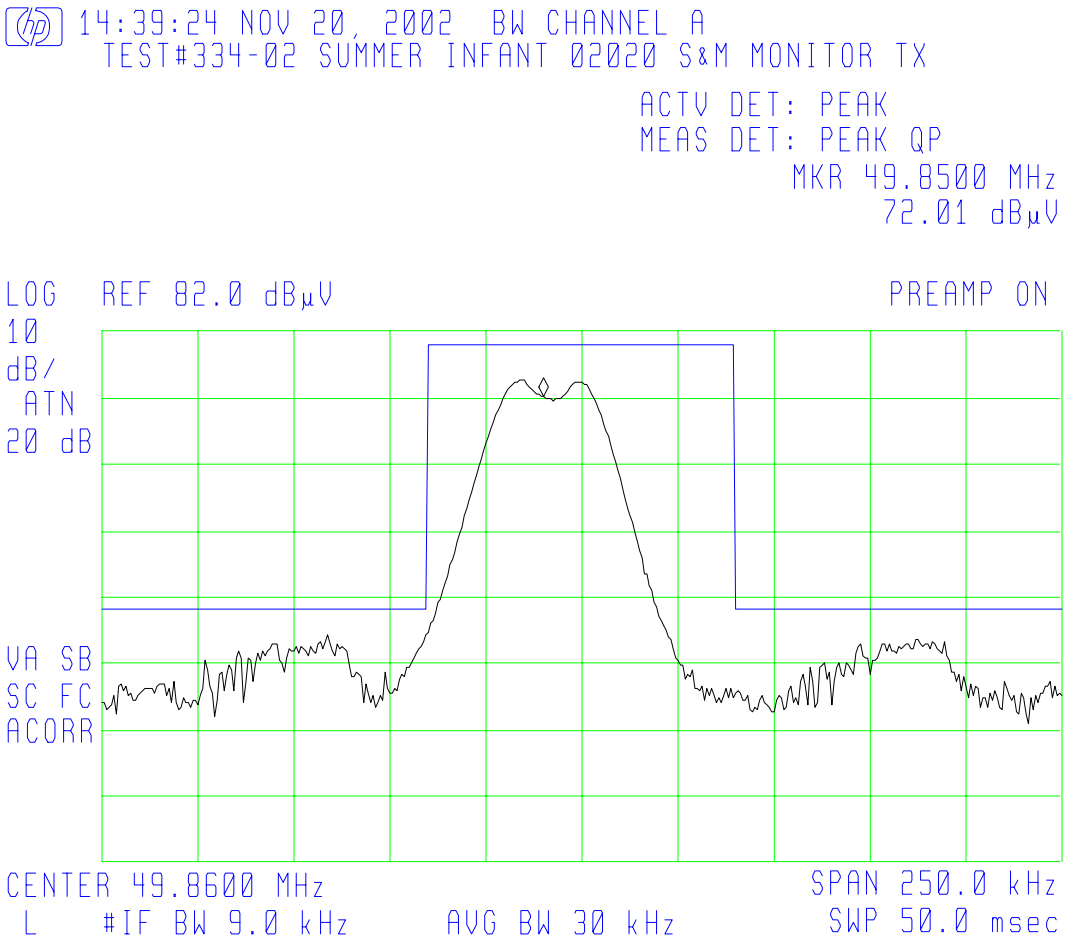
PLEASE SEE NEXT PAGE(S) FOR OCCUPIED BANDWIDTH RADIATED TEST DATA

Channel A Output Power



Freq (MHz)	Azimuth (Degrees)	Antenna Height (meters)	Peak Amp (dBuV/m)	Avg Amp (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)
49.850	268	1.3	78.5	78.4	80.0	-1.6

Channel A Occupied Bandwidth Plot



Display shows a mask with the top limit at 80 dBuV/m, and the band 49.82-49.90 MHz wide with the limit around the band per 15.209. An audio signal of 3.5kHz increased to maximum modulation depth was found to worst case modulation, and is as shown in the plot.

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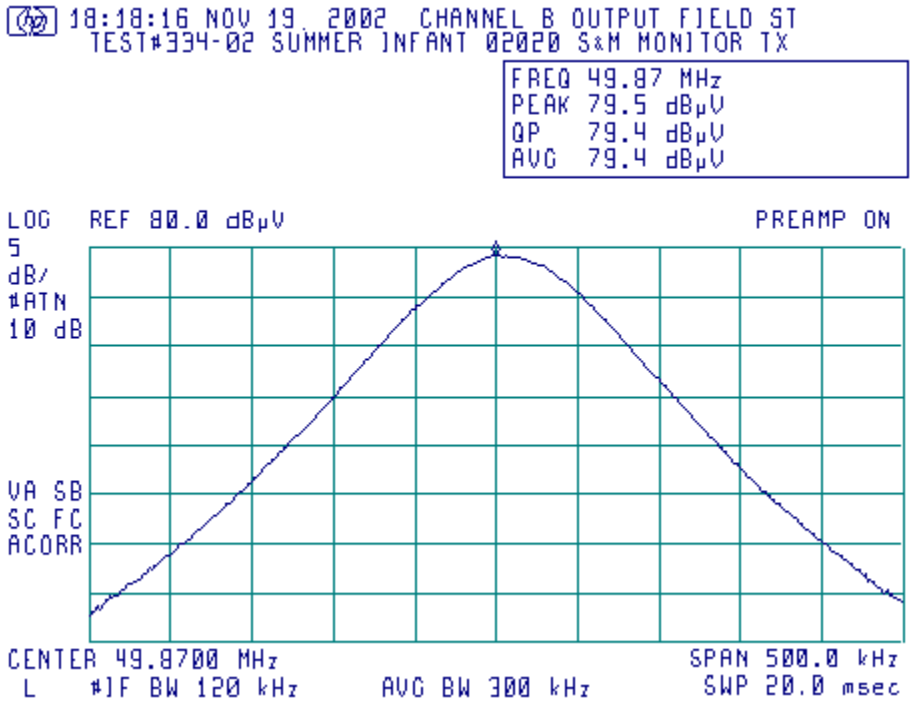
Channel B Output Power



Freq (MHz)	Azimuth (Degrees)	Antenna Height (meters)	Peak Amp (dBuV/m)	Avg Amp (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)
49.850	268	1.3	79.5	79.4	80.0	-0.6

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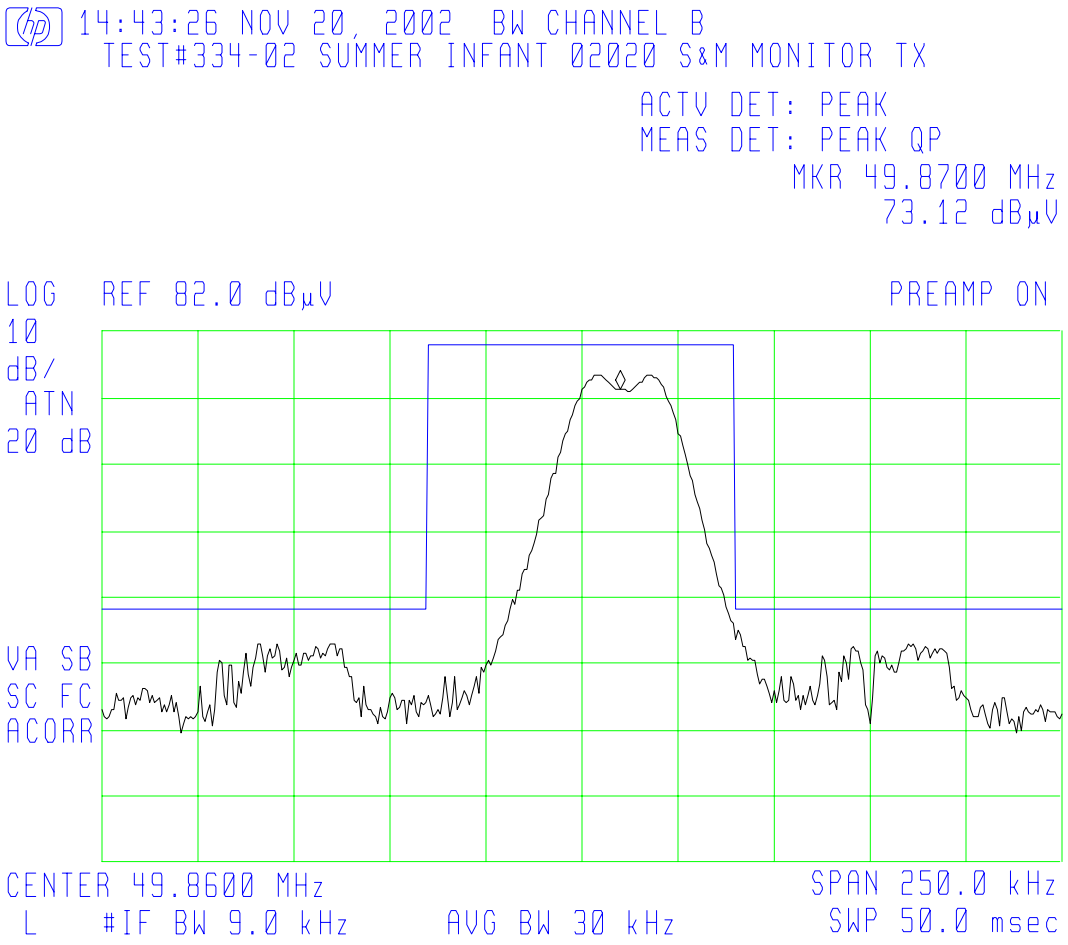
Channel B Occupied Bandwidth Plot



Display shows a mask with the top limit at 80 dBuV/m, and the band 49.82-49.90 MHz wide with the limit around the band per 15.209. An audio signal of 3.5kHz increased to maximum modulation depth was found to worst case modulation, and is as shown in the 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.

PLEASE SEE NEXT PAGE FOR CONDUCTED TEST DATA

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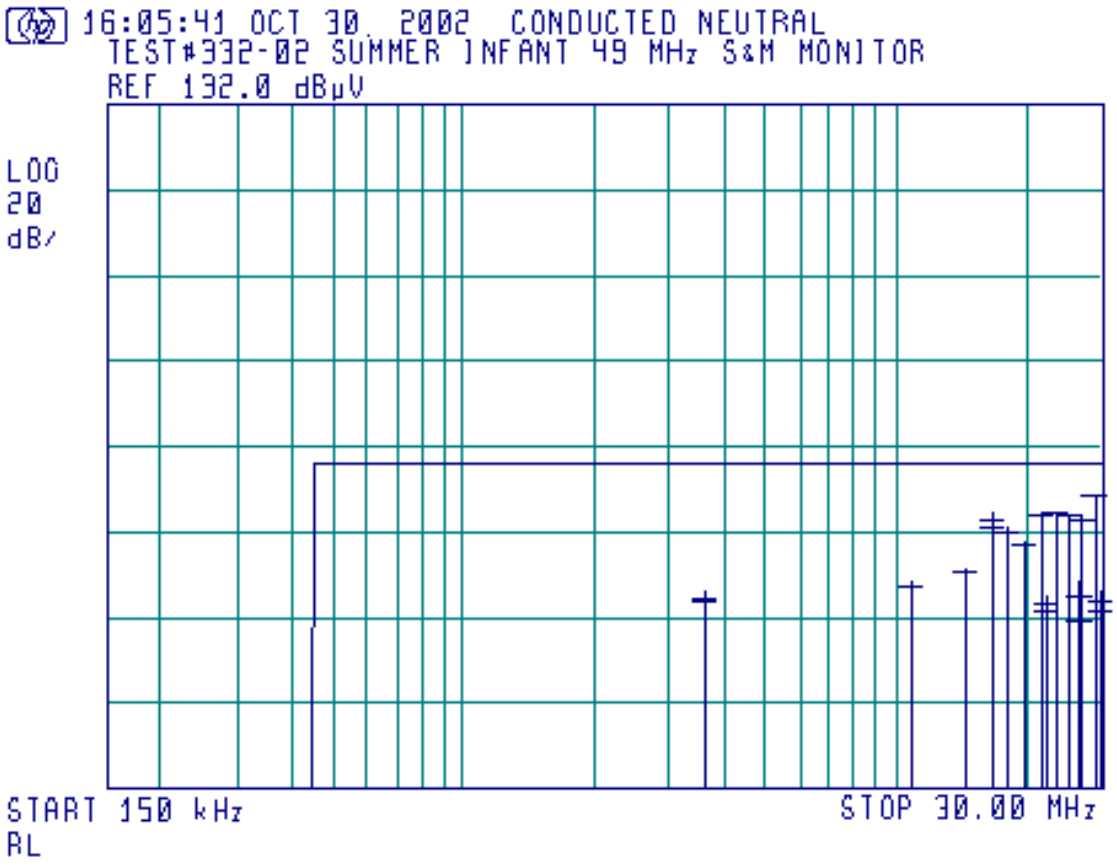
Conducted 120V 60Hz Neutral Data Log Plot



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Conducted 120V 60Hz Neutral Tabular Data

Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP Limit (dBuV)	QP Margin (dB)
3.595171	18.35	16.82	48.00	-31.18
10.788967	20.44	19.77	48.00	-28.23
14.382758	24.05	23.12	48.00	-24.88
16.626914	37.12	34.67	48.00	-13.33
17.979496	33.26	32.76	48.00	-15.24
19.776488	29.80	29.30	48.00	-18.70
21.574700	36.95	36.59	48.00	-11.41
22.365268	17.71	15.17	48.00	-32.83
23.372904	37.12	36.83	48.00	-11.17
25.171002	36.78	36.43	48.00	-11.57
26.382123	20.55	17.79	48.00	-30.21
26.967923	36.24	35.41	48.00	-12.59
28.766283	41.35	41.15	48.00	-6.85
29.556705	18.52	15.73	48.00	-32.27

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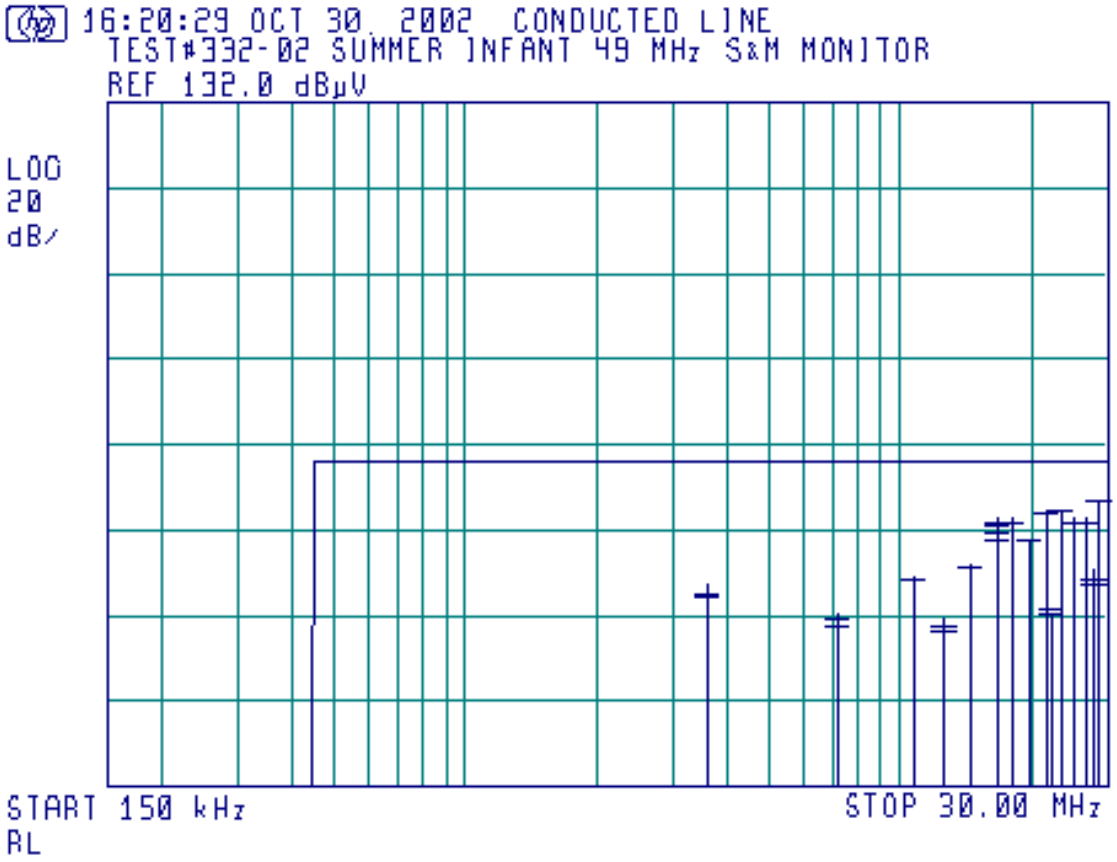
Conducted 120V 60Hz Phase Data Log Plot



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Conducted 120V 60Hz Phase Tabular Data

Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP Limit (dBuV)	QP Margin (dB)
3.596831	19.18	17.74	48.00	-30.26
7.191622	13.03	11.19	48.00	-36.81
10.787189	21.80	21.01	48.00	-26.99
12.585079	11.21	9.51	48.00	-38.49
14.383843	24.76	23.89	48.00	-24.11
16.624417	35.49	34.12	48.00	-13.88
16.627207	35.22	32.04	48.00	-15.96
17.978944	34.48	34.07	48.00	-13.93
19.777254	30.29	29.86	48.00	-18.14
21.574700	36.87	36.56	48.00	-11.44
22.363983	11.88	13.62	48.00	-34.38
23.373463	37.17	36.88	48.00	-11.12
25.171201	34.63	34.25	48.00	-13.75
26.968125	35.09	34.01	48.00	-13.99
27.758968	23.16	20.84	48.00	-27.16
28.767031	39.78	39.47	48.00	-8.53

NOTES AND COMMENTS

(Special conditions unique to this test)

Please see the last paragraph on page 6.