1250 Peterson Dr., Wheeling, IL 60090

Company: Midmark Corporation
Model Tested: 625-003, 625-006
Report Number: 15874

FCC Rules and Regulations / Intentional Radiators

Operational in the 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz Bands

Part 15, Subpart C, Section 15.249

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name:	625 Wireless Basestation
FCC ID:	U39 9A429T1
Kind of Equipment:	Medical Exam Table
Frequency Range:	2405 - 2480 MHz
Test Configuration:	Stand Alone (Tested at 240 vac, 60 Hz)
Model Number(s):	625-001, 625-002, 625-003, 625-005, 625-006
Model(s) Tested:	625-003, 625-006
Serial Number(s):	N/A
Date of Tests:	November 17 & 18, 2009, and February 16, 2010
Test Conducted For:	Midmark Corporation 60 Vista Drive Versailles, Ohio 45380

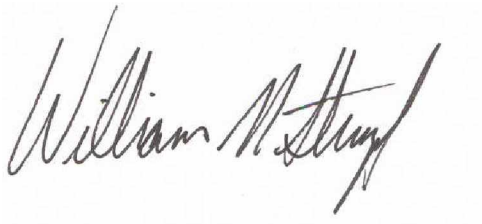
NOTICE: "This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government". Please see the "Additional Description of Equipment Under Test" page listed inside of this report.

SIGNATURE PAGE

Report By:

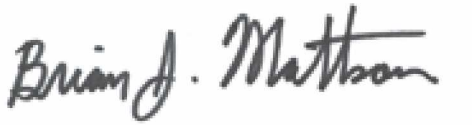
Arnom C. Rowe
Test Engineer
EMC-001375-NE

Reviewed By:



William Stumpf
OATS Manager

Approved By:



Brian Mattson
General Manager

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United States Department of Commerce
National Institute of Standards and Technology

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D.L.S. Electronic Systems, Inc.

Wheeling, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

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This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA

2009-10-01 through 2010-09-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

1.0 SUMMARY OF TEST REPORT

It was found that the 625 Wireless Basestation, Model Number(s) 625-003, 625-006 **meets** the radio interference radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.249 for operational in the 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz Bands.

2.0 INTRODUCTION

On November 17 & 18, 2009, a series of radio frequency interference measurements was performed on 625 Wireless Basestation, Model Number(s) 625-003, 625-006, Serial Number: N/A. The tests were performed according to the procedures of the FCC as stated in the "Methods of Measurement of Radio-Noise Emissions for Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" found in the American National Standards Institute, ANSI C63.4-2003. Tests were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

D.L.S. Electronic Systems, Inc. is a full service EMC/Safety Testing Laboratory accredited to ISO 17025. NVLAP Certificate and Scope can be viewed at http://www.dlsemc.com/certificate. Our facilities are registered with the FCC, Industry Canada, and VCCI.

Main Test Facility:
D.L.S. Electronic Systems, Inc.
1250 Peterson Drive
Wheeling, Illinois 60090

O.A.T.S. Test Facility:
D.L.S. Electronic Systems, Inc.
166 S. Carter Street
Genoa City, Wisconsin 53128
FCC Registration Number: 334127

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency interference emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Sections 15.35(b), 15.37(d), 15.209 & 15.249 for Intentional Radiators operating in the Bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24-24.25 GHz.

4.0 TEST SET-UP

All emission tests were performed at D.L.S. Electronic Systems, Inc. and set up according to the ANSI C63.4-2003, Annex H. The conducted tests were performed with the test item placed on a non-conductive table (table top equipment), located in the test room. Equipment normally operated on the floor was tested by placing it on the metal ground plane. The ground plane has an electrical isolation layer over its surface approximately 7mm thick. The power line supplied was connected to a dual line impedance stabilization network electrically bonded to the ground plane, located on the floor. The networks were constructed per the requirements of the ANSI C63.4-2003, Annex H.

All radiated emissions tests were performed with the test item placed on a 80 cm high rotating non-conductive table, located in the test room. Equipment normally operated on the floor was placed on a metal covered turntable which is flush with the surrounding conducting ground plane. The ground plane has an electrical isolation layer over its surface approximately 7 mm thick. The EUT is separated from the turntable ground plane by a non-conductive layer. The equipment under test was set up according to ANSI C63.4-2003, Sections 6 and 8.

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

All preliminary data below 1000 MHz was automatically plotted using the ESI 26/40 Fixed Tuned Receiver. The data was taken using Peak, Quasi-Peak or the Average Detector Functions as required. This information was then used to determine the frequencies of maximum emissions. Above 1000 MHz, final data was taken using the Average Detector.

Below 1000 MHz, final data was taken using the ESI 26/40 Fixed Tuned Receiver. These plots were made using the Peak or Quasi-Peak Detector functions, with manual measurements performed on the questionable frequencies using the Quasi-Peak or the Average Detector Function of the ESI 26/40 Fixed Tuned Receiver as required. Above 1000 MHz, final data was taken using the Average Detector on the Spectrum Analyzer.

The bandwidths shown below are specified by ANSI C63.4-2003, Section 4.2.

Frequency Range	Bandwidth (-6 dB)
10 to 150 kHz	200 Hz
150 kHz to 30 MHz	9 kHz
30 MHz to 1 GHz	120 kHz
Above 1 GHz	1 MHz

A list of the equipment used can be found in Table 1. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.

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6.0 AMBIENT MEASUREMENTS

For emissions measurements, broadband antennas and an EMI Test Receiver with a panoramic spectrum display are used. First the frequency range is scanned and displayed on the test receiver display. Next the scanned frequency range is divided into smaller ranges, and then it is manually tuned through to determine the emissions from the EUT. A headset or loudspeaker is connected to the test receiver's AM/FM demodulated output as an aid in detecting ambient signals and finding frequencies of significant emission from the EUT. If there is any doubt as to the source of the emission, it is further investigated by rotating the EUT, or by disconnecting the power from the EUT.

The EUT is set up in its typical configuration and operated in its various modes. For tabletop systems, cables are manipulated within the range of likely configurations. For floor-standing equipment, the cables are located in the same manner as the user would install them and no further manipulation is made. If the manner of cable installation is not known, or if it changes with each installation, cables or wires for floor-standing equipment shall be manipulated to the extent possible to produce the maximum level of emissions. For each mode of operation, the frequency spectrum is monitored. Variations in antenna height, antenna polarization, EUT azimuth, and cable or wire placement (each variable within bounds specified elsewhere) are explored to produce the emissions that have the highest amplitude relative to the limit. These methods are performed to the specifications in ANSI C63.4-2003.

7.0 DESCRIPTION OF TEST SAMPLE: (See also Paragraph 8.0)

7.1 Description:

Exam table used to position a patient for a medical exam.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 54 Width: 32 Height: 18-37

7.3 LINE FILTER USED:

Corcom 10EH1

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

N/A

Clock Frequencies:

25 MHz

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

1. Main Control Board PN: 015-2371-00 A6
2. Upholstery heater control board PN: 015-2628-00 A1
3. Basestation PN: 015-2086-00 C

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8.0 ADDITIONAL DESCRIPTION OF TEST SAMPLE:
(See also Paragraph 7.0)

1: There were no additional descriptions noted at the time of test.

NOTE:

The EUT was tested in continuous transmit mode in which it was continuously transmitting a constant pulse train.
The EUT was tested in continuous receive mode.
The EUT was tested at the low, mid and high channels (2405 MHz, 2445 MHz, and 2480 MHz).
The EUT was tested inside the Midmark 625 Table (host unit).
The EUT was tested for AC Line Conducted Emissions separate from host at 120V 60Hz. Using an off the shelf, standard, unmodified AC to DC power supply.

9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 625 Wireless Basestation
Model Number: 625-003, 625-006; Serial Number: N/A

Item 1 Midmark 625 Table (host unit).

Item 2 2.5 meter, non-shielded, AC power cord.

Item 3 Hand switch.

Item 4 Foot switch.

Item 5 Two non-shielded, 2-meter, AC output power cords.

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10.0 RADIATED PHOTOS TAKEN DURING TESTING

Radiated Side 1

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Radiated Side 2

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Radiated Side 3

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Radiated Side 4

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Close-up of Radio Board

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Close-up of Antenna

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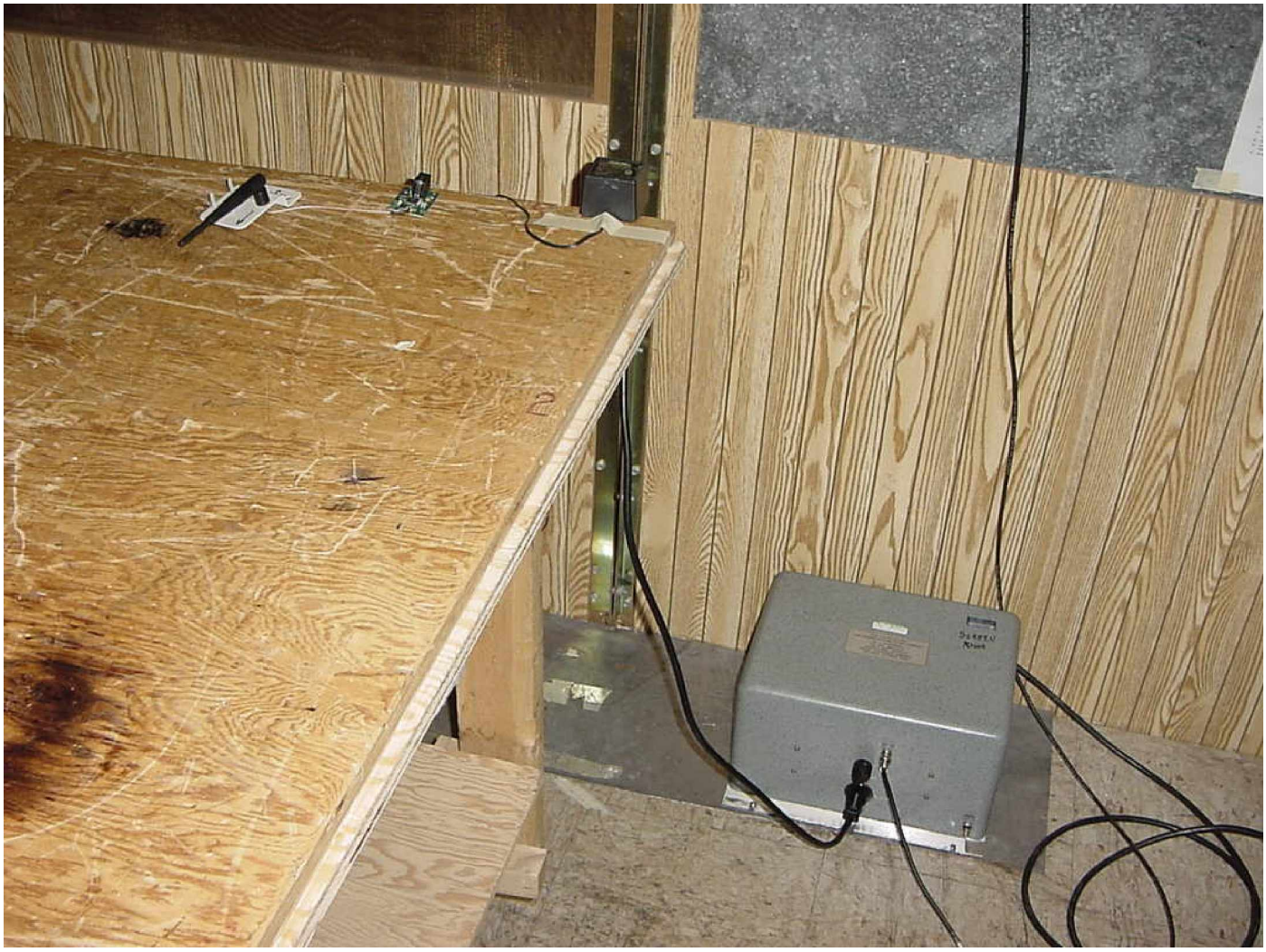
10.0 CONDUCTED PHOTOS TAKEN DURING TESTING



Conducted Front

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10.0 CONDUCTED PHOTOS TAKEN DURING TESTING (CON'T)

Conducted Back

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11.0 RESULTS OF TESTS

The radio interference emission charts can be seen on the pages at the end of this report. Data sheets indicating the test measurements taken during testing can also be found at the end of this report.

12.0 CONCLUSION

It was found that the 625 Wireless Basestation, Model Number(s) 625-003, 625-006 **meets** the radio interference radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.249 for operational in the 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz Bands.

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TABLE 1 – EQUIPMENT LIST

Description	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	7/10
Preamplifier	Rohde & Schwarz	TS-PR10	032001/003	9 kHz – 1 GHz	1/10
Antenna	EMCO	3104C	4849	20 MHz – 200 MHz	4/10
Antenna	Electro-Metrics	LPA-25	1114	200 MHz – 1 GHz	7/11
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18 GHz-26 GHz	8/10
Horn Antenna	EMCO	3116	2549	18 – 40 GHz	8/10
High Pass Filter	Planar	CL22500-9000-CD-SS	PF1229/0728	15-40 GHz	7/10
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	12/09
LISN	Solar	9252-50-R-24-BNC	971612	10 kHz – 30 MHz	1/10
Filter- High-Pass	SOLAR	7930-120	090701	120 kHz	2/10
Limiter	Electro-Metrics	EM-7600	705	10 kHz – 30 MHz	1/10

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

APPENDIX A

TEST PROCEDURE

Part 15, Subpart C, Section 15.249(a)(c)(d)(e)

Operation within the Bands 902-928 MHz,

2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz

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APPENDIX A

1.0 CONDUCTED EMISSION MEASUREMENTS

Conducted emissions were measured over the frequency range from 150 kHz to 30 MHz in accordance with the power line measurements as specified in FCC Part 15, Subpart C, Section 15.207 & ANSI C63.4-2003. Since the device is operated from the public utility lines, the 120 Vac, 60 Hz power leads, high (hot) and low (neutral) sides, were measured by connecting the measuring equipment to the appropriate meter terminal of the LISN. During the test, the cables were placed and items moved (when appropriate) to maximize emissions. All signals were then recorded. The allowed levels for Intentional Radiators which is designed to connected to the public utility (AC) power line cannot exceed the following:

Frequency of Emissions (MHz)	Conducted Limits (dBuV)	
	Quasi Peak	Average
.15 to .5	66 to 56	56 to 46
.5 to 5	56	46
5 to 30	60	50

NOTE:

All test measurements were made at a screen room temperature of **68° F** at **63%** relative humidty.

APPENDIX A

AC POWER LINE CONDUCTED DATA AND GRAPHS TAKEN DURING TESTING

PART 15.207

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APPENDIX A

FCC Part 15 Class B

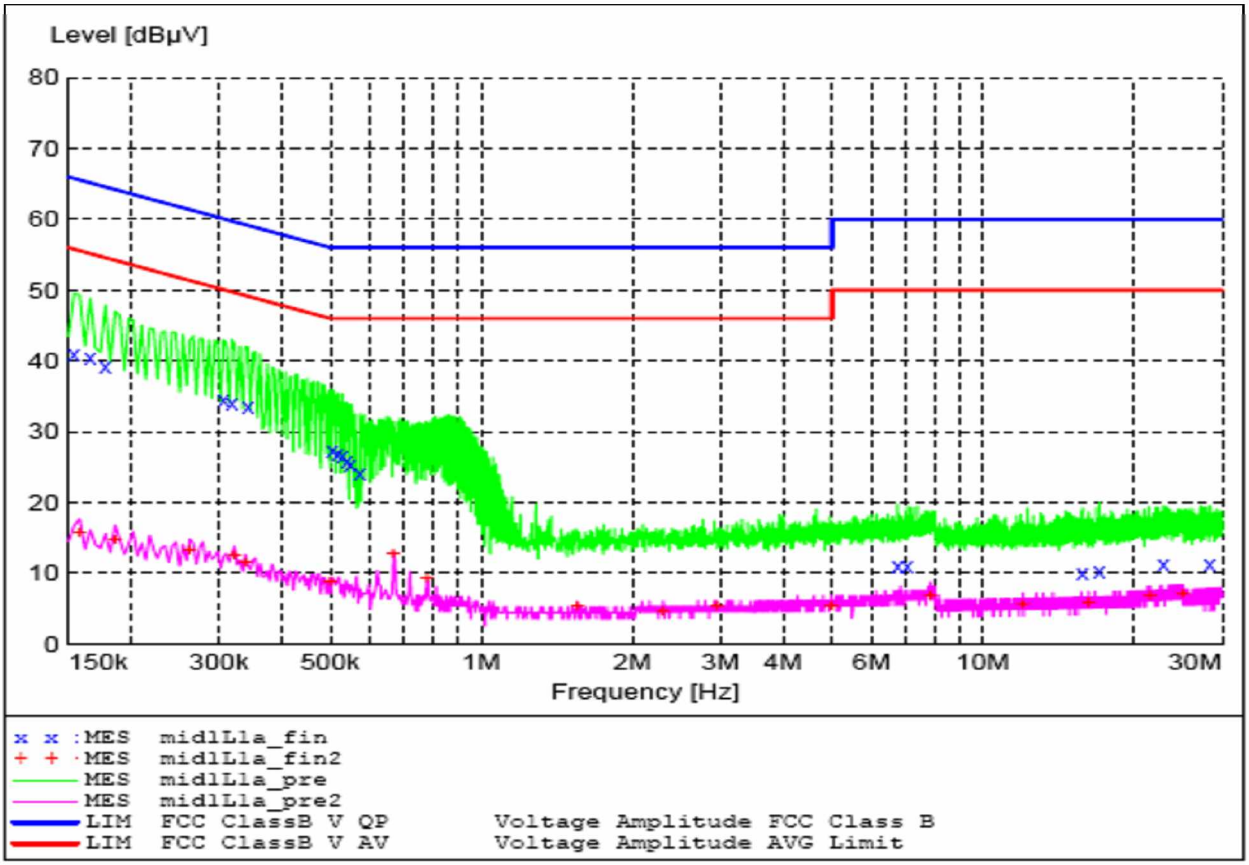
Voltage Mains Test

EUT: Basestation Transceiver
Manufacturer: Midmark Corp.
Operating Condition: 69 deg. F, 24% R.H.
Test Site: DLS O.F. Screenroom
Operator: Adam A
Test Specification: Line 1
Comment: 120 V 60 Hz - Tx
Date: 02-16-2010

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description: Line Conducted Emissions

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak CISPR AV	2.0 s	9 kHz	LISN DLS#128



Page 1/2 2/16/2010 3:38PM midlLla

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APPENDIX A

MEASUREMENT RESULT: "mid1L1a_fin"

2/16/2010 3:38PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154000	41.10	12.7	66	24.7	QP	---	---
0.166000	40.50	12.5	65	24.7	QP	---	---
0.178000	39.30	12.2	65	25.3	QP	---	---
0.306000	34.60	10.7	60	25.5	QP	---	---
0.318000	34.10	10.7	60	25.7	QP	---	---
0.342000	33.50	10.6	59	25.7	QP	---	---
0.504000	27.30	10.4	56	28.7	QP	---	---
0.516000	26.90	10.4	56	29.1	QP	---	---
0.528000	26.50	10.5	56	29.5	QP	---	---
0.540000	25.90	10.5	56	30.1	QP	---	---
0.548000	25.50	10.5	56	30.5	QP	---	---
0.572000	24.20	10.5	56	31.8	QP	---	---
6.760000	11.10	10.2	60	48.9	QP	---	---
7.056000	11.10	10.2	60	48.9	QP	---	---
15.816000	10.10	10.6	60	49.9	QP	---	---
17.076000	10.20	10.7	60	49.8	QP	---	---
22.928000	11.40	10.9	60	48.6	QP	---	---
28.332000	11.20	11.2	60	48.8	QP	---	---

MEASUREMENT RESULT: "mid1L1a_fin2"

2/16/2010 3:38PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.158000	15.70	12.6	56	39.9	CAV	---	---
0.186000	14.70	12.0	54	39.5	CAV	---	---
0.262000	13.30	10.9	51	38.1	CAV	---	---
0.322000	12.40	10.7	50	37.3	CAV	---	---
0.338000	11.50	10.6	49	37.8	CAV	---	---
0.500000	8.90	10.4	46	37.1	CAV	---	---
0.668000	12.70	10.3	46	33.3	CAV	---	---
0.780000	9.20	10.2	46	36.8	CAV	---	---
1.552000	5.30	10.0	46	40.7	CAV	---	---
2.304000	4.50	10.0	46	41.5	CAV	---	---
2.952000	5.40	10.1	46	40.6	CAV	---	---
4.980000	5.40	10.1	46	40.6	CAV	---	---
5.000000	5.40	10.1	46	40.6	CAV	---	---
7.872000	6.90	10.2	50	43.1	CAV	---	---
12.024000	5.70	10.4	50	44.3	CAV	---	---
16.256000	5.90	10.6	50	44.1	CAV	---	---
21.536000	6.80	10.8	50	43.2	CAV	---	---
25.020000	7.00	11.0	50	43.0	CAV	---	---

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APPENDIX A

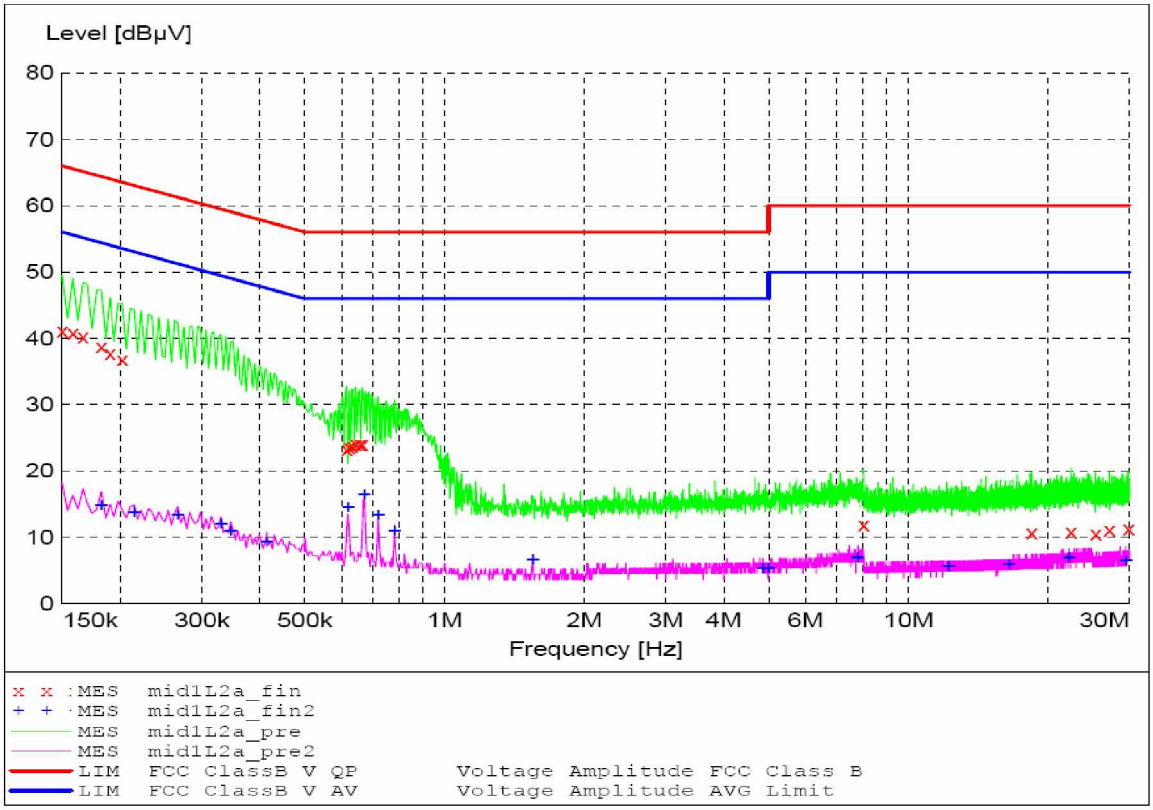
FCC Part 15 Class B

Voltage Mains Test

```
EUT:                    Basestation Transceiver
Manufacturer:           Midmark Corp.
Operating Condition:    69 deg. F,  24%  R.H.
Test Site:              DLS O.F. Screenroom
Operator:               Adam A
Test Specification:     Line 2
Comment:                120 V  60 Hz - Tx
                        Date:  02-16-2010
```

SCAN TABLE: "Line Cond Scrn RmFin"

```
  Short Description:              Line Conducted Emissions
  Start       Stop        Step        Detector  Meas.     IF       Transducer
  Frequency   Frequency   Width                 Time      Bandw.
  150.0 kHz   30.0 MHz    4.0 kHz     QuasiPeak 2.0 s     9 kHz    LISN DLS#128
                                      CISPR AV
```




```
Page 1/2   2/16/2010  3:45PM   mid1L2a
```

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APPENDIX A

MEASUREMENT RESULT: "mid1L2a_fin"

2/16/2010 3:45PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	41.20	12.8	66	24.8	QP	---	---
0.158000	40.90	12.6	66	24.7	QP	---	---
0.166000	40.30	12.5	65	24.9	QP	---	---
0.182000	38.70	12.1	64	25.7	QP	---	---
0.190000	37.80	11.9	64	26.2	QP	---	---
0.202000	36.80	11.7	64	26.7	QP	---	---
0.616000	23.30	10.4	56	32.7	QP	---	---
0.624000	23.60	10.4	56	32.4	QP	---	---
0.632000	23.80	10.4	56	32.2	QP	---	---
0.644000	24.00	10.3	56	32.0	QP	---	---
0.656000	24.00	10.3	56	32.0	QP	---	---
0.664000	24.00	10.3	56	32.0	QP	---	---
8.008000	11.90	10.2	60	48.1	QP	---	---
18.424000	10.70	10.7	60	49.3	QP	---	---
22.448000	10.90	10.9	60	49.1	QP	---	---
25.380000	10.60	11.0	60	49.4	QP	---	---
27.136000	11.10	11.1	60	48.9	QP	---	---
29.860000	11.20	11.2	60	48.8	QP	---	---

MEASUREMENT RESULT: "mid1L2a_fin2"

2/16/2010 3:45PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.182000	14.80	12.1	54	39.6	CAV	---	---
0.214000	13.80	11.4	53	39.2	CAV	---	---
0.266000	13.30	10.9	51	37.9	CAV	---	---
0.330000	12.00	10.7	50	37.5	CAV	---	---
0.346000	11.00	10.6	49	38.1	CAV	---	---
0.414000	9.30	10.3	48	38.3	CAV	---	---
0.620000	14.60	10.4	46	31.4	CAV	---	---
0.672000	16.50	10.3	46	29.5	CAV	---	---
0.720000	13.30	10.2	46	32.7	CAV	---	---
0.780000	11.00	10.2	46	35.0	CAV	---	---
1.552000	6.70	10.0	46	39.3	CAV	---	---
4.868000	5.40	10.1	46	40.6	CAV	---	---
5.000000	5.40	10.1	46	40.6	CAV	---	---
7.776000	6.90	10.2	50	43.1	CAV	---	---
12.216000	5.70	10.4	50	44.3	CAV	---	---
16.496000	5.90	10.6	50	44.1	CAV	---	---
22.252000	6.90	10.9	50	43.1	CAV	---	---
29.472000	6.50	11.2	50	43.5	CAV	---	---

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APPENDIX A

2.0 BAND EDGE AND RESTRICTED BAND COMPLIANCE

The field strength of any emissions appearing outside the 902 to 928 MHz band shall not exceed the general radiated emissions limits as stated Section 15.209. The fundamental from the 625 Wireless Basestation transmitter shall not be inside the restricted band 960 to 1240 MHz.

As stated in Section 15.205a, the fundamental emission from the 625 Wireless Basestation shall not fall within any of the bands listed below:

Frequency in MHz	Frequency in MHz	Frequency in MHz	Frequency in GHz
.0900 to .1100	162.0125 to 167.17	2310.0 to 2390	9.30 to 9.50
.4900 to .5100	167.7200 to 173.20	2483.5 to 2500	10.60 to 12.70
2.1735 to 2.1905	240.000 to 285.00	2655.0 to 2900	13.25 to 13.40
8.362 to 8.3660	322.200 to 335.40	3260.0 to 3267	14.47 to 14.50
13.36 to 13.410	399.900 to 410.00	3332.0 to 3339	15.35 to 16.20
25.50 to 25.670	608.000 to 614.00	3345.8 to 3358	17.70 to 21.40
37.50 to 38.250	960.000 to 1240.00	3600.0 to 4400	22.01 to 23.13
73.00 to 75.500	1300.000 to 1427.00	4500.0 to 5250	23.60 to 24.00
108.00 to 121.94	1435.000 to 1626.50	5350.0 to 5450	31.20 to 31.80
123.00 to 138.00	1660.000 to 1710.00	7250.0 to 7750	36.43 to 36.50
149.90 to 150.00	1718.800 to 1722.20	8025.0 to 8500	ABOVE 38.60
156.70 to 156.90	2200.000 to 2300.00	9000.0 to 9200	

NOTE:

The noise floor within the Restricted Bands for the EMC Receiver will typically lay 20 dB below the limit.

See the following page (s) for the graph (s) made showing compliance for Band Edge. Also see the table of measurements made for the Fundamental, Harmonic, Spurious and Restricted Band emissions in paragraph 4 of this section.

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APPENDIX A

BAND EDGE

DATA AND GRAPH(S)

PART 15.249

APPENDIX A

Radiated Upper Band-Edge Measurement

Test Methodology

Because the upper band-edge coincides with a restricted band, band-edge compliance for the upper band-edge was determined using the radiated mark-delta method as outlined in FCC KDB Publication 913591. The radiated field strength of the fundamental emission was first determined and then the mark-delta method was used to determine the field strength of the band-edge emissions.

Upper Band-Edge Marker Delta Method

Frequency (MHz)	Antenna Polarity (H/V)	Fundamental Field Strength (dBµV/m)	Duty Cycle Correction (dB)	Delta-Marker (dB)	Band-Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2480 (Peak)	V	95.54	N/A	-31.75	63.79	74	10.21
2480 (Avg)	V	95.54	-13.92	-31.75	49.87	54	4.13

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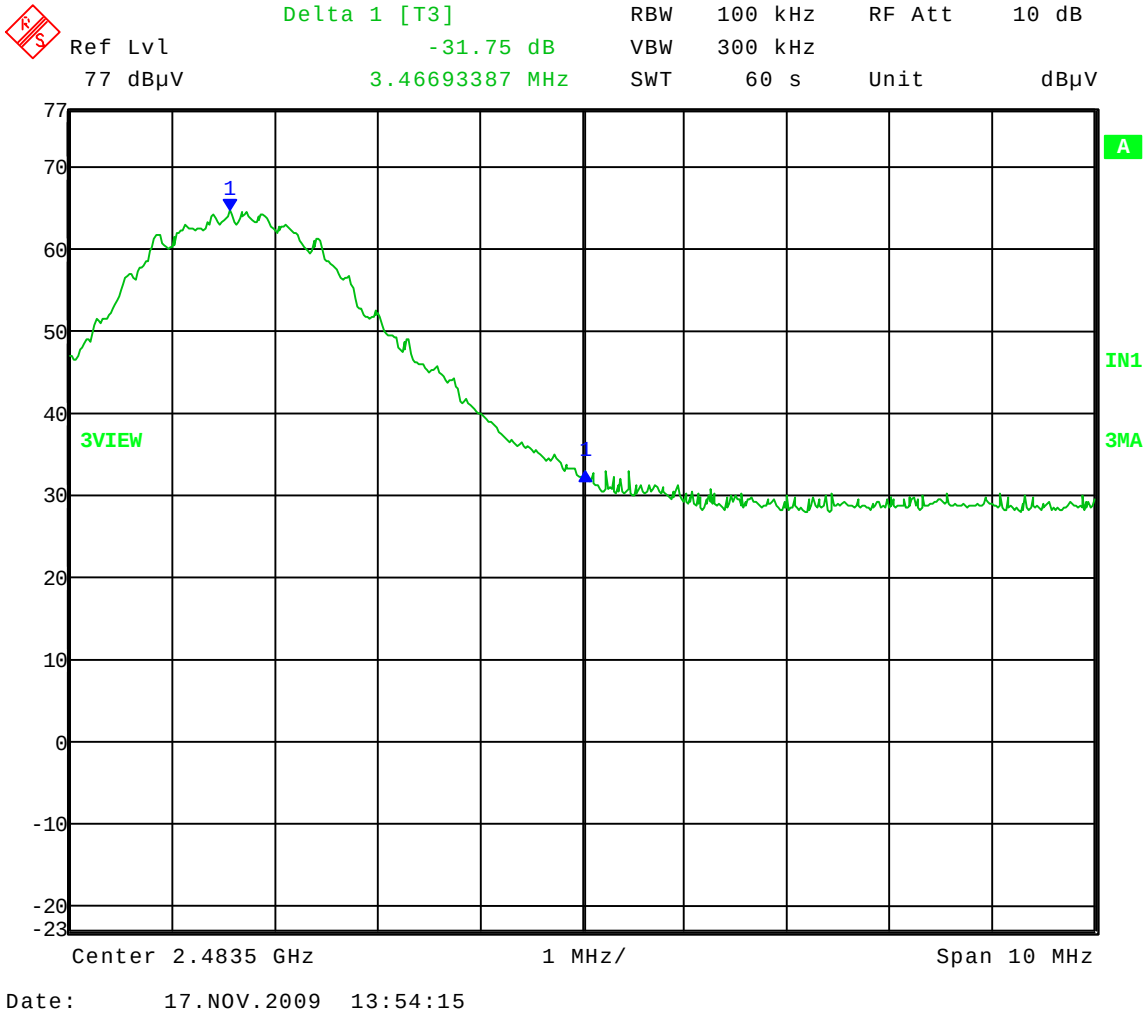
APPENDIX A

Test Date: 11-17-2009
Company: Midmark Corporation
EUT: Midmark 625 Wireless Basestation
Test: Upper Band-Edge Radiated – Marker Delta Method
Operator: Craig B
Comment: High Channel: Frequency – 2.480 GHz



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APPENDIX A

3.0 ANTENNA CONNECTOR – 15.203

As stated in 15.203 the 625 Wireless Basestation was designed to ensure that no antenna other than that furnished by Midmark Corporation will be used with the EUT. The use of a permanently attached antenna or antenna that uses an unique coupling to the intentional radiator was considered to comply with section 15.203.

4.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS (SECTION 15.249a-d)

The radiated measurements made at D.L.S. Electronic Systems, Inc., for the 625 Wireless Basestation, Model Number: 625-003, 625-006, are shown in tabulated and graph form. Preliminary radiation measurements were performed at a 3 meter test distance with the limits adjusted linearly when required. The frequency range from 30 MHz to over 960 MHz, depending upon the fundamental frequency as stated in Part 15.33a, was automatically scanned and plotted at various angles.

Measurements for the 625 Wireless Basestation were made up to 26000 MHz, in accordance with Section 15.33a for Intentional Radiators with a fundamental frequency of 2405 - 2480 MHz MHz. For intentional radiators, the frequency range to be investigated is determined by the lowest radio frequency generated by the device without going below 30 MHz, up to at least the tenth harmonic of the highest fundamental frequency or 10 GHz, whichever is lower. At those frequencies where significant signals were detected, measurements were made over the entire frequency range specified in FCC Part 15, Subpart C, Section 15.249 at the open field test site, located at Genoa City, Wisconsin, FCC file number **31040/SIT**. When required, levels were extrapolated from 10 meters to 3 meters using a linear extrapolation.

All signals in the frequency range of 30 MHz to 2000 MHz were measured with a Biconical Antenna or tuned dipoles and from 200 MHz to 1000 MHz, a Log Periodic or Tuned Dipoles were used. From 1000 MHz to 10 GHz Horn Antennas were used. During the test the equipment was rotated and the antenna was raised and lowered from 1 meter to 4 meters to find the maximum level of emissions. In order to find maximum emissions, the cables were moved through all the positions the equipment would be expected to experience in the field. The EUT, peripheral equipment and cables were configured to meet the conditions in ANSI C63.4-2003, Clauses 6 & 8. Tests were made with the receive antenna(s) in both the horizontal and vertical planes of polarization. In each case, the table was rotated to find the maximum emissions.

APPENDIX A

4.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS (CON'T)

For operation in the bands 902 to 928 MHz, 2400 to 2483.5 MHz, 5725 to 5875 MHz, and 24.0 to 24.25 GHz the field strength of any emissions within this band shall not exceed the field strength levels specified in the following table as stated in FCC, Part 15, Section 15.249(a).

Frequency range in MHz	Field Strength of Fundamental millivolts/meter	Field Strength of Fundamental dBuV/meter	Field Strength of Harmonics microvolts/meter	Field Strength of Harmonics dBuV/meter
902 to 928	50	93.98	500	53.98
2400 to 2483.5	50	93.98	500	53.98
5725 to 5875	50	93.98	500	53.98
24000 to 24250	250	107.96	2500	67.96

Field strength limits are at a distance of 3 meters. The emission limits shown are based on measurement instrumentation employing an average detector.

Emissions radiated outside of the specified frequency bands, except for harmonics are attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Preliminary radiated emission measurements were performed at a 3 meter test distance. The frequency range from 30 MHz to 1000 MHz was automatically scanned and plotted at various angles.

NOTE:

All radiated emissions measurements were made at a test room temperature of 70°F at 36% relative humidity.

APPENDIX A

RADIATED DATA TAKEN FOR

FUNDAMENTAL, HARMONIC & SPURIOUS

EMISSIONS MEASUREMENTS

PART 15.249

APPENDIX A

Radiated Fundamental and Spurious Emissions – 30 MHz to 26 GHz

30 MHz to 10 GHz Tested at a 3 Meter Distance
10 GHz to 26 GHz Tested at a 1 Meter Distance

EUT: Model: Midmark 625 Table Base Station Transceiver
Manufacturer: Midmark Corporation
Operating Condition: 70 deg F; 36% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.249 and Part 15.205
Comment: Transmit at Low channel: 2.405 GHz
Date: 11-17-2009
Notes: All other emissions at least 20 dB under the limit.

Frequency (GHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Duty Cycle Correction (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
2.405	Max Peak	Vert	57.73	28.33	9.6	0	95.66	114	18.34	1.03	337	Fundamental
2.405	Average	Vert	57.73	28.33	9.6	-13.92	81.74	94	12.26	1.03	337	Fundamental
2.405	Max Peak	Horz	62.14	28.33	9.6	0	100.07	114	13.93	1.06	258	Fundamental
2.405	Average	Horz	62.14	28.33	9.6	-13.92	86.15	94	7.85	1.06	258	Fundamental
4.810	Max Peak	Vert	58.42	32.89	-30.6	0	60.71	74	13.29	1.00	283	Harmonic
4.810	Average	Vert	58.42	32.89	-30.6	-13.92	46.79	54	7.21	1.00	283	Harmonic
4.810	Max Peak	Horz	52.37	32.89	-30.6	0	54.66	74	19.34	1.00	270	Harmonic
4.810	Average	Horz	52.37	32.89	-30.6	-13.92	40.74	54	13.26	1.00	270	Harmonic
7.215	Max Peak	Vert	48.44	35.80	-27.6	0	56.64	74	17.36	1.00	322	Harmonic
7.215	Average	Vert	48.44	35.80	-27.6	-13.92	42.72	54	11.28	1.00	322	Harmonic

APPENDIX A

Radiated Fundamental and Spurious Emissions – 30 MHz to 26 GHz

30 MHz to 10 GHz Tested at a 3 Meter Distance
10 GHz to 26 GHz Tested at a 1 Meter Distance

EUT: Model: Midmark 625 Table Base Station Transceiver
Manufacturer: Midmark Corporation
Operating Condition: 71 deg F; 37% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.249 and Part 15.205
Comment: Transmit at Mid channel: 2.445 GHz
Date: 11-18-2009
Notes: All other emissions at least 20 dB under the limit.

Frequency (GHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Duty Cycle Correction (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
2.445	Max Peak	Vert	60.97	28.45	9.6	0	99.02	114	14.98	1.14	320	Fundamental
2.445	Average	Vert	60.97	28.45	9.6	-13.92	85.1	94	8.9	1.14	320	Fundamental
2.445	Max Peak	Horz	61.82	28.45	9.6	0	99.87	114	14.13	1.00	302	Fundamental
2.445	Average	Horz	61.82	28.45	9.6	-13.92	85.95	94	8.05	1.00	302	Fundamental
4.890	Max Peak	Vert	60.79	33.00	-30.5	0	63.29	74	10.71	1.01	286	Harmonic
4.890	Average	Vert	60.79	33.00	-30.5	-13.92	49.37	54	4.63	1.01	286	Harmonic
4.890	Max Peak	Horz	55.11	33.00	-30.5	0	57.61	74	16.39	1.00	269	Harmonic
4.890	Average	Horz	55.11	33.00	-30.5	-13.92	43.69	54	10.31	1.00	269	Harmonic
7.335	Max Peak	Vert	49.56	36.12	-26.9	0	58.78	74	15.22	1.00	0	Harmonic
7.335	Average	Vert	49.56	36.12	-26.9	-13.92	44.86	54	9.14	1.00	0	Harmonic
7.335	Max Peak	Horz	48.12	36.12	-26.9	0	57.34	74	16.66	1.00	7	Harmonic
7.335	Average	Horz	48.12	36.12	-26.9	-13.92	43.42	54	10.58	1.00	7	Harmonic

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Company: Midmark Corporation
Model Tested: 625-003, 625-006
Report Number: 15874

APPENDIX A

Radiated Fundamental and Spurious Emissions – 30 MHz to 26 GHz

30 MHz to 10 GHz Tested at a 3 Meter Distance

10 GHz to 26 GHz Tested at a 1 Meter Distance

EUT: Model: Midmark 625 Table Base Station Transceiver
Manufacturer: Midmark Corporation
Operating Condition: 70 deg F; 36% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.249 and Part 15.205
Comment: Transmit at High channel: 2.480 GHz
Date: 11-17-2009
Notes: All other emissions at least 20 dB under the limit.

Frequency (GHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Duty Cycle Correction (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
2.480	Max Peak	Vert	58.67	28.56	9.7	0	96.93	114	17.07	1.11	318	Fundamental
2.480	Average	Vert	58.67	28.56	9.7	-13.92	83.01	94	10.99	1.11	318	Fundamental
2.480	Max Peak	Horz	57.49	28.56	9.7	0	95.75	114	18.25	1.00	238	Fundamental
2.480	Average	Horz	57.49	28.56	9.7	-13.92	81.83	94	12.17	1.00	238	Fundamental
4.960	Max Peak	Vert	55.48	33.09	-30.7	0	57.87	74	16.13	1.00	286	Harmonic
4.960	Average	Vert	55.48	33.09	-30.7	-13.92	43.95	54	10.05	1.00	286	Harmonic
4.960	Max Peak	Horz	54.58	33.09	-30.7	0	56.97	74	17.03	1.14	349	Harmonic
4.960	Average	Horz	54.58	33.09	-30.7	-13.92	43.05	54	10.95	1.14	349	Harmonic
7.440	Max Peak	Vert	46.96	36.4	-26.1	0	57.26	74	16.74	1.00	0	Harmonic
7.440	Average	Vert	46.96	36.4	-26.1	-13.92	43.34	54	10.66	1.00	0	Harmonic

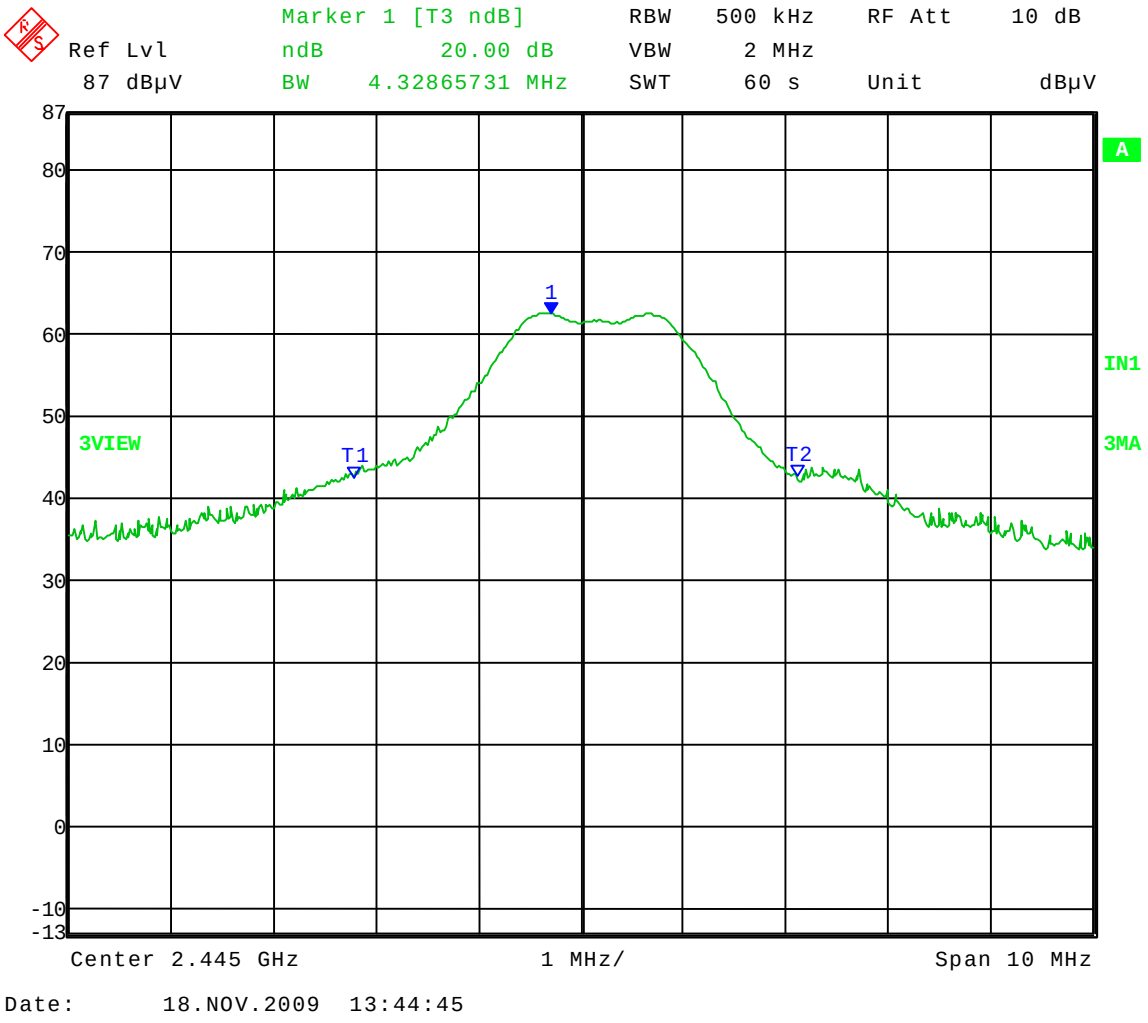
20 dB BANDWIDTH

DATA AND GRAPH(S)

PART 15.249

Test Date: 11-18-2009
Company: Midmark Corporation
EUT: Midmark 625 Table Base Station Transceiver
Test: 20 dB Bandwidth – Radiated (15.249)
Operator: Craig B
Comment: 2.445 GHz Transmit Frequency

20 dB Bandwidth = 4.32 MHz



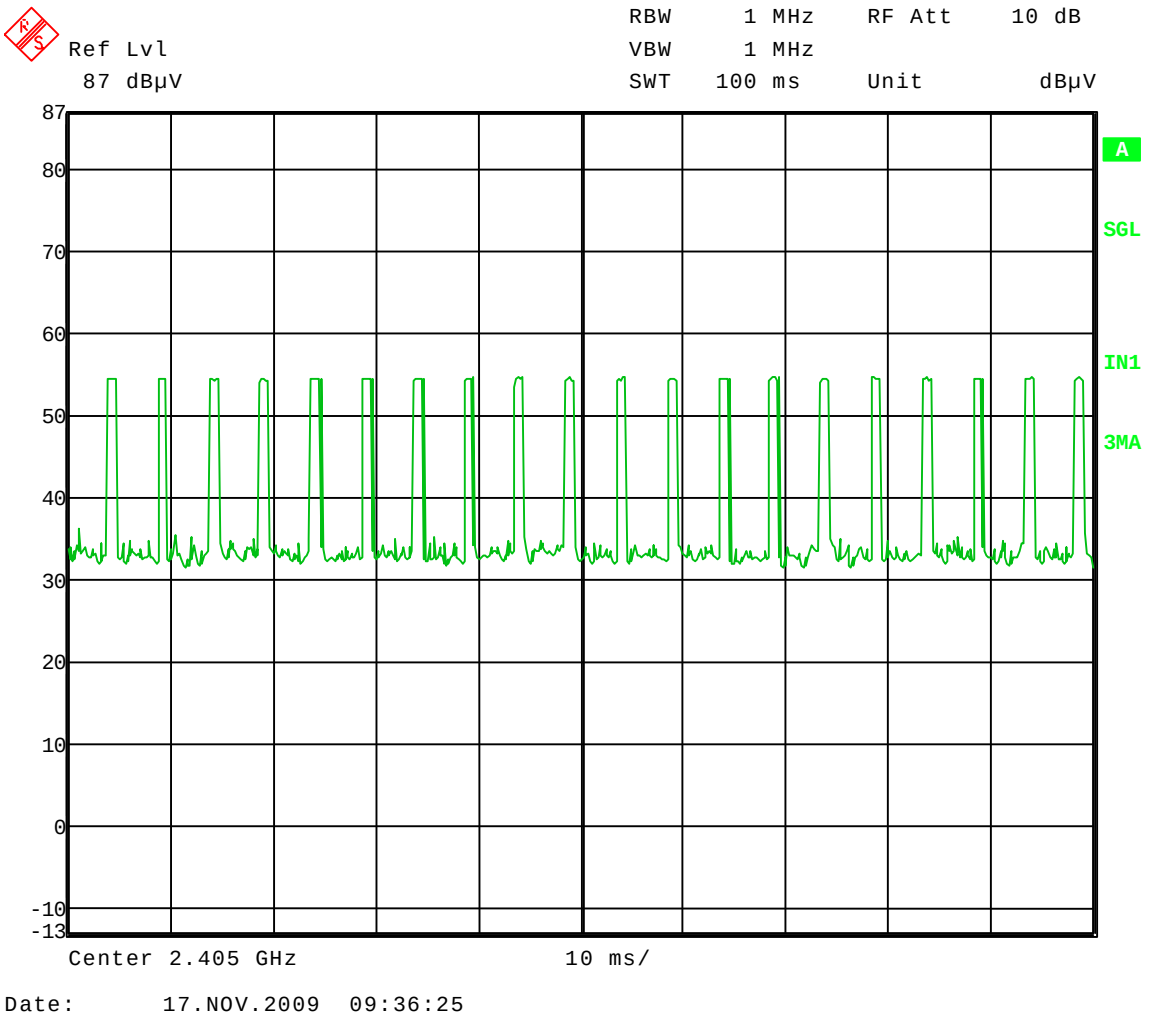
TRANSMITTER DUTY CYCLE GRAPHS

PART 15.35(c)

Test Date: 11-17-2009
Company: Midmark Corporation
EUT: Midmark 625 Table Base Station Transceiver
Test: Duty Cycle – used for testing (FCC Part 15.35(c))
Operator: Craig B

Comment: 20 pulses at 1.006012 ms = 20.12ms
Duty Cycle Correction: 20 Log (20.12/100)= -13.92
Duty Cycle Correction factor: 13.92 dB

100 ms sweep:



Test Date: 11-17-2009
Company: Midmark Corporation
EUT: Midmark 625 Table Base Station Transceiver
Test: Duty Cycle – used for testing (FCC Part 15.35(c))
Operator: Craig B

Comment: 20 pulses at 1.006012 ms = 20.12ms
Duty Cycle Correction: 20 Log (20.12/100)= -13.92
Duty Cycle Correction factor: 13.92 dB

Duration of one pulse: