1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

FCC Rules and Regulations / Intentional Radiators

Operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz Bands

Part 15, Subpart C, Section 15.247

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name:	ICM Call Pendant
FCC ID:	KXU-SP2FSZ24
Kind of Equipment:	Wireless Nurse Call and Security Device
Frequency Range:	2405-2475
Test Configuration:	Handheld (Tested at 3 vdc)
Model Number(s):	0800-0375
Model(s) Tested:	0800-0375
Serial Number(s):	N/A
Date of Tests:	November 23 & 24, 2009
Test Conducted For:	RF Technologies, Inc. 3125 N. 126th Street Brookfield, WI 53066

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.

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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

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100276-0

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:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

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).

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

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 ICM Call Pendant, Model Number(s) 0800-0375 **meets** the radio interference radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands. The AC Power Line conducted emissions test was not required because the ICM Call Pendant is powered from a D.C. power source. It does not have a line cord to plug into the A.C. power line.

2.0 INTRODUCTION

On November 23 & 24, 2009, a series of radio frequency interference measurements was performed on ICM Call Pendant, Model Number(s) 0800-0375, 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 & the FCC guidance document "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005". 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 15.205, 15.209 & 15.247 for Intentional Radiators operating in the Bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

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 or following the guidelines in the FCC's "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005". 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 or following the guidelines in the FCC's "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005", as indicated in the test data section of this test report..

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.

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:

This test sample is a wireless transceiver device that transmits and receives signals to and from other wireless transceivers. The test sample communicates wirelessly with other devices to create a mesh of wireless connectivity.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

55 mm x 44 mm x 15 mm

7.3 LINE FILTER USED:

N/A

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

N/A

Clock Frequencies:

16 MHz

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

1. ICM Call Pendant PCB Assembly PN: 0830-0082 Rev. B

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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:

For testing purposes the unit was supplied with firmware to select continuous transmit or receive on both integral antennas by pressing the button on the device. Testing was preformed on the low, middle, and high channels of 2.405, 2.440, and 2.475 GHz.

9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 ICM Call Pendant
Model Number: 0800-0375 Serial Number: N/A

Item 1 Panasonic Battery for testing.

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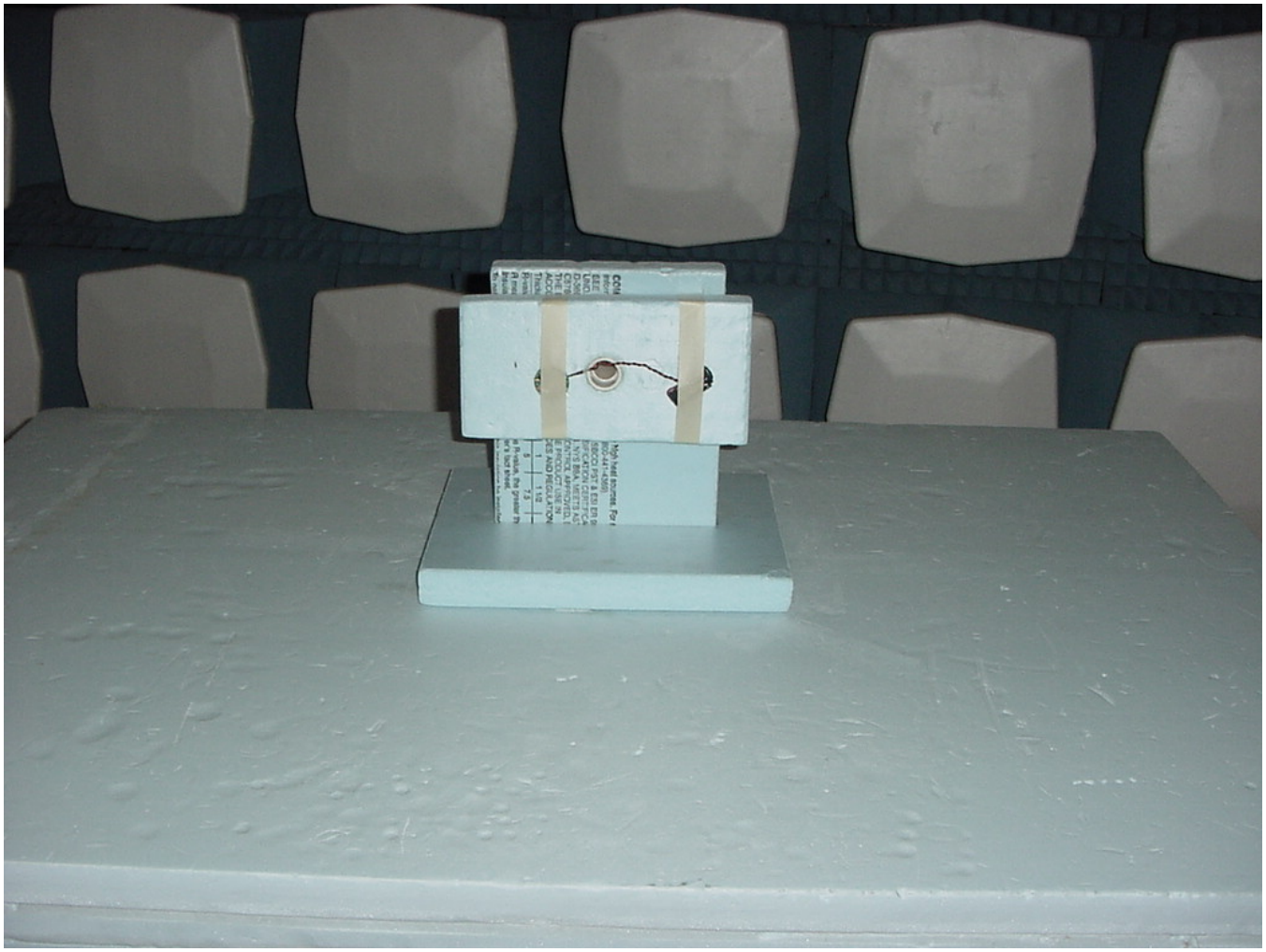
10.0 RADIATED PHOTOS TAKEN DURING TESTING



Radiated x-Position

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Radiated y-Position

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10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

Radiated z-Position

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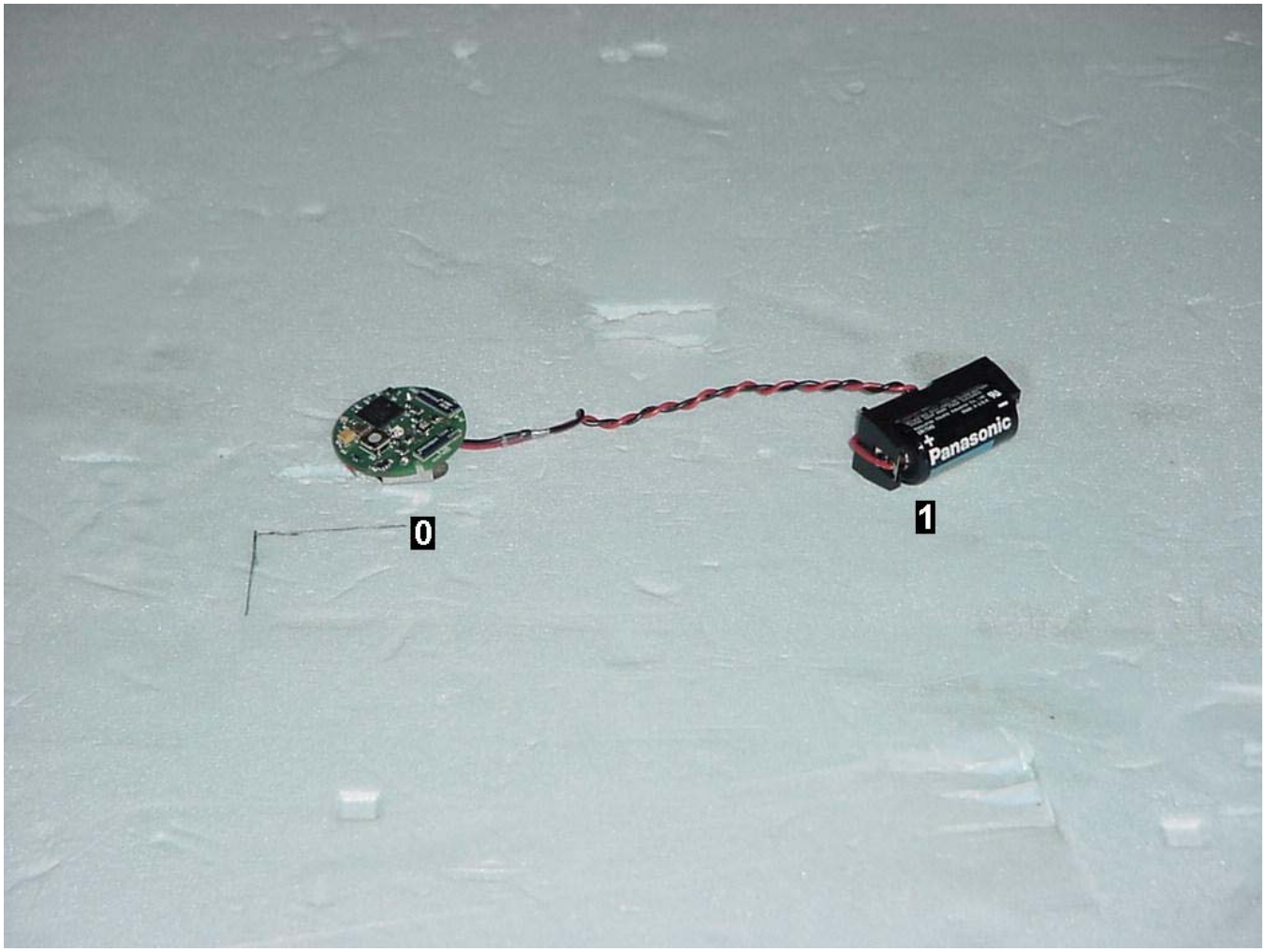
10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)



Radiated Close-up

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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 ICM Call Pendant, Model Number(s) 0800-0375 **meets** the radio interference radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz Bands. The conducted emissions test was not required because the ICM Call Pendant is powered from a D.C. power source. It does not have a line cord to plug into the A.C. power line.

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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	9810-4849	20 MHz – 200 MHz	4/10
Antenna	EMCO	3146	1205	200 MHz – 1 GHz	4/10
Preamp	Ciao	CA118-4010	101	1 GHz-18 GHz	1/10
Horn Antenna	EMCO	3115	9502-4451	1-18 GHz	4/11
Filter- High-Pass	Q-Microwave	100462	2	4.2 GHz-18 GHz	5/10
Horn Antenna	Com-Power	AH-118	071127	1-18 GHz	4/10
Signal Generator	Rhode & Schwarz	SMR40	100092	1-40 GHz	12/09
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18 GHz-26 GHz	8/10
Horn Antenna	ETS Lindgren	3116	00062917	18 – 40 GHz	10/11
High Pass Filter	Planar	CL22500-9000-CD-SS	PF1229/0728	15-40 GHz	7/10

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 15.207

ANSI C63.4-2003

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1a. AC POWER LINE CONDUCTED EMISSION MEASUREMENTS

If applicable, the conducted emissions were measured over the frequency range from 150 kHz to 30 MHz in accordance with the power line measurements as specified in the American National Standards Institute, ANSI C63.4-2003, Section 12. Since the device is operated from the public utility lines, the 115 Vac 60 Hz power leads, high and low sides, were to be measured by connecting the measuring equipment to the appropriate meter terminal of the LISN. All signals were then recorded. The allowed levels for Intentional Radiators 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

All conducted emissions measurements were made at a test room temperature of **°F** at **%** relative humidity.

NOTE:

This test was not run because the device is battery operated.

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APPENDIX B

TEST PROCEDURE

Part 15, Subpart C, Section 15.247 (a-h)

OPERATION WITHIN THE BAND 902-928 MHz,

2400-2483.5 MHz AND 5725-5857 MHz

ANSI C63.4-2003

AND

KDB Publication No. 558074 (DTS)

NOTE:

Per the FCC's guidance document "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005", as indicated in the test data section of this test report.

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1b. SPURIOUS EMISSIONS AT ANTENNA TERMINALS – PART 15.247(d), 15.203 & FCC Guidance Document "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005".

Spurious conducted emissions were measured at the antenna terminals. Plots were made showing the amplitude of each harmonic emission with the equipment operated. As shown by the radiated charts there was no reason to believe that there were any spurious emissions other than the harmonics that were than individually investigated when doing the conducted test at the antenna terminals. Measurements were made up to the 10^{th} harmonic of the fundamental.

As stated in 15.203 the ICM Call Pendant was designed to ensure that no antenna other than that furnished by RF Technologies, Inc. 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.

The allowed emissions for transmitters operating in the 2400 MHz - 2483.5 MHz bands for ICM Call Pendant equipment are found under Part 15, Section 15.247(d). This paragraph states that in any 100 kHz bandwidth outside the frequency band which the spread spectrum intentional radiator is operating, the radio frequency power produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

NOTE: See the following pages for the data and graphs of the actual measurements made:

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RF CONDUCTED EMISSION DATA AND GRAPH(S)

TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

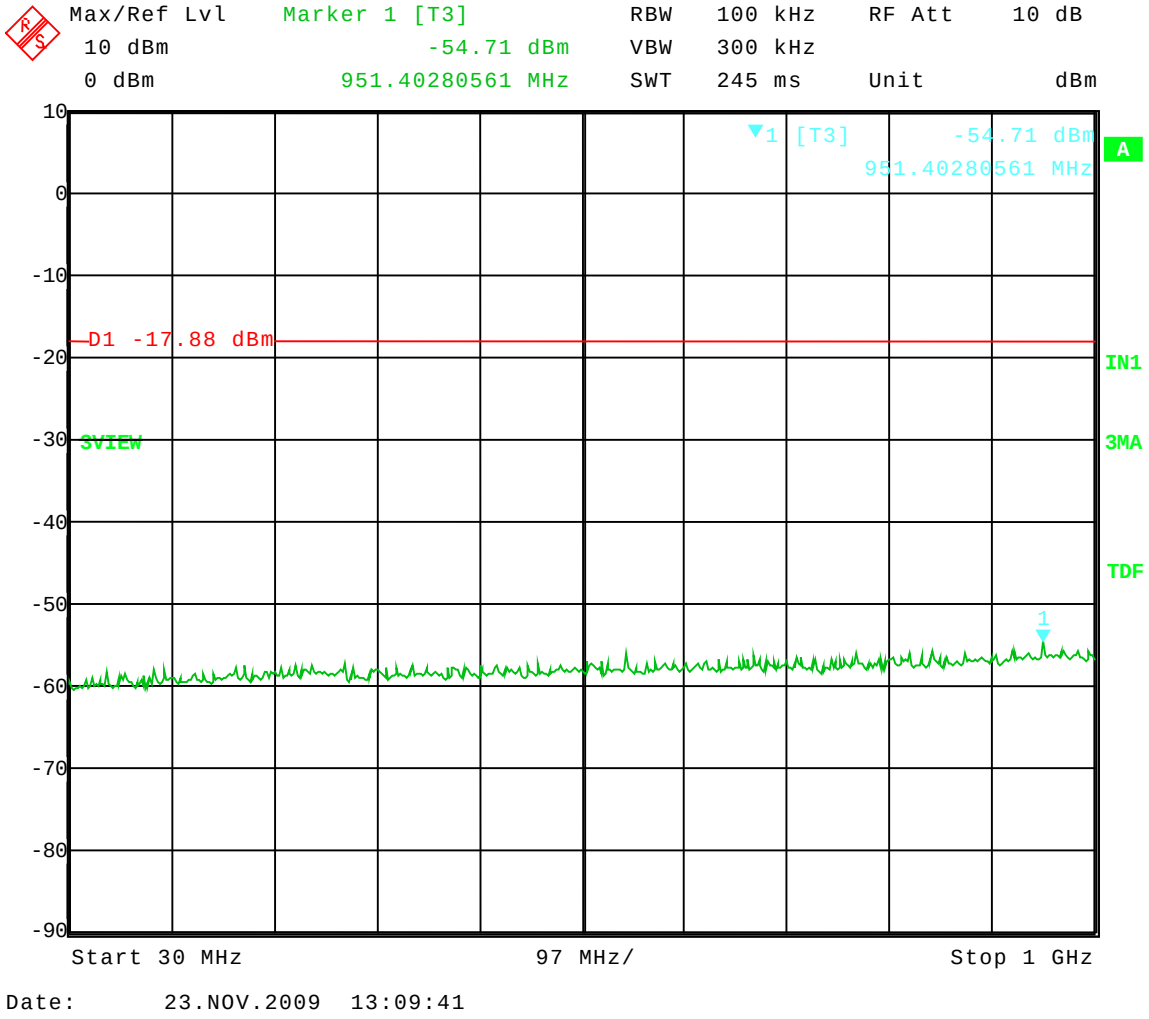
AT THE ANTENNA TERMINALS

PART 15.247(d)

ANTENNA E1

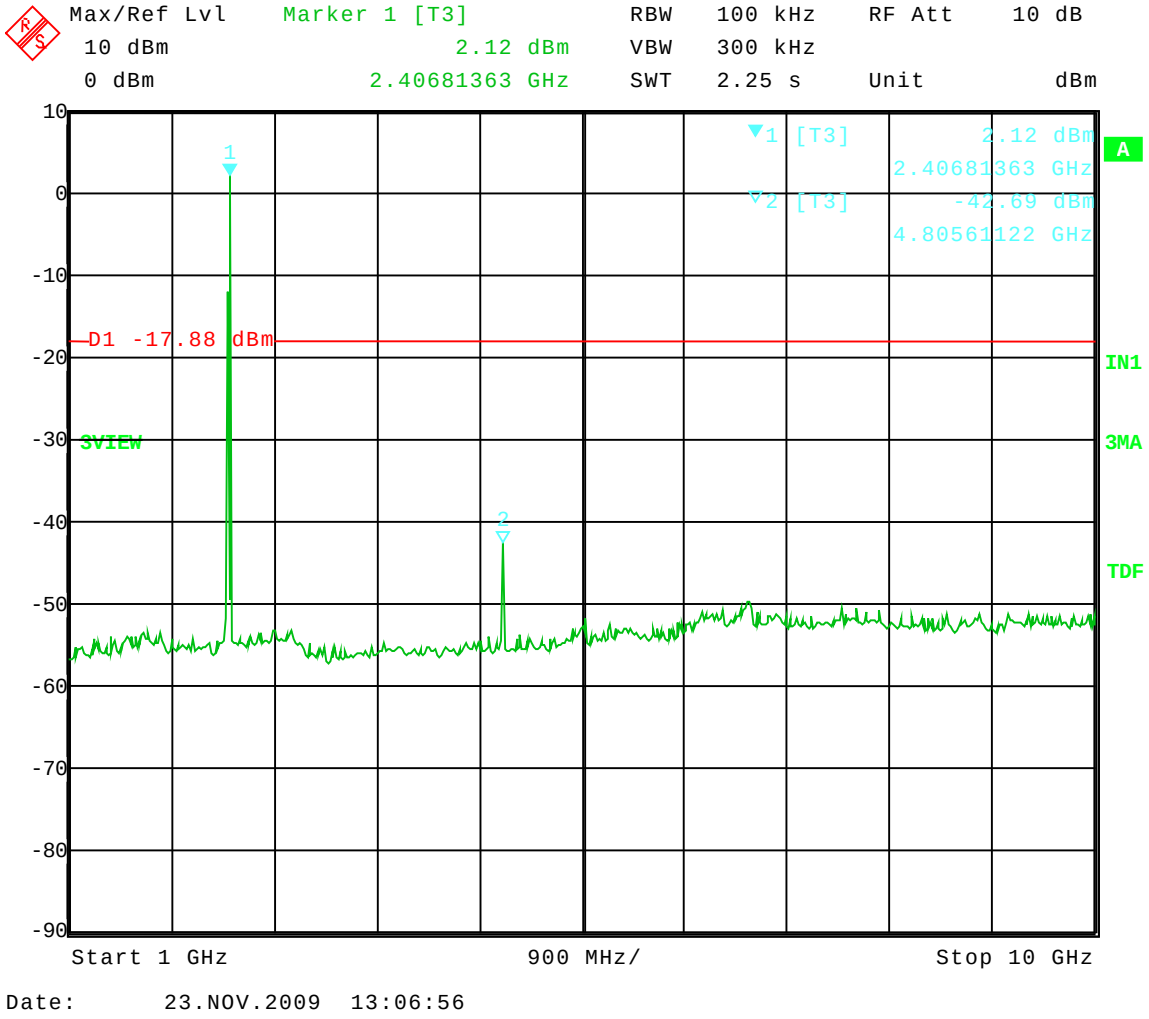
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E1
Frequency Range: 30 to 1000 MHz
Limit = -17.88 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

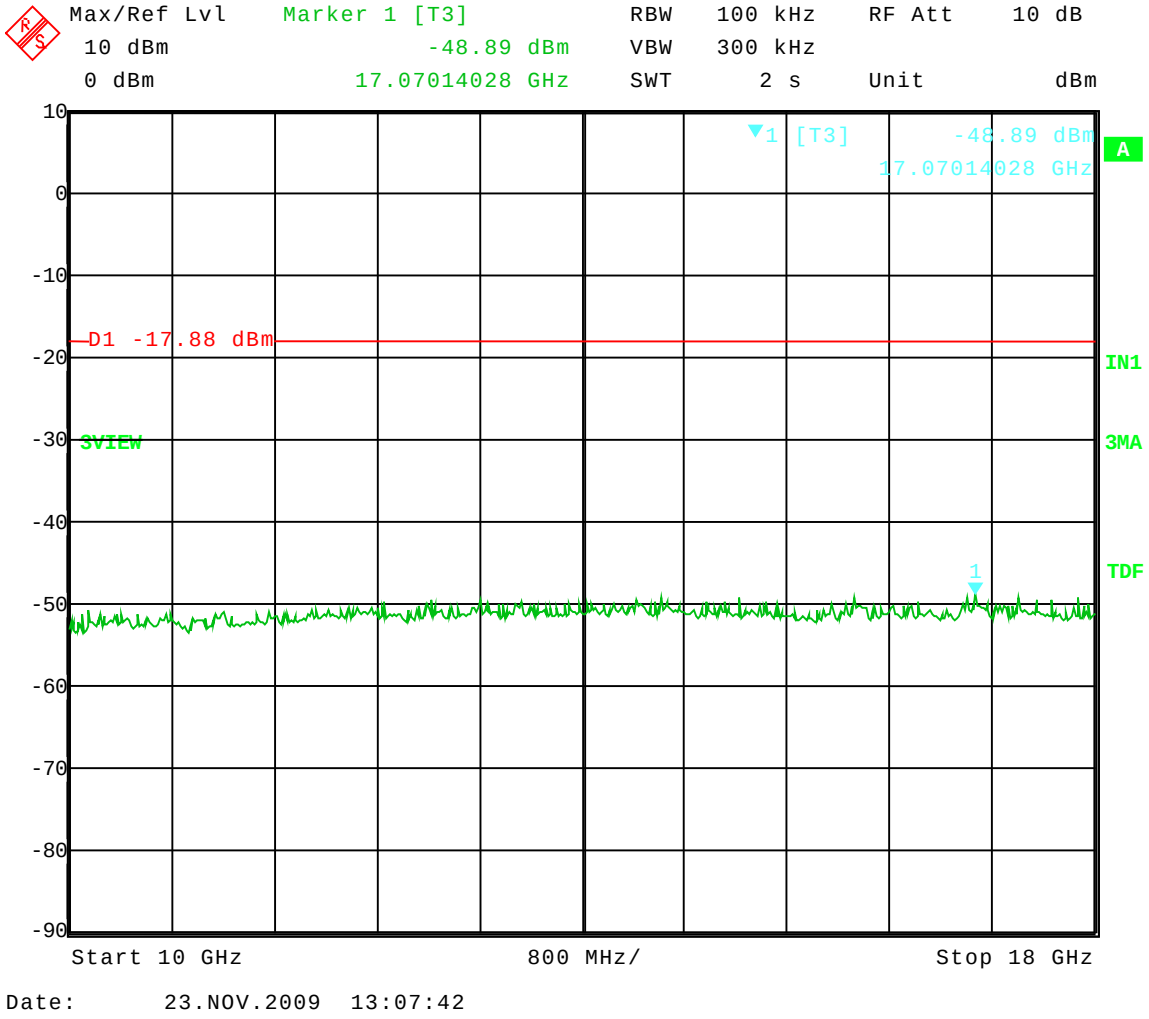
Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E1
Frequency Range: 1 to 10 GHz
Limit = -17.88 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

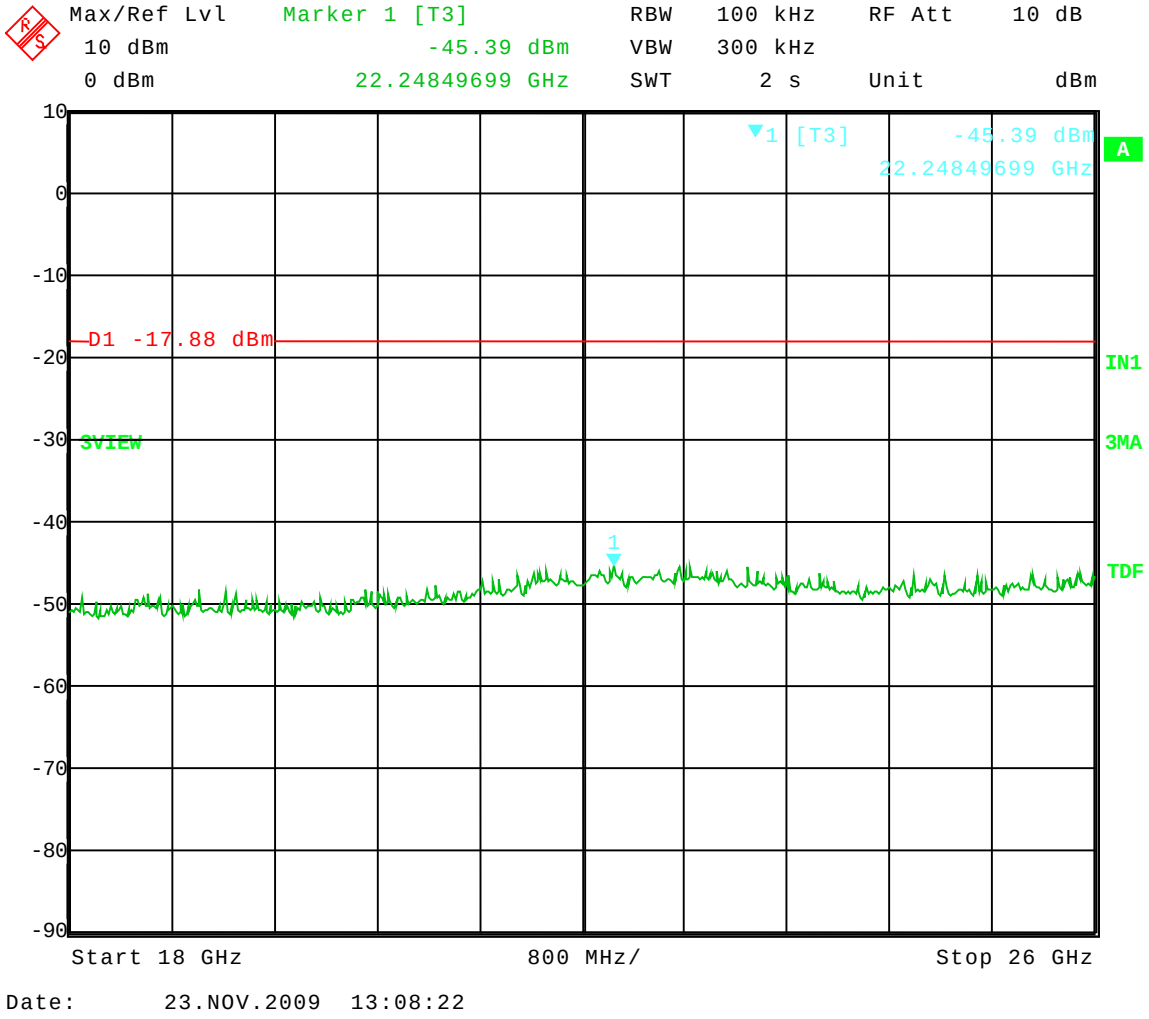
Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E1
Frequency Range: 10 to 18 GHz
Limit = -17.88 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



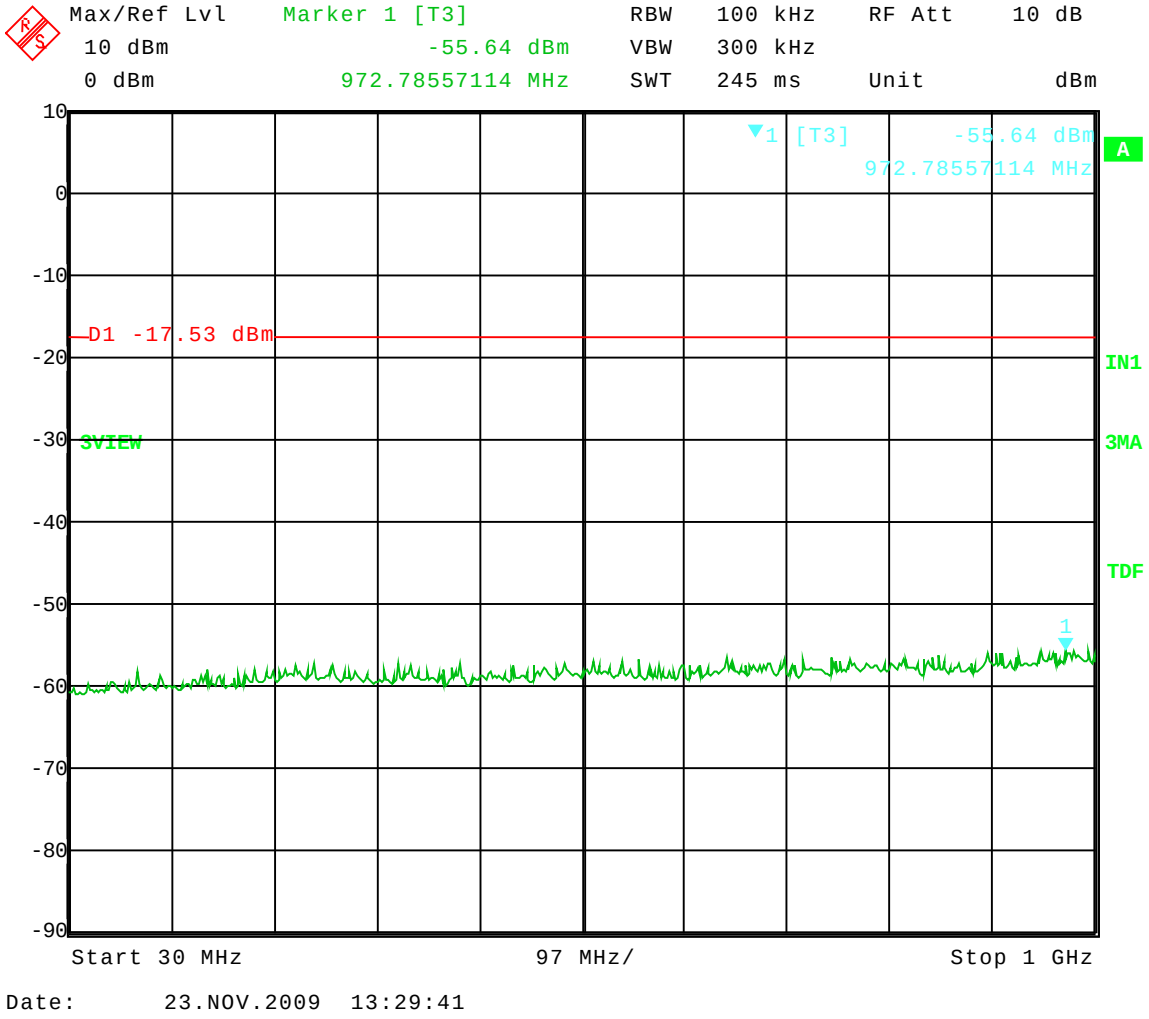
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E1
Frequency Range: 18 to 26 GHz
Limit = -17.88 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



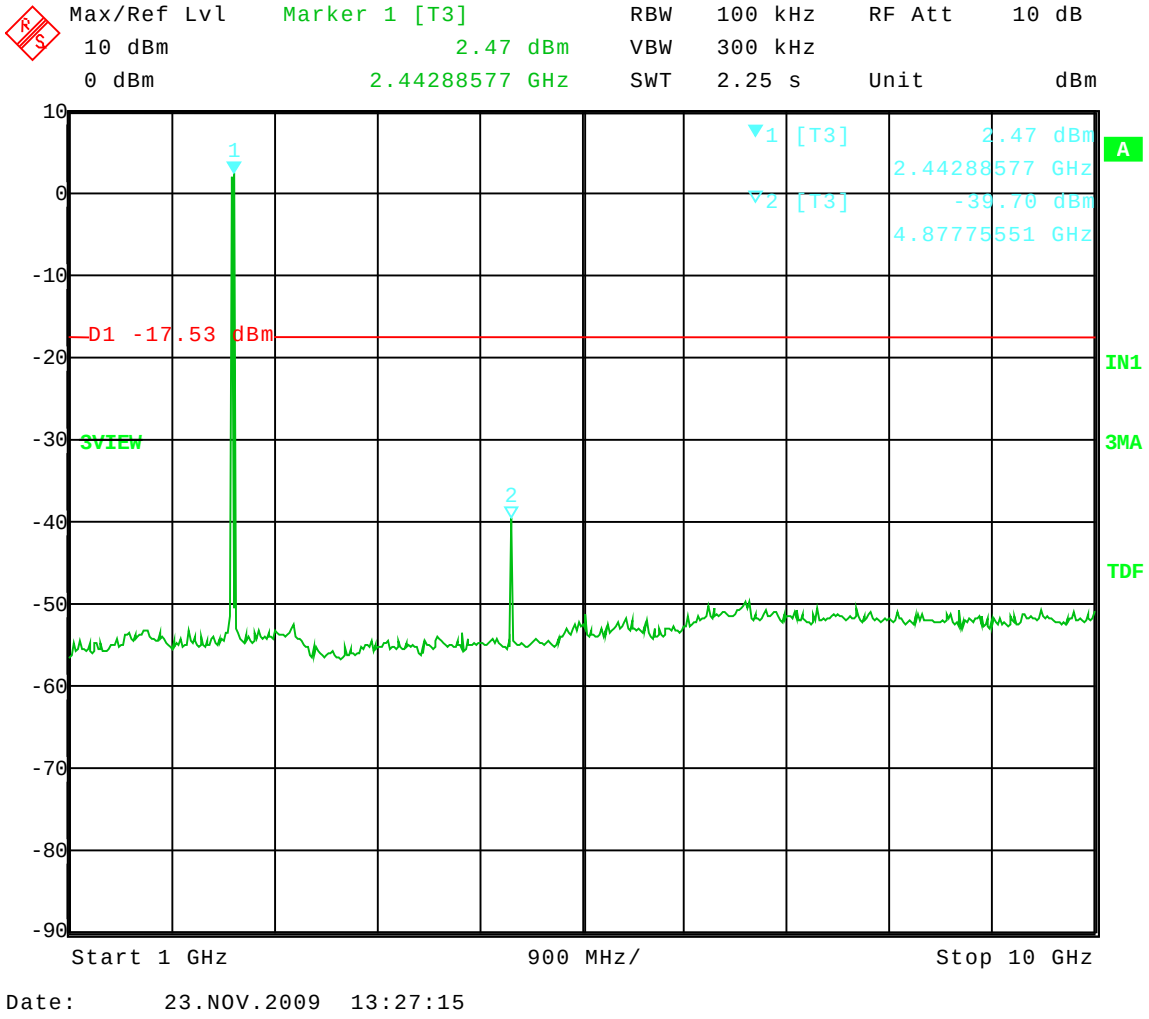
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E1
Frequency Range: 30 to 1000 MHz
Limit = -17.53 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



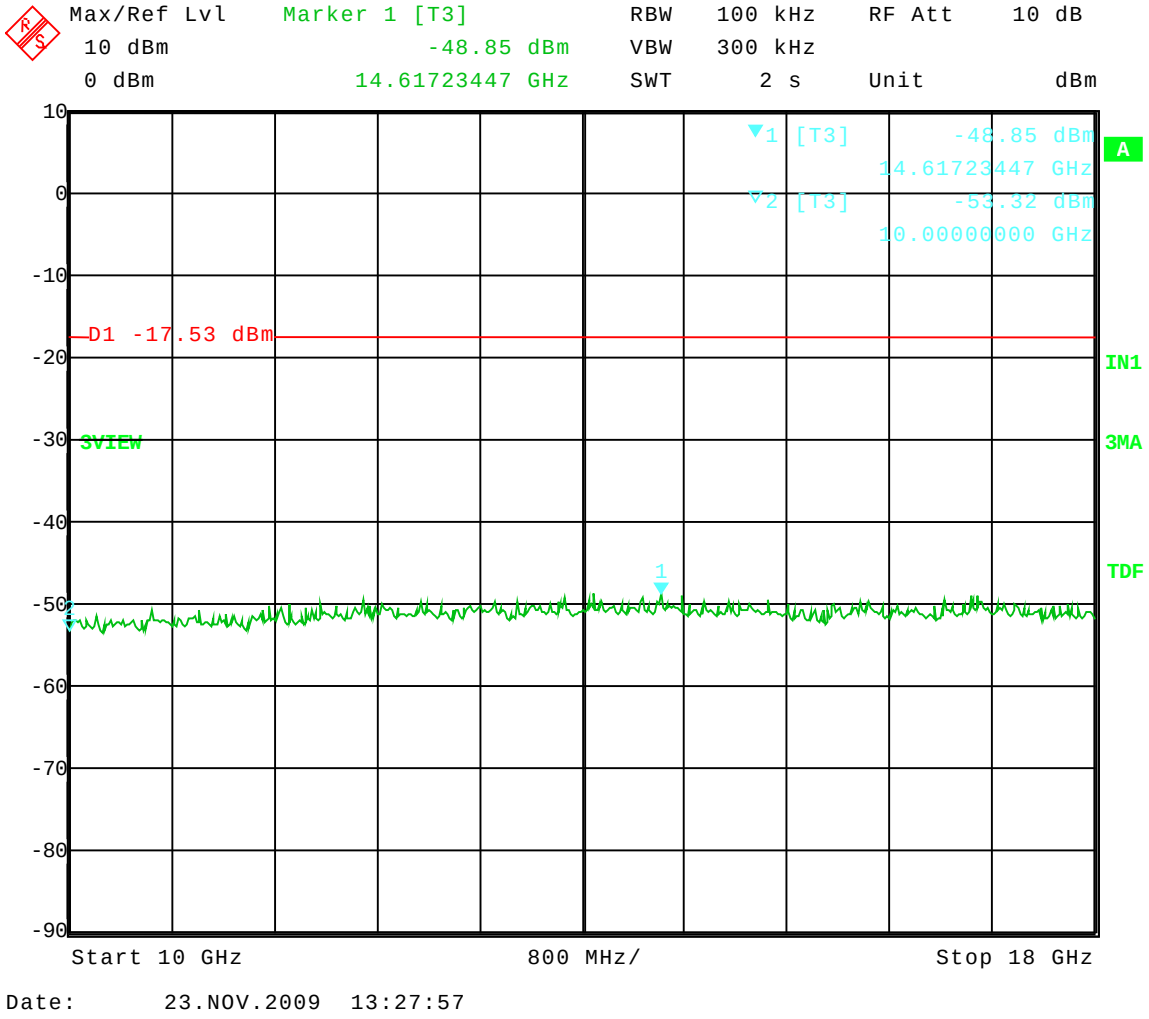
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E1
Frequency Range: 1 to 10 GHz
Limit = -17.53 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



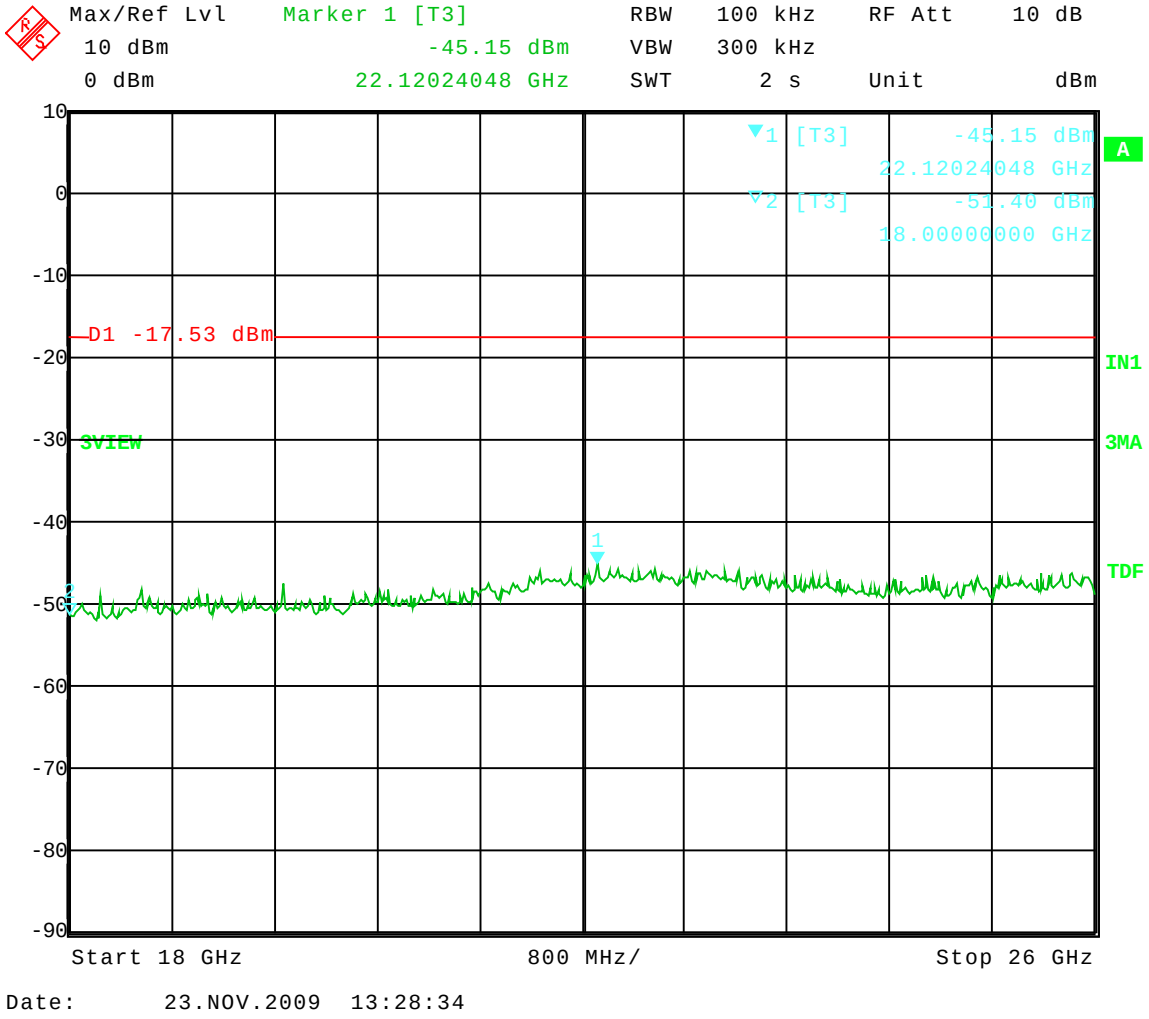
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E1
Frequency Range: 10 to 18 GHz
Limit = -17.53 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted –15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E1
Frequency Range: 18 to 26 GHz
Limit = -17.53 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

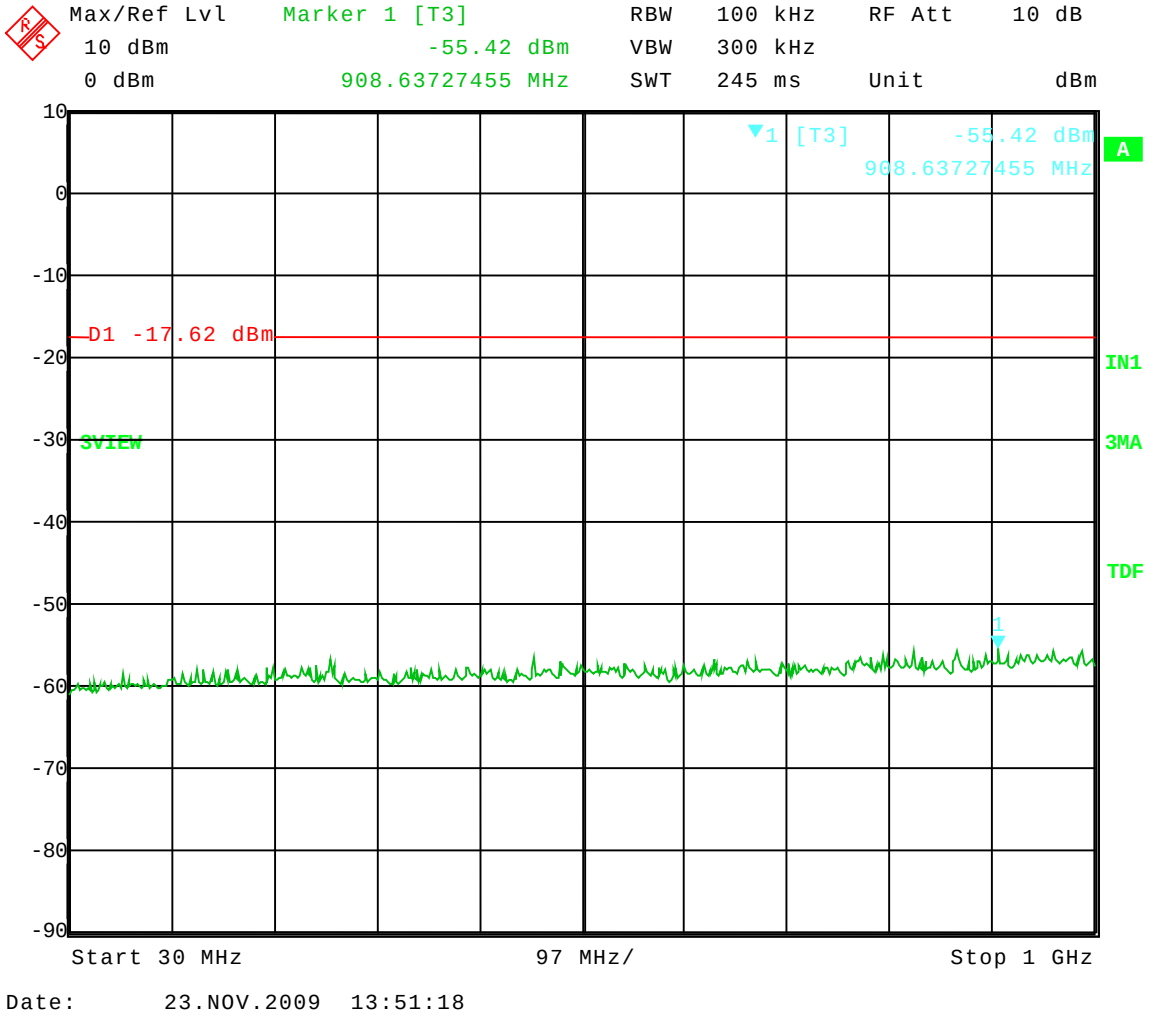
Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz

Antenna E1

Frequency Range: 30 to 1000 MHz
Limit = -17.62 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



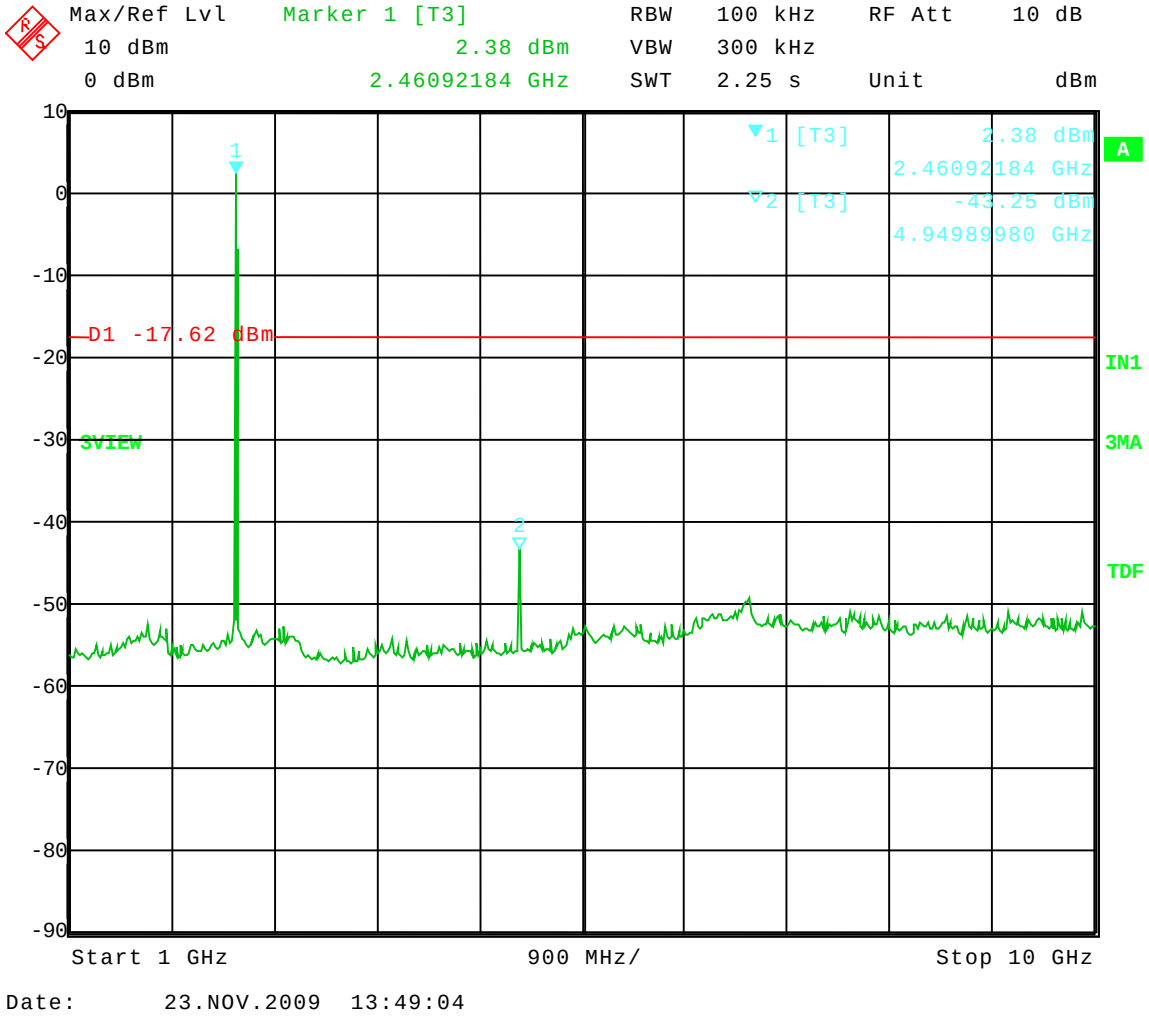
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted- 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz

Antenna E1

Frequency Range: 1 to 10 GHz
Limit = -17.62 dBm

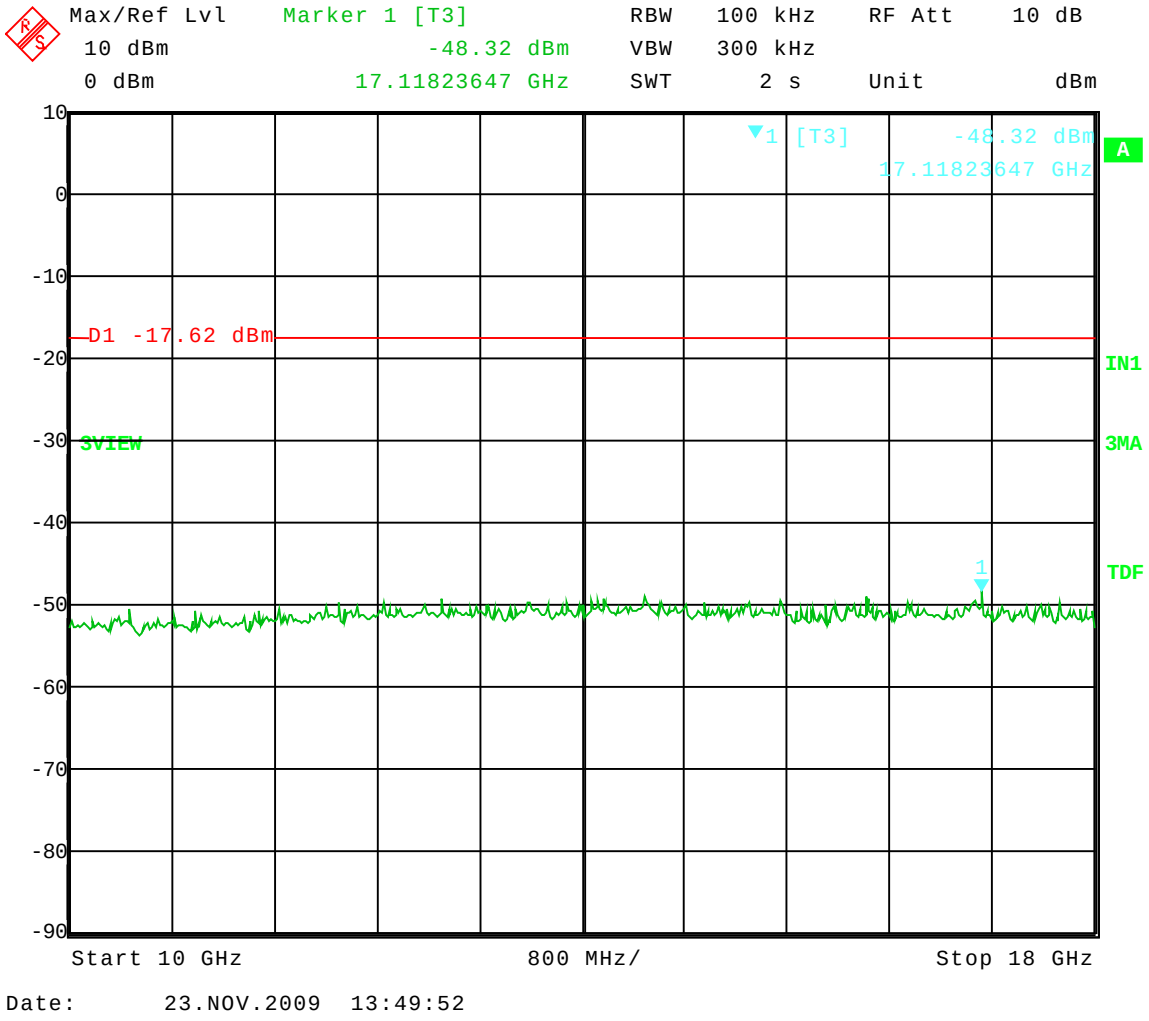
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz
Antenna E1
Frequency Range: 10 to 18 GHz
Limit = -17.62 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



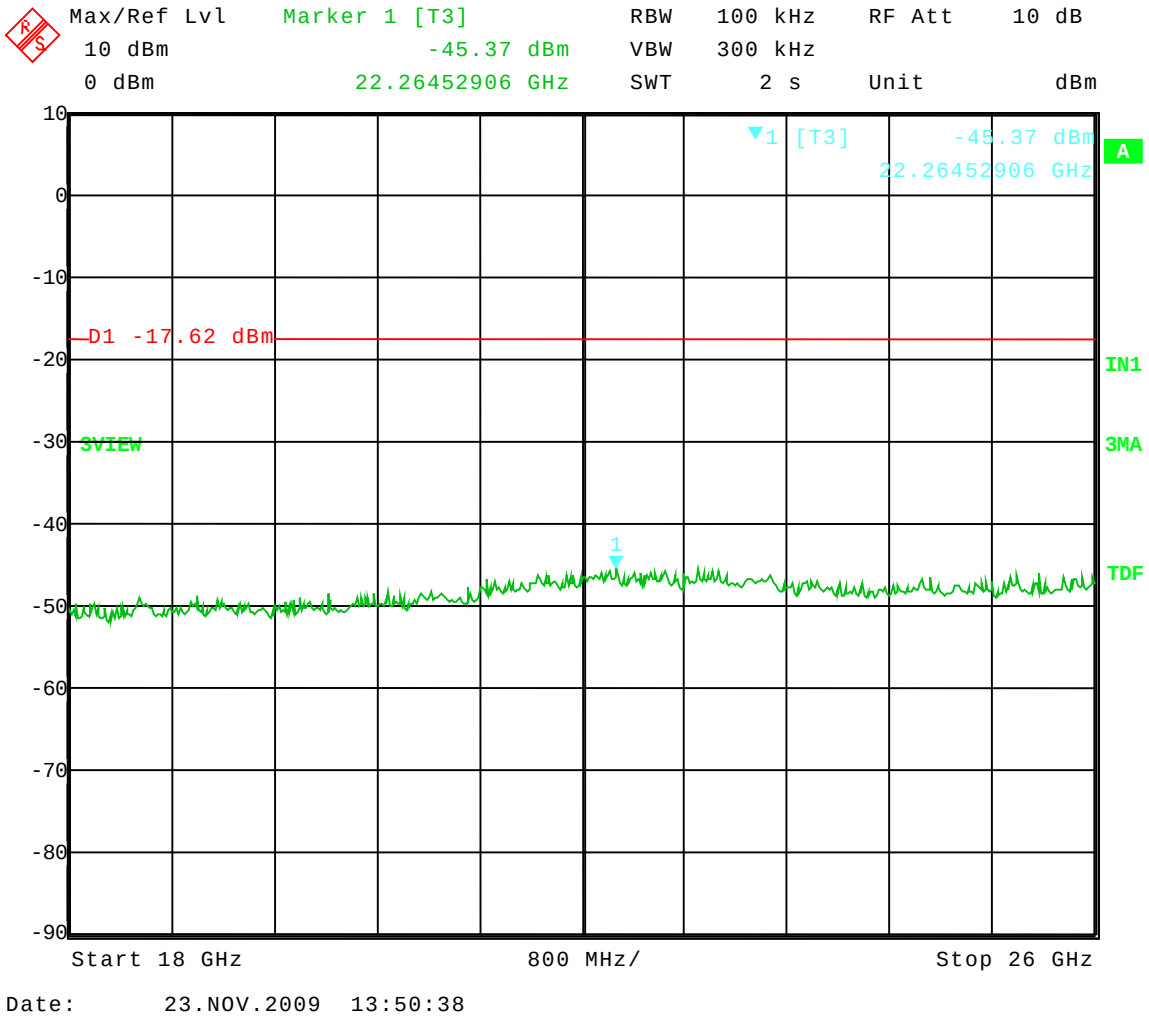
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz

Antenna E1

Frequency Range: 18 to 26 GHz
Limit = -17.62 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

RF CONDUCTED EMISSION DATA AND GRAPH(S)

TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

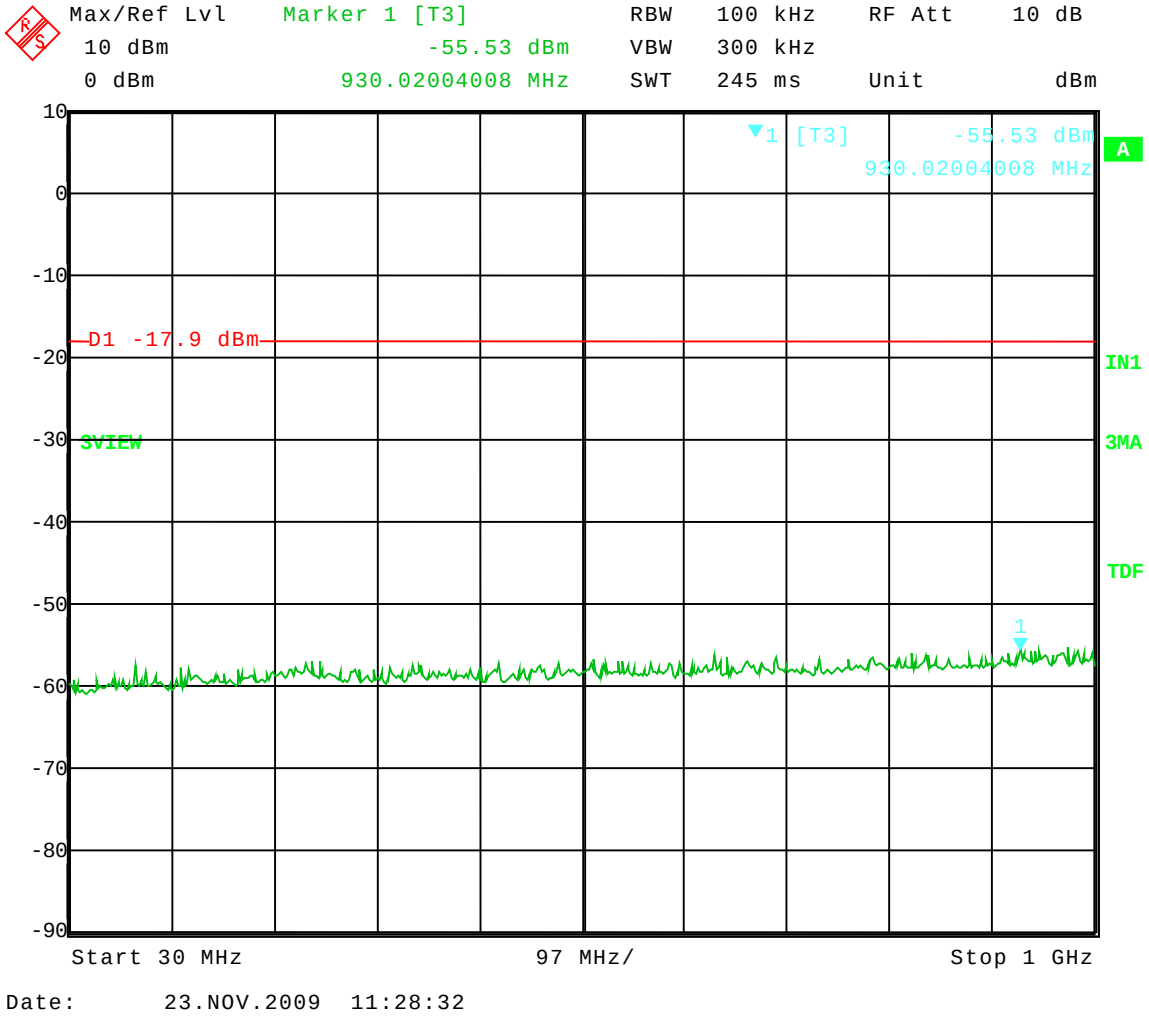
AT THE ANTENNA TERMINALS

PART 15.247(d)

ANTENNA E2

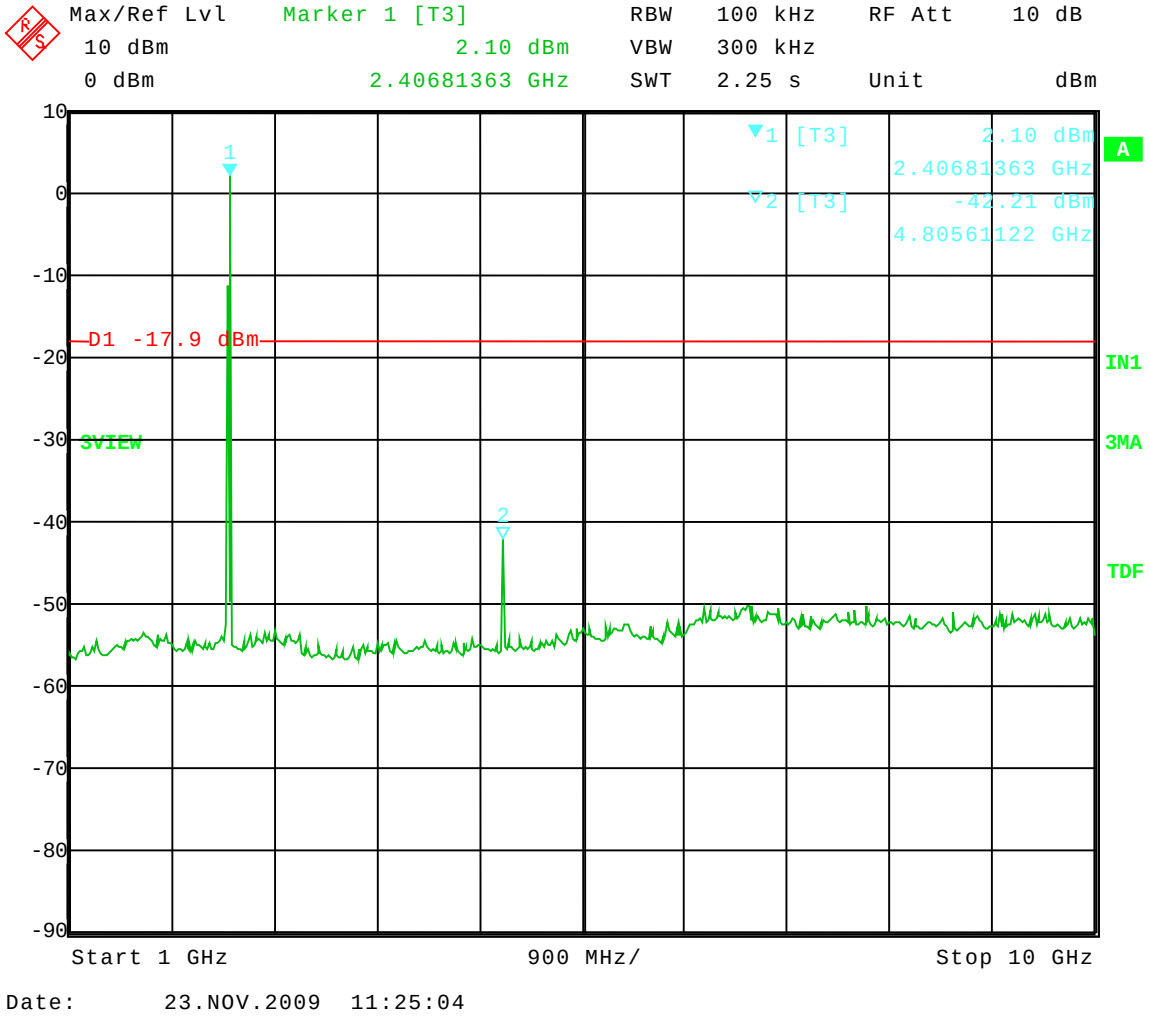
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E2
Frequency Range: 30 to 1000 MHz
Limit = -17.9 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

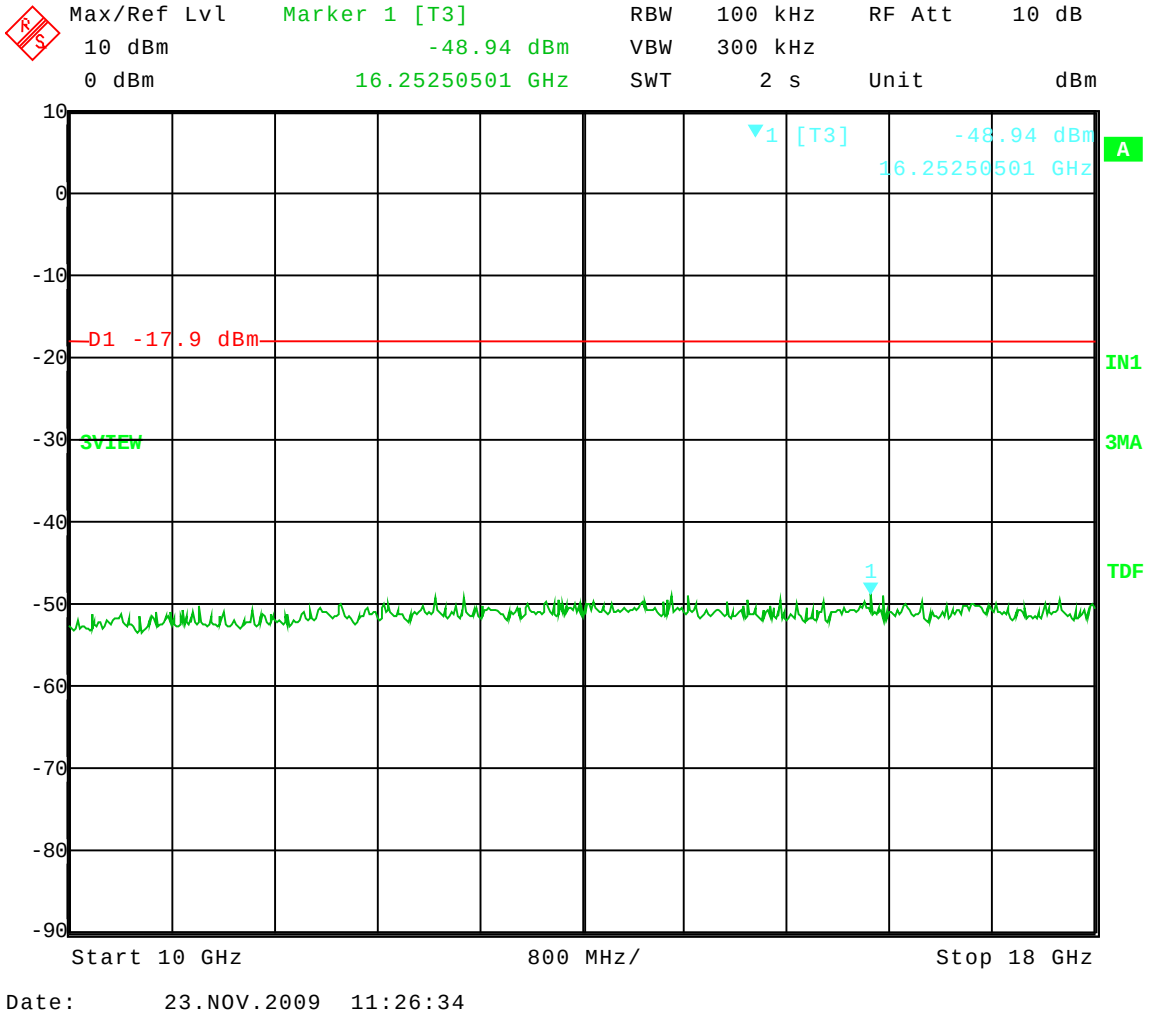
Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E2
Frequency Range: 1 to 10 GHz
Limit = -17.9 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

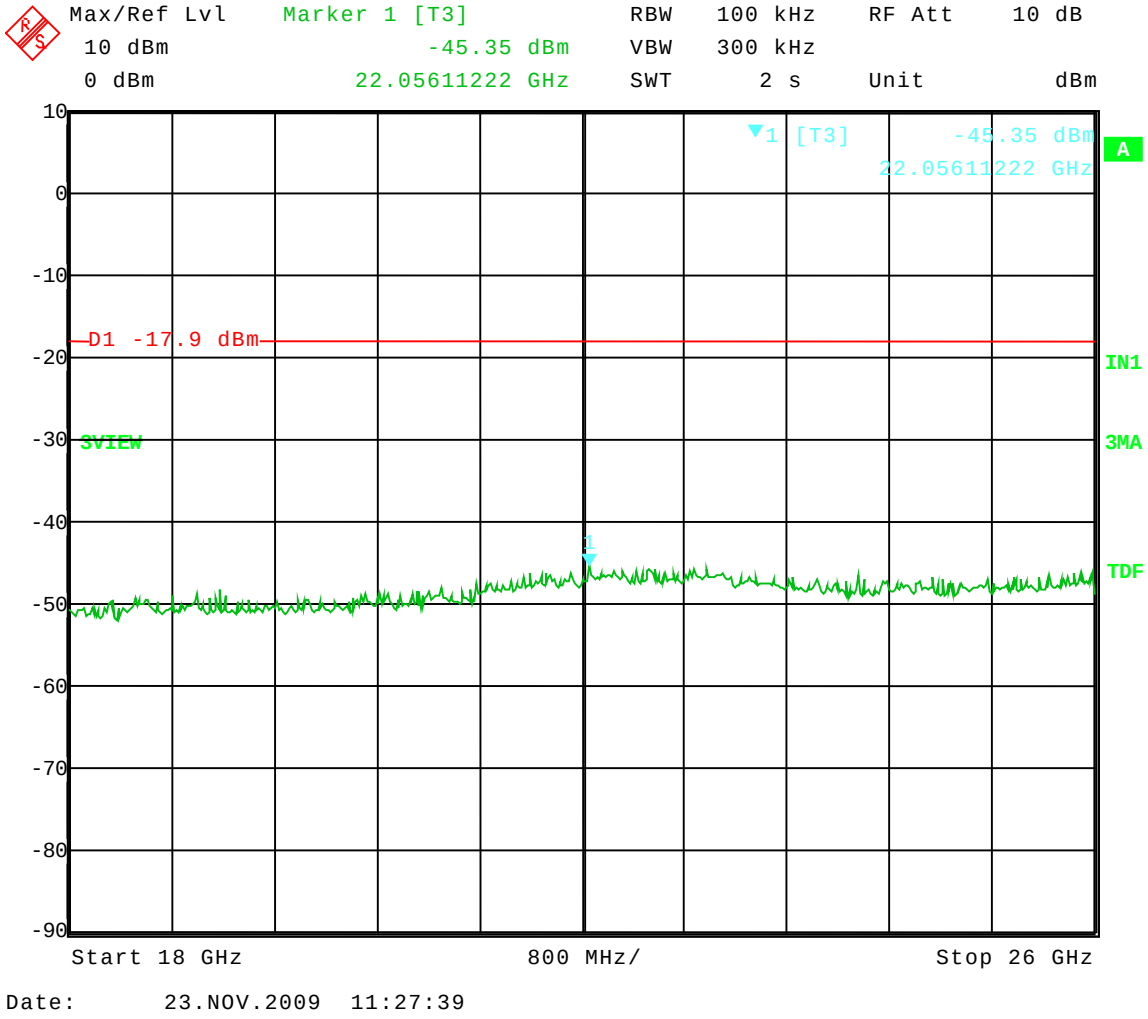
Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

Test Date: 11-23-2009
Company: RF Technologies
EUT: Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E2
Frequency Range: 10 to 18 GHz
Limit = -17.9 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



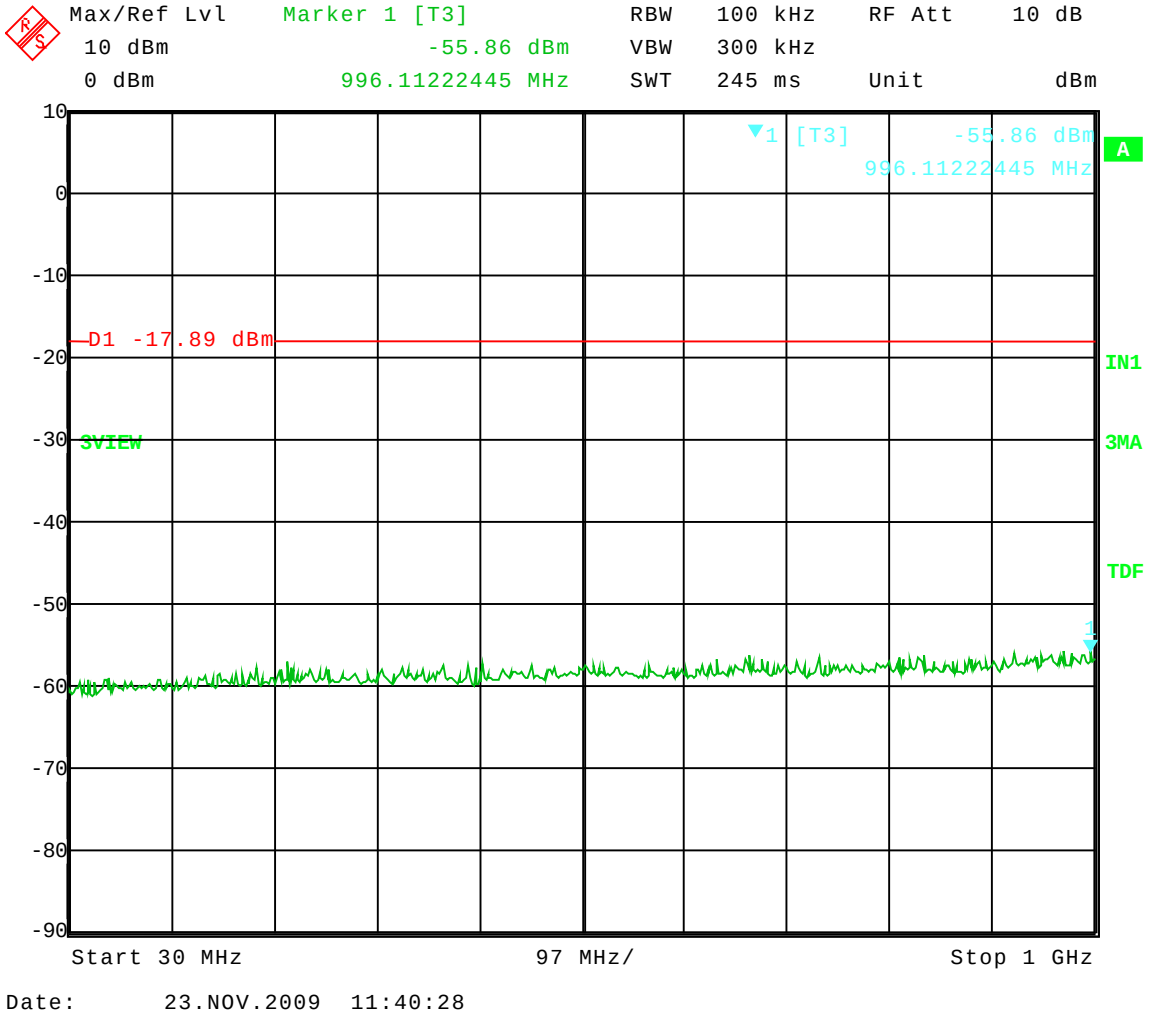
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel Transmit = 2.405 GHz
Antenna E2
Frequency Range: 18 to 26 GHz
Limit = -17.9 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



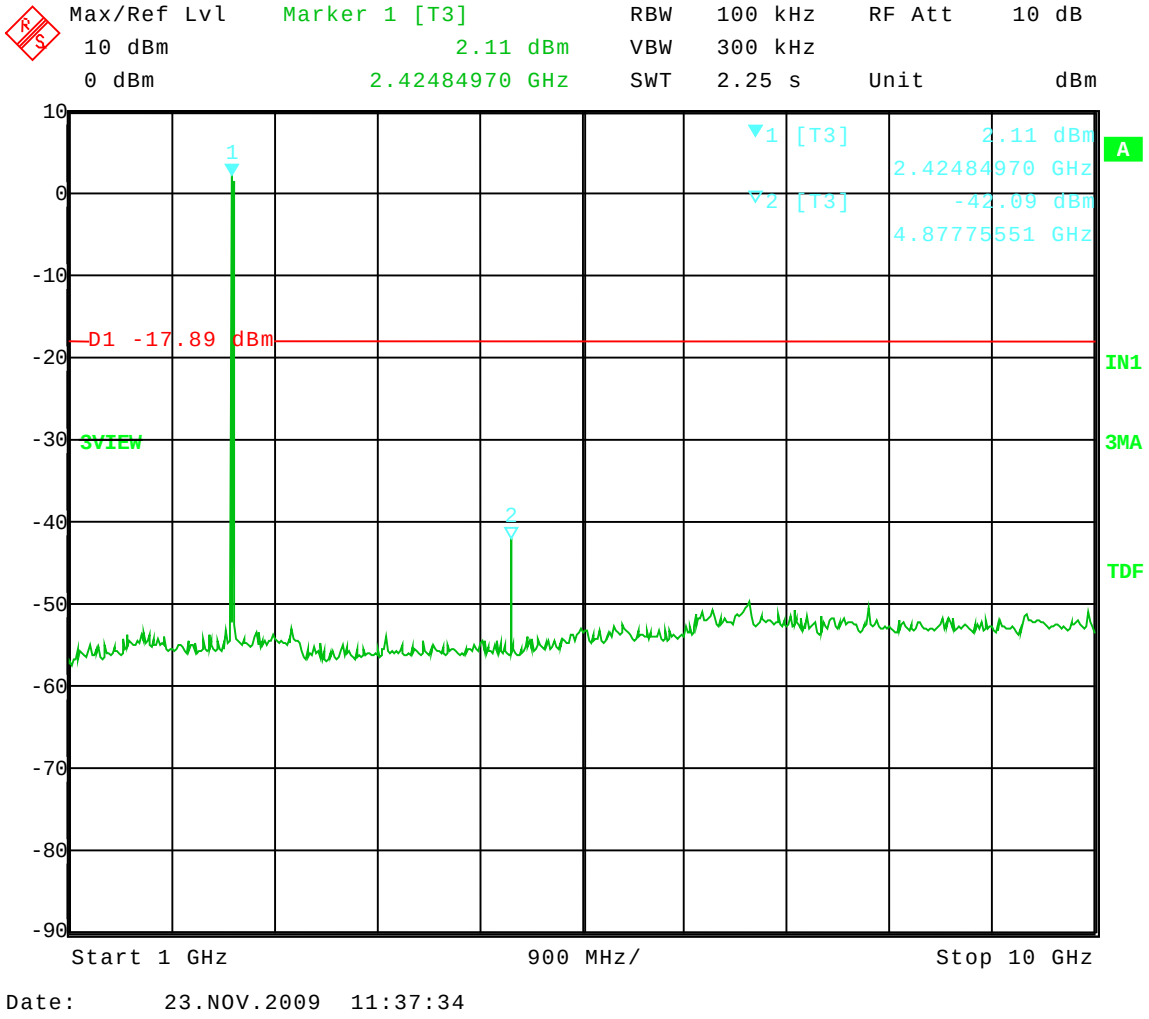
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E2
Frequency Range: 30 to 1000 MHz
Limit = -17.89 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



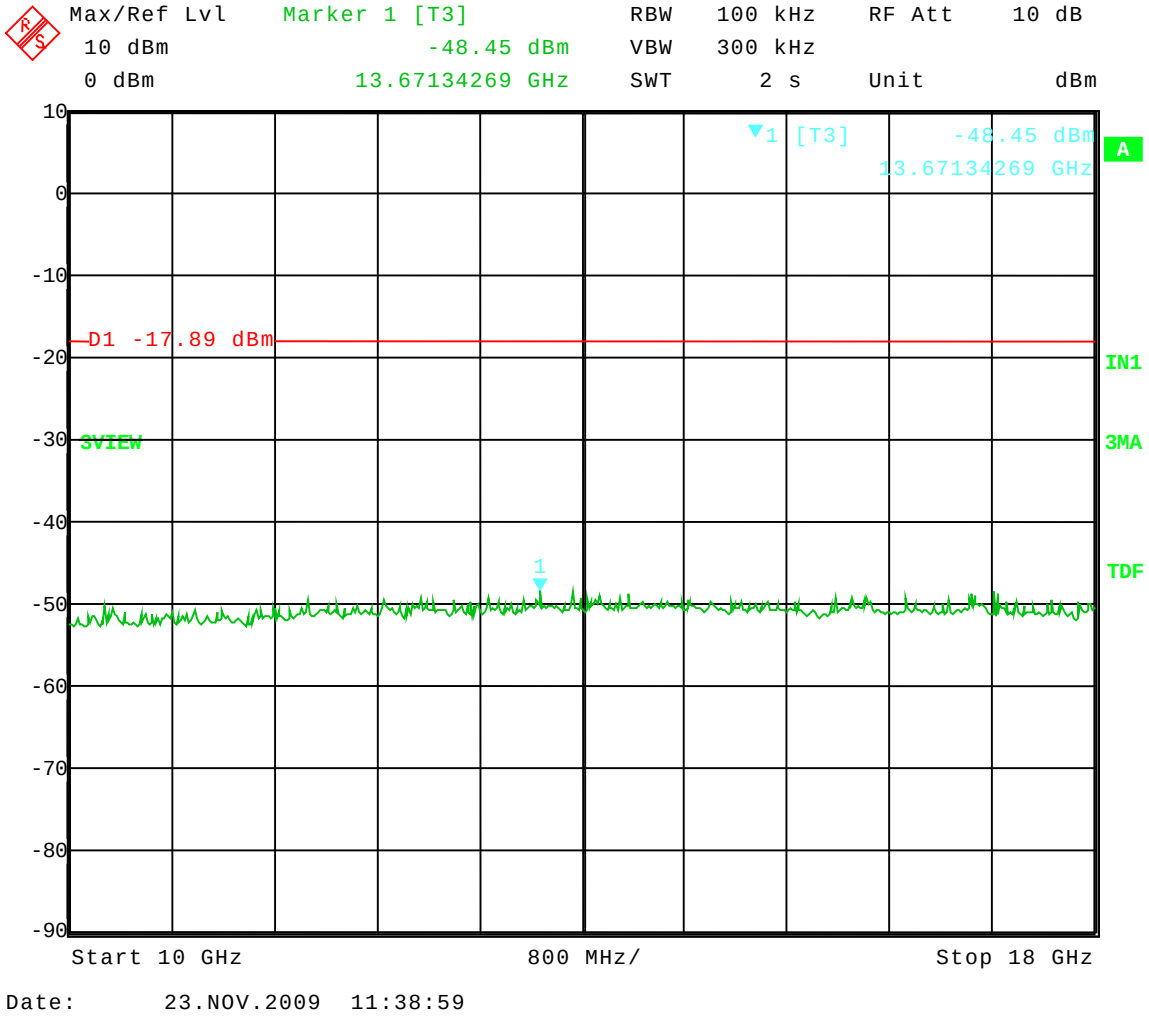
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E2
Frequency Range: 1 to 10 GHz
Limit = -17.89 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



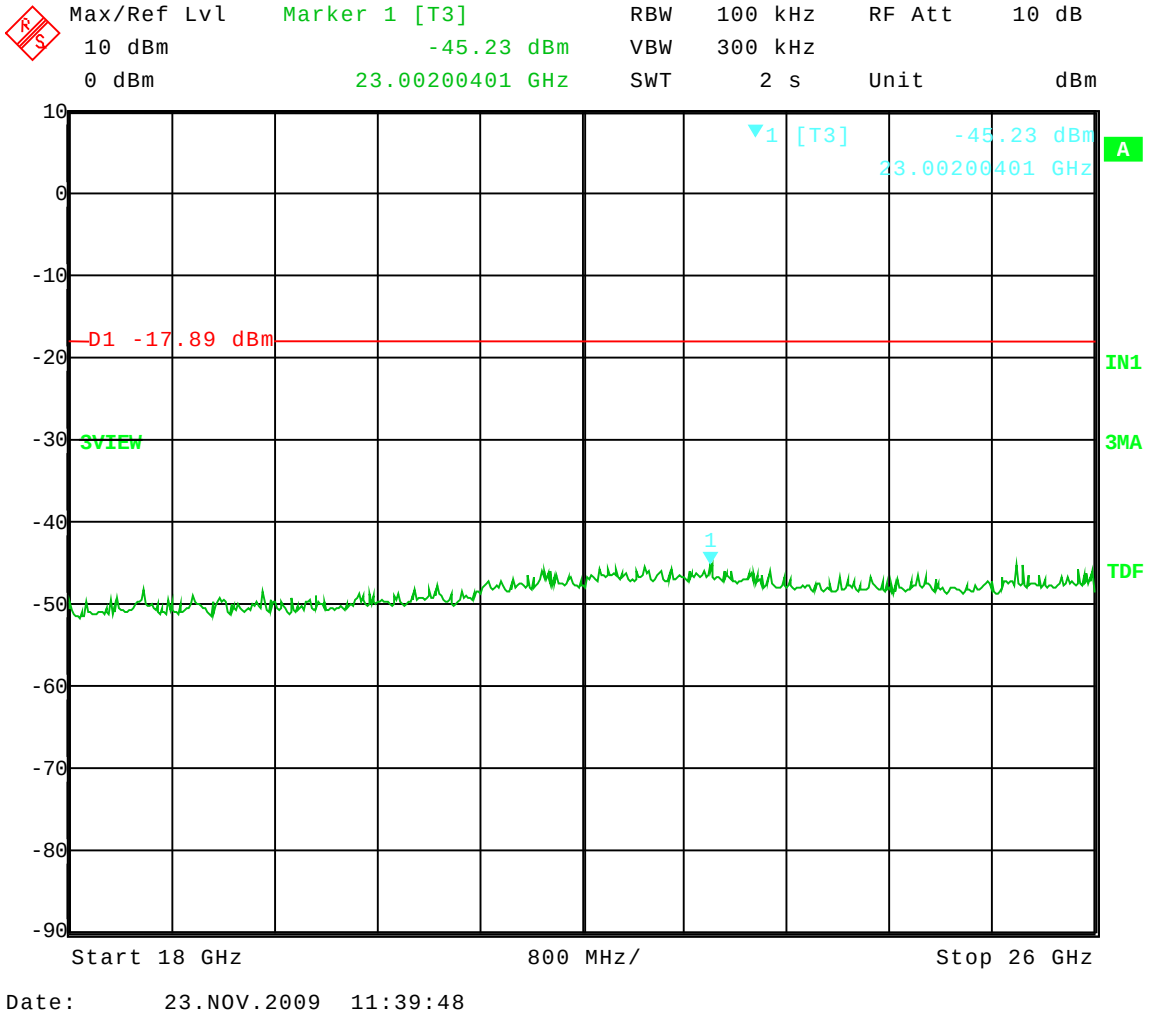
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E2
Frequency Range: 10 to 18 GHz
Limit = -17.89 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: Middle Channel Transmit = 2.440 GHz
Antenna E2
Frequency Range: 18 to 26 GHz
Limit = -17.89 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



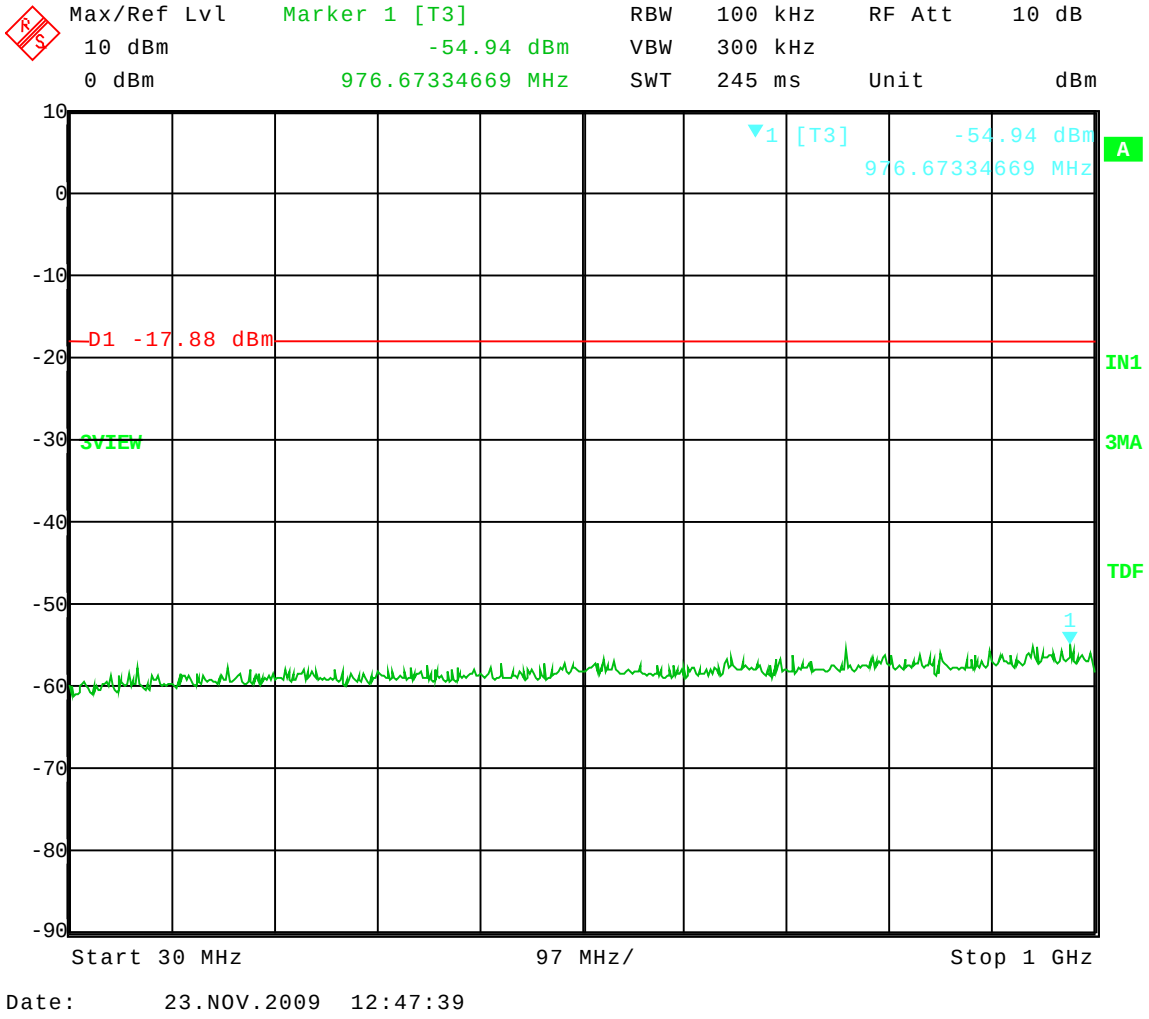
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz

Antenna E2

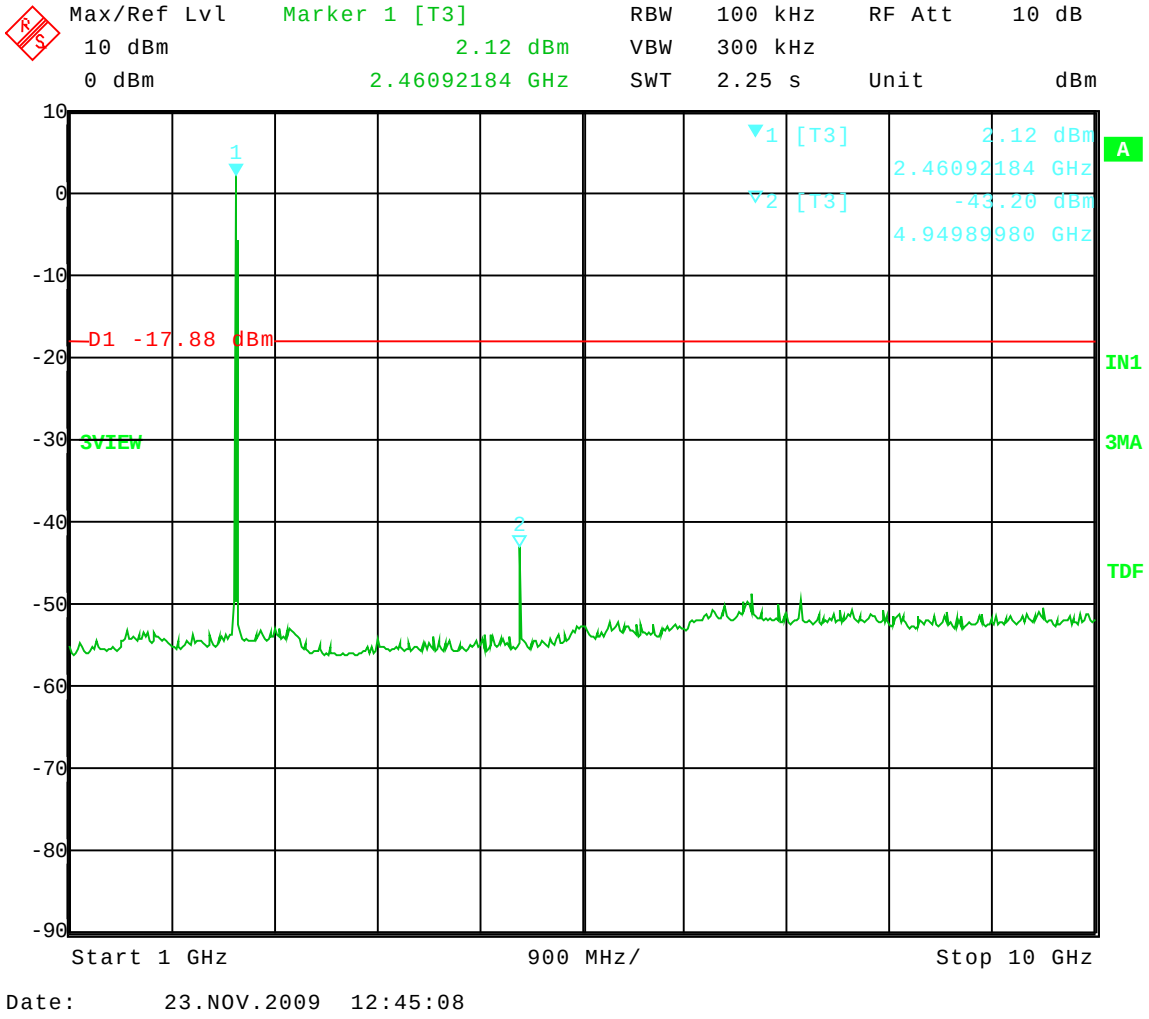
Frequency Range: 30 to 1000 MHz
Limit = -17.88 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

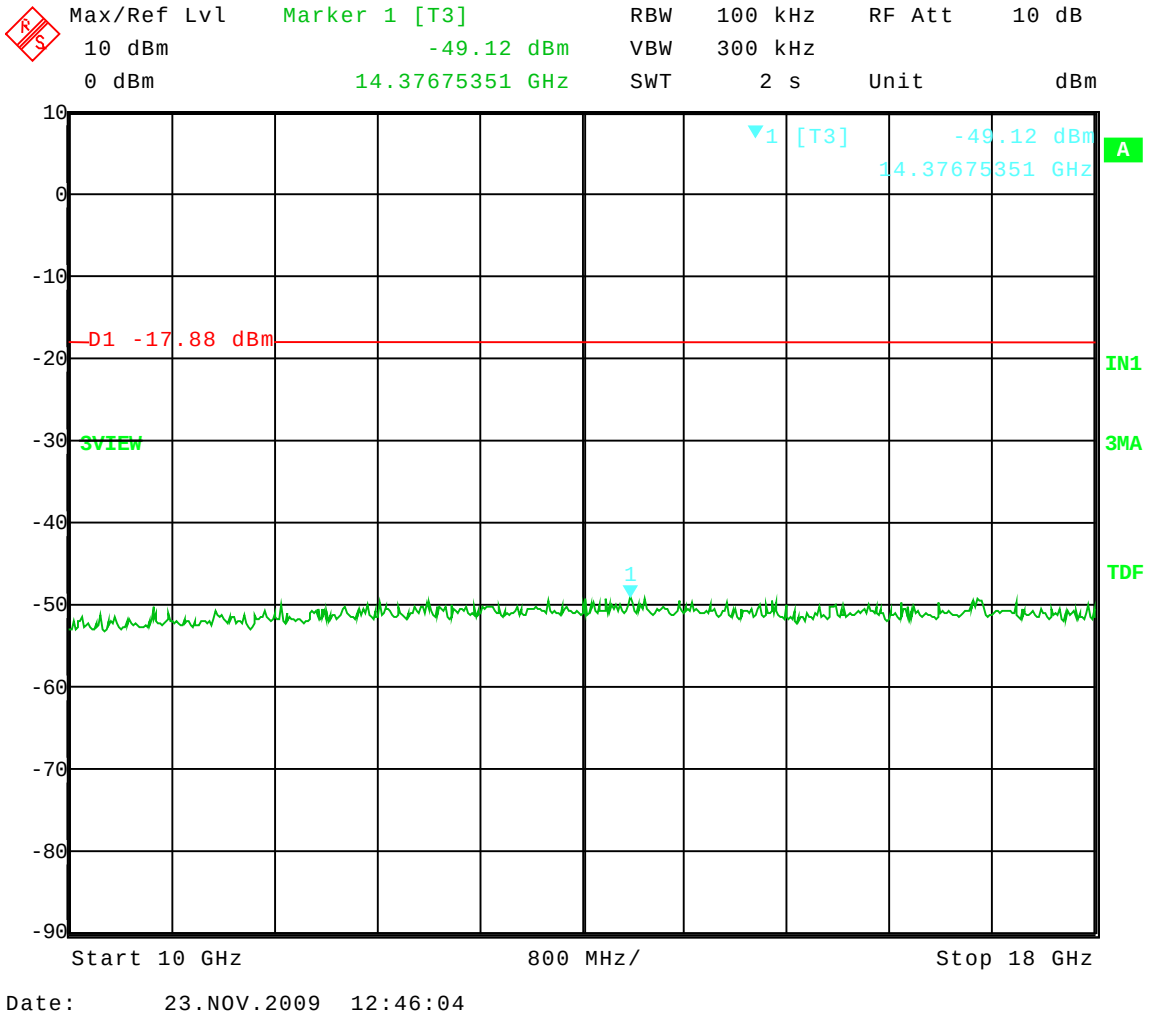
Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz
Antenna E2
Frequency Range: 1 to 10 GHz
Limit = -17.88 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

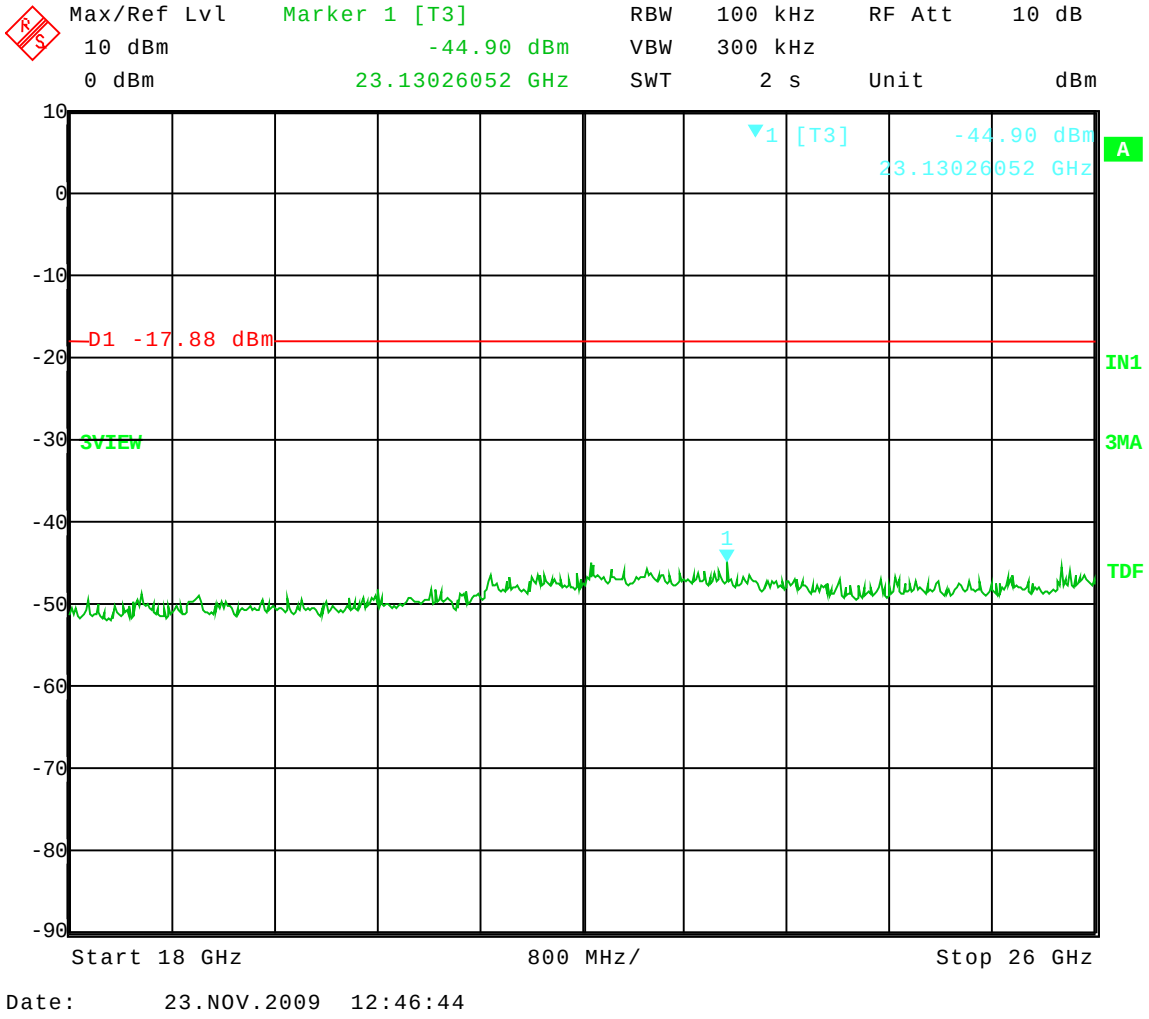
Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz
Antenna E2
Frequency Range: 10 to 18 GHz
Limit = -17.88 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



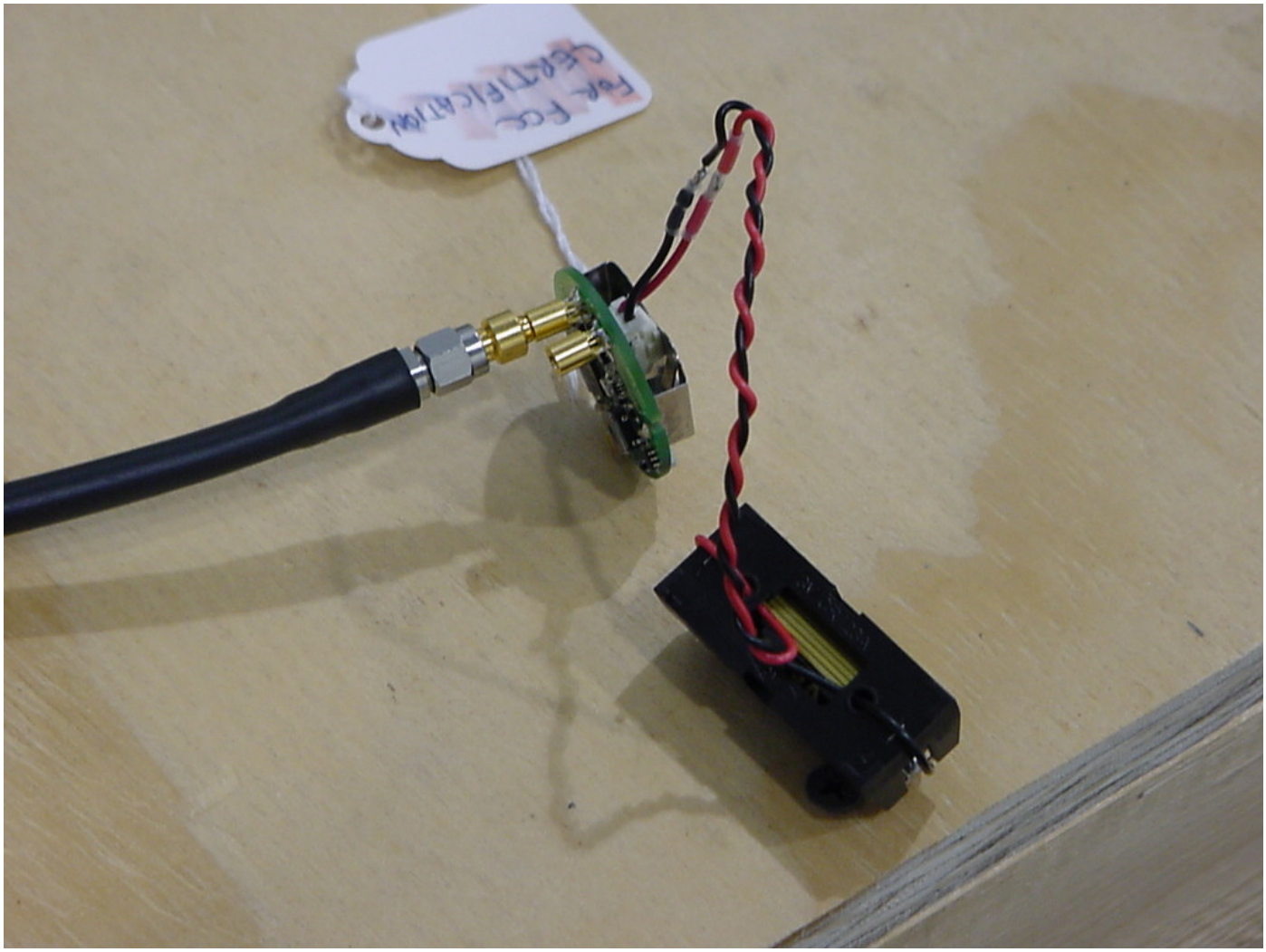
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Spurious Emissions - Conducted – 15.247(d)
Operator: Adam A
Comment: High Channel Transmit = 2.475 GHz
Antenna E2
Frequency Range: 18 to 26 GHz
Limit = -17.88 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

2b. RF CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING



1250 Peterson Dr., Wheeling, IL 60090

3b. RESTRICTED BANDS

As stated in Section 15.205a, the fundamental emission from the ICM Call Pendant 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.

4b. RESTRICTED BAND AND BAND EDGE COMPLIANCE

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the attenuation below the general limits specified in 15.209 is not required.

The field strength of any **radiated emissions** which fall within the restricted bands shall not exceed the general radiated emissions limits as stated Section 15.209.

NOTE: See the following page(s) for the graph(s) made showing compliance for Restricted Band and Band Edge Compliance:

1250 Peterson Dr., Wheeling, IL 60090

RADIATED DATA AND GRAPH(S) TAKEN FOR SPURIOUS AND RESTRICTED BAND EMISSIONS MEASUREMENTS

PART 15.247

ANTENNA E1

1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

SPURIOUS AND RESTRICTED BAND EMISSIONS – 30 MHz to 26 GHz

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

EUT: ICM Pendant
Manufacturer: RF Technologies
Operating Condition: 73 deg F; 38% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247 & 15.205
Comment: Low Channel 2.440 GHz - Antenna E1
Date: 11-23-2009

Notes: All other emissions at least 20 dB under the limit.
Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.

Frequency (MHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
4810.000	Max Peak	Vert	67.15	32.98	-31.8	68.33	0	68.33	74	5.7	1.0	7	H / RB
4810.000	Average	Vert	67.15	32.98	-31.8	68.33	20	48.33	54	5.7	1.0	7	H / RB
4810.000	Max Peak	Horz	67.03	32.98	-31.8	68.21	0	68.21	74	5.8	1.1	33	H / RB
4810.000	Average	Horz	67.03	32.98	-31.8	68.21	20	48.21	54	5.8	1.1	33	H / RB

Legend: H=Harmonic ; RB=Restricted Band ; F=Fundamental
Level = Total Level - System Loss - Antenna Factor
Final Corrected = Total Level - Duty Cycle Correction
Margin = Limit - Final Corrected

1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

SPURIOUS AND RESTRICTED BAND EMISSIONS – 30 MHz to 26 GHz

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

EUT: ICM Pendant
Manufacturer: RF Technologies
Operating Condition: 73 deg F; 38% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247 & 15.205
Comment: Mid Channel 2.440 GHz - Antenna E1
Date: 11-23-2009

Notes: All other emissions at least 20 dB under the limit.
Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.

Frequency (MHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
4880.000	Max Peak	Vert	69.81	32.89	-32	70.7	0	70.7	74	3.3	1.1	347	H / RB
4880.000	Average	Vert	69.81	32.89	-32	70.7	20	50.7	54	3.3	1.1	347	H / RB
4880.000	Max Peak	Horz	67.86	32.89	-32	68.75	0	68.75	74	5.3	1.1	13	H / RB
4880.000	Average	Horz	67.86	32.89	-32	68.75	20	48.75	54	5.3	1.1	13	H / RB

Legend: H=Harmonic ; RB=Restricted Band ; F=Fundamental
Level = Total Level - System Loss - Antenna Factor
Final Corrected = Total Level - Duty Cycle Correction
Margin = Limit - Final Corrected

1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 0800-0375
Report Number: 15865

SPURIOUS AND RESTRICTED BAND EMISSIONS – 30 MHz to 26 GHz

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

EUT: ICM Pendant
Manufacturer: RF Technologies
Operating Condition: 73 deg F; 38% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247 & 15.205
Comment: High Channel 2.475 GHz - Antenna E1
Date: 11-23-2009

Notes: All other emissions at least 20 dB under the limit.
Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.

Frequency (MHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
4950.000	Max Peak	Vert	70.48	33.07	-31.6	71.95	0	71.95	74	2.1	1.1	346	H / RB
4950.000	Average	Vert	70.48	33.07	-31.6	71.95	20	51.95	54	2.1	1.1	346	H / RB
4950.000	Max Peak	Horz	68.54	33.07	-31.6	70.01	0	70.01	74	4.0	1.1	353	H / RB
4950.000	Average	Horz	68.54	33.07	-31.6	70.01	20	50.01	54	4.0	1.1	353	H / RB

Legend: H=Harmonic ; RB=Restricted Band ; F=Fundamental
Level = Total Level - System Loss - Antenna Factor
Final Corrected = Total Level - Duty Cycle Correction
Margin = Limit - Final Corrected

1250 Peterson Dr., Wheeling, IL 60090

RADIATED DATA AND GRAPH(S) TAKEN FOR SPURIOUS AND RESTRICTED BAND EMISSIONS MEASUREMENTS

PART 15.247

E2 ANTENNA

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

SPURIOUS AND RESTRICTED BAND EMISSIONS – 30 MHz to 26 GHz

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

EUT: ICM Pendant
Manufacturer: RF Technologies
Operating Condition: 73 deg F; 38% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247 & 15.205
Comment: Low Channel 2.440 GHz - Antenna E2
Date: 11-23-2009

Notes: All other emissions at least 20 dB under the limit.
Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.

Frequency (MHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
4810.000	Max Peak	Vert	65.39	32.98	-31.8	66.57	0	66.57	74	7.4	1.2	255	H / RB
4810.000	Average	Vert	65.39	32.98	-31.8	66.57	20	46.57	54	7.4	1.2	255	H / RB
4810.000	Max Peak	Horz	63.56	32.98	-31.8	64.74	0	64.74	74	9.3	1.1	175	H / RB
4810.000	Average	Horz	63.56	32.98	-31.8	64.74	20	44.74	54	9.3	1.1	175	H / RB

Legend: H=Harmonic ; RB=Restricted Band ; F=Fundamental
Level = Total Level - System Loss - Antenna Factor
Final Corrected = Total Level - Duty Cycle Correction
Margin = Limit - Final Corrected

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

SPURIOUS AND RESTRICTED BAND EMISSIONS – 30 MHz to 26 GHz

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

EUT: ICM Pendant
Manufacturer: RF Technologies
Operating Condition: 73 deg F; 38% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247 & 15.205
Comment: Mid Channel 2.440 GHz - Antenna E2
Date: 11-23-2009

Notes: All other emissions at least 20 dB under the limit.
Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.

Frequency (MHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
4880.000	Max Peak	Vert	66.49	32.89	-32	67.38	0	67.38	74	6.6	1.0	9	H / RB
4880.000	Average	Vert	66.49	32.89	-32	67.38	20	47.38	54	6.6	1.0	9	H / RB
4880.000	Max Peak	Horz	65.22	32.89	-32	66.11	0	66.11	74	7.9	1.1	28	H / RB
4880.000	Average	Horz	65.22	32.89	-32	66.11	20	46.11	54	7.9	1.1	28	H / RB

Legend: H=Harmonic ; RB=Restricted Band ; F=Fundamental
Level = Total Level - System Loss - Antenna Factor
Final Corrected = Total Level - Duty Cycle Correction
Margin = Limit - Final Corrected

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

SPURIOUS AND RESTRICTED BAND EMISSIONS – 30 MHz to 26 GHz

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

EUT: ICM Pendant
Manufacturer: RF Technologies
Operating Condition: 73 deg F; 38% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247 & 15.205
Comment: High Channel 2.475 GHz - Antenna E2
Date: 11-23-2009

Notes: All other emissions at least 20 dB under the limit.
Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.

Frequency (MHz)	Measurement Type	Antenna Polarization	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	EUT Angle (deg)	Comment
4950.000	Max Peak	Vert	69.51	33.07	-31.6	70.98	0	70.98	74	3.0	1.0	60	H / RB
4950.000	Average	Vert	69.51	33.07	-31.6	70.98	20	50.98	54	3.0	1.0	60	H / RB
4950.000	Max Peak	Horz	66.68	33.07	-31.6	68.15	0	68.15	74	5.8	1.1	175	H / RB
4950.000	Average	Horz	66.68	33.07	-31.6	68.15	20	48.15	54	5.8	1.1	175	H / RB

Legend: H=Harmonic ; RB=Restricted Band ; F=Fundamental
Level = Total Level - System Loss - Antenna Factor
Final Corrected = Total Level - Duty Cycle Correction
Margin = Limit - Final Corrected

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DATA AND GRAPH(S) TAKEN SHOWING

THE BAND EDGE CONDUCTED COMPLIANCE

PART 15.247

ANTENNA E1

NOTE:

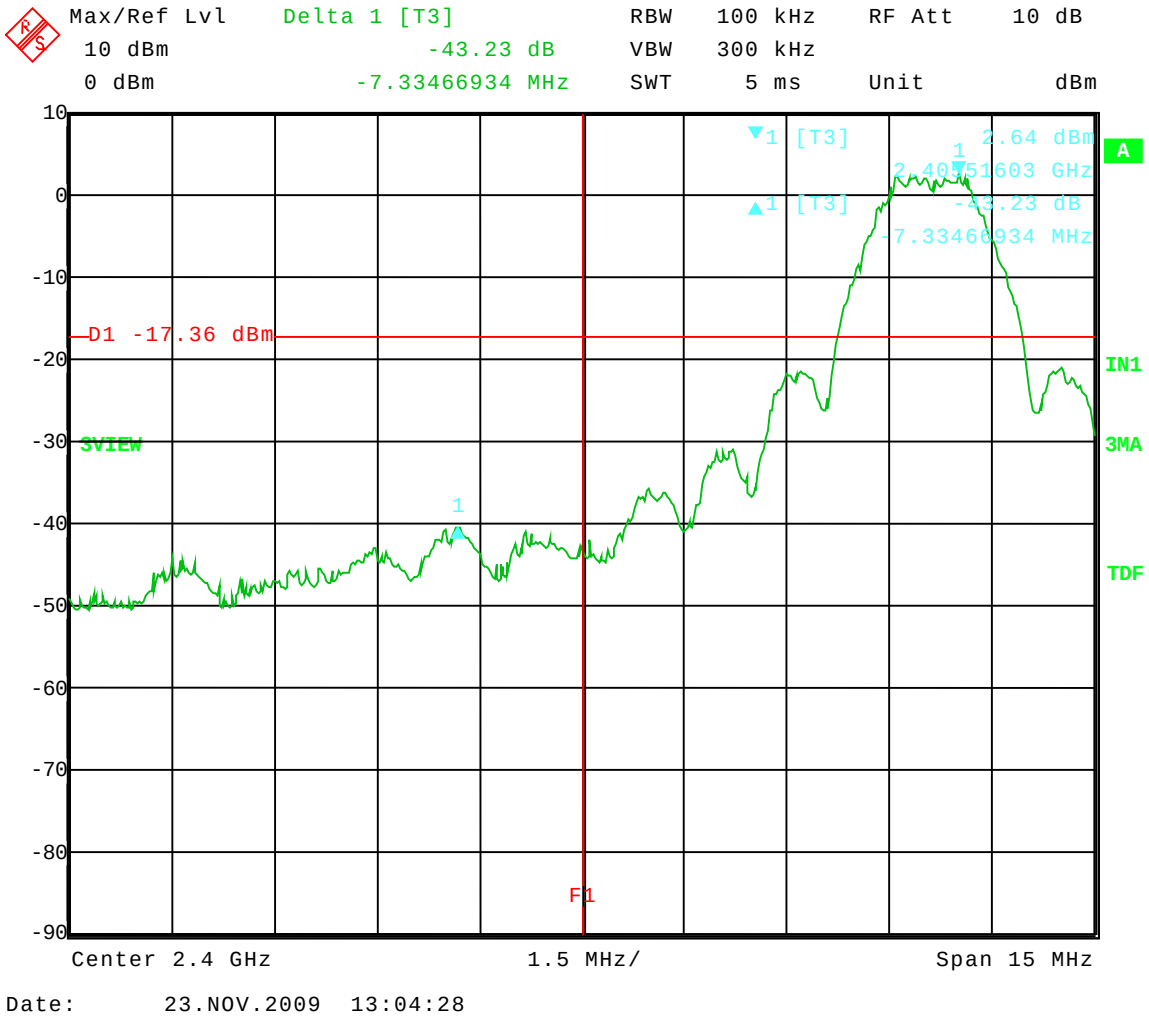
Using FCC Guidance Document "**Measurement of Digital Transmission Systems Operating under Section 15.247** - March 23, 2005".

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Low Band-Edge Compliance - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E1

Band-Edge Frequency = 2.4 GHz
Band-Edge > 20 dB Below Peak In-Band Emission



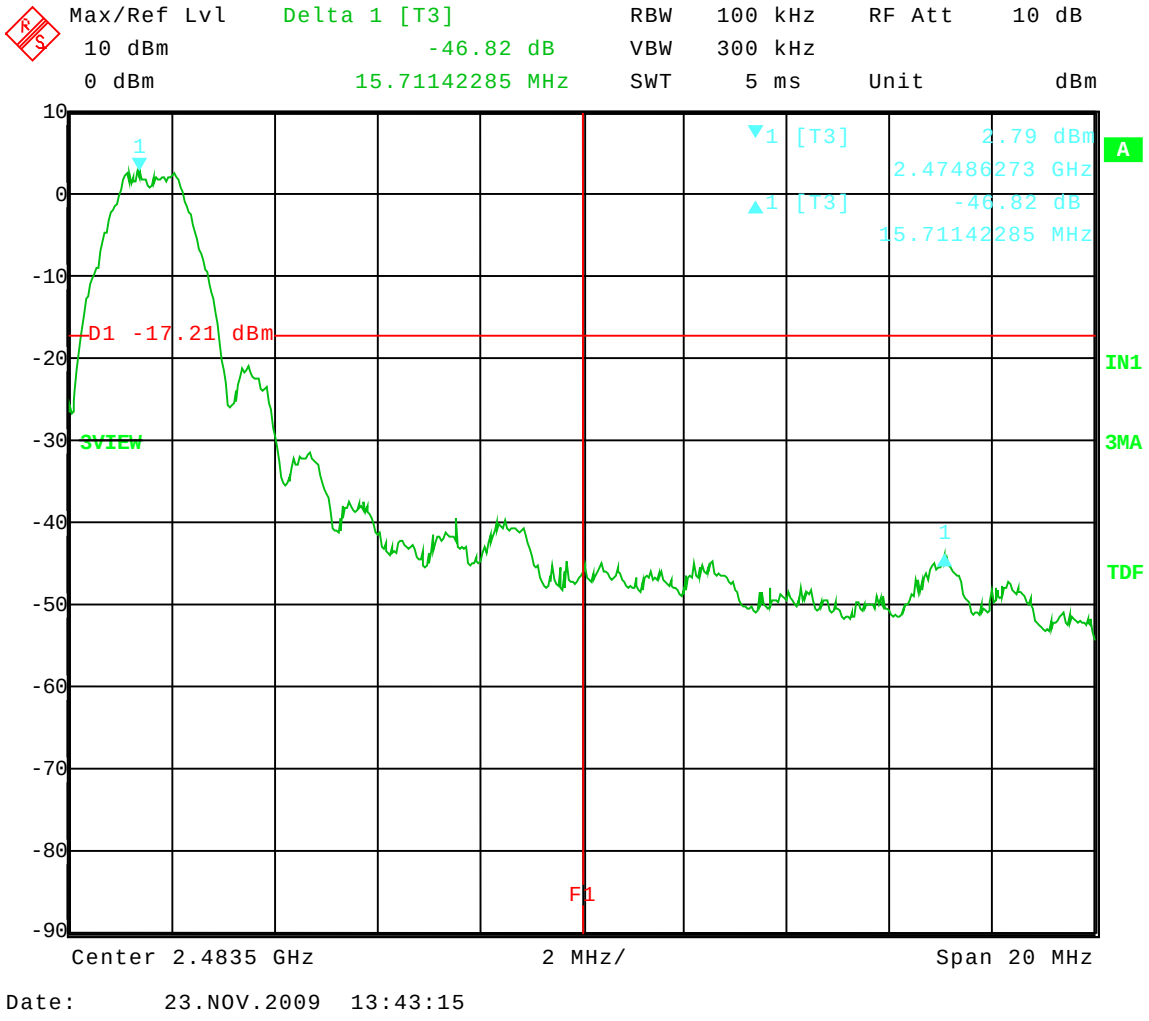
1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Upper Band-Edge Compliance - Conducted – 15.247(d)
Operator: Adam A

Comment: High Channel: Frequency – 2.475 GHz
Antenna E1

Band-Edge Frequency = 2.4835 GHz
Band-Edge > 20 dB Below Peak In-Band Emission



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DATA AND GRAPH(S) TAKEN SHOWING

THE BAND EDGE CONDUCTED COMPLIANCE

PART 15.247

ANTENNA E2

NOTE:

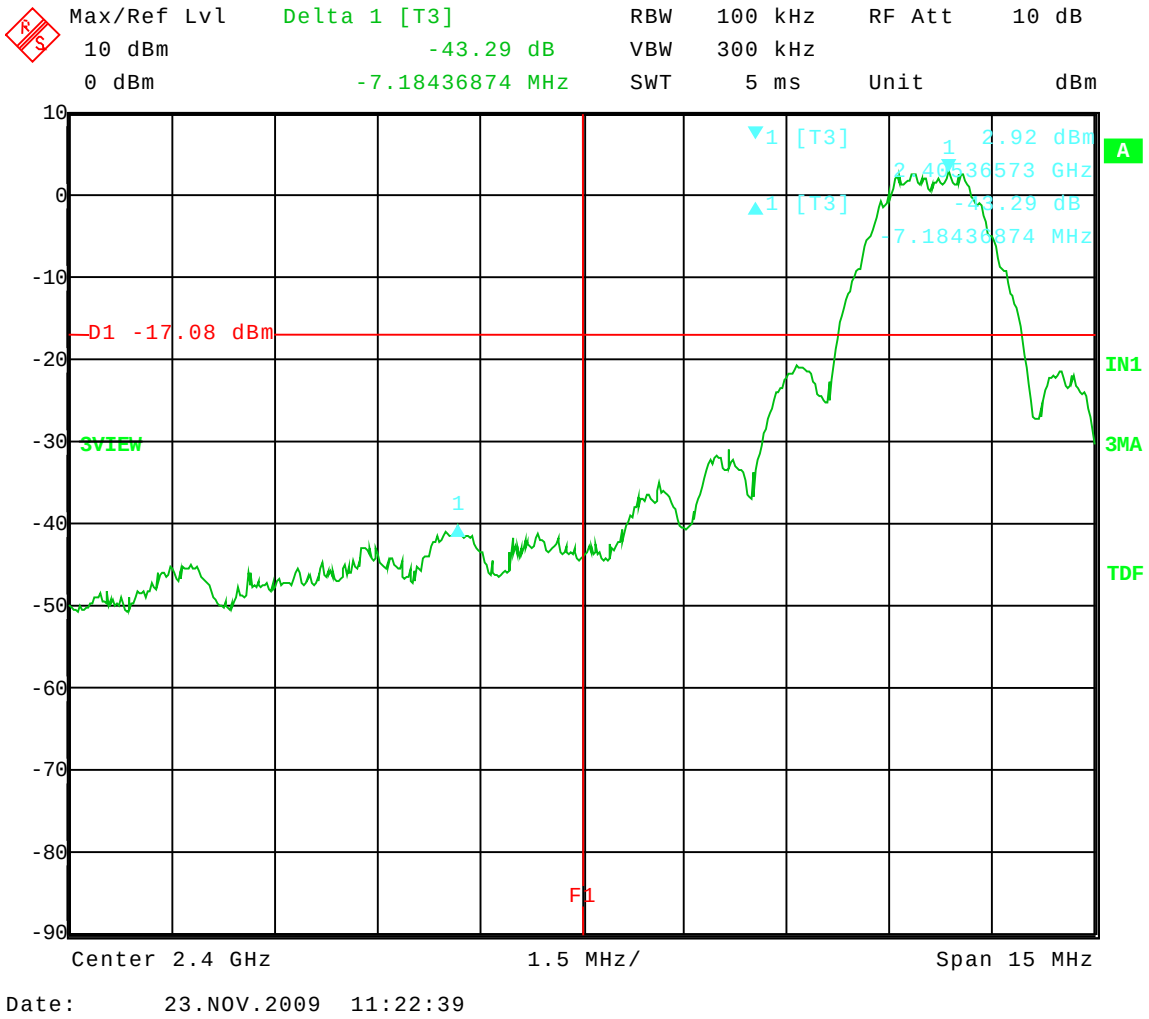
Using FCC Guidance Document "**Measurement of Digital Transmission Systems Operating under Section 15.247** - March 23, 2005".

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Low Band-Edge Compliance - Conducted – 15.247(d)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E2

Band-Edge Frequency = 2.4 GHz
Band-Edge > 20 dB Below Peak In-Band Emission



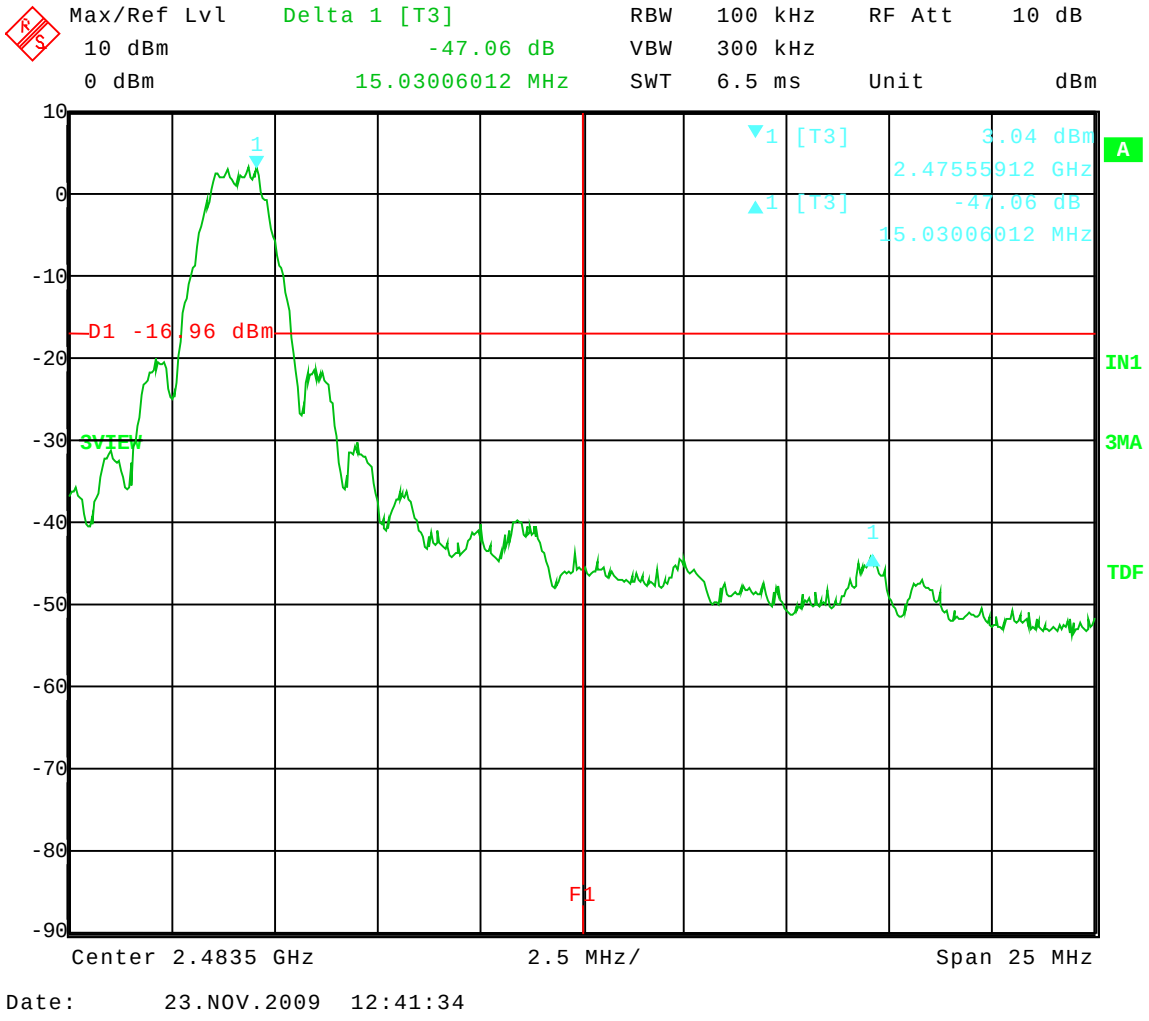
1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Upper Band-Edge Compliance - Conducted – 15.247(d)
Operator: Adam A

Comment: High Channel: Frequency – 2.475 GHz
Antenna E2

Band-Edge Frequency = 2.4835 GHz
Band-Edge > 20 dB Below Peak In-Band Emission



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APPENDIX B

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 (Antenna E1 Worst Case)

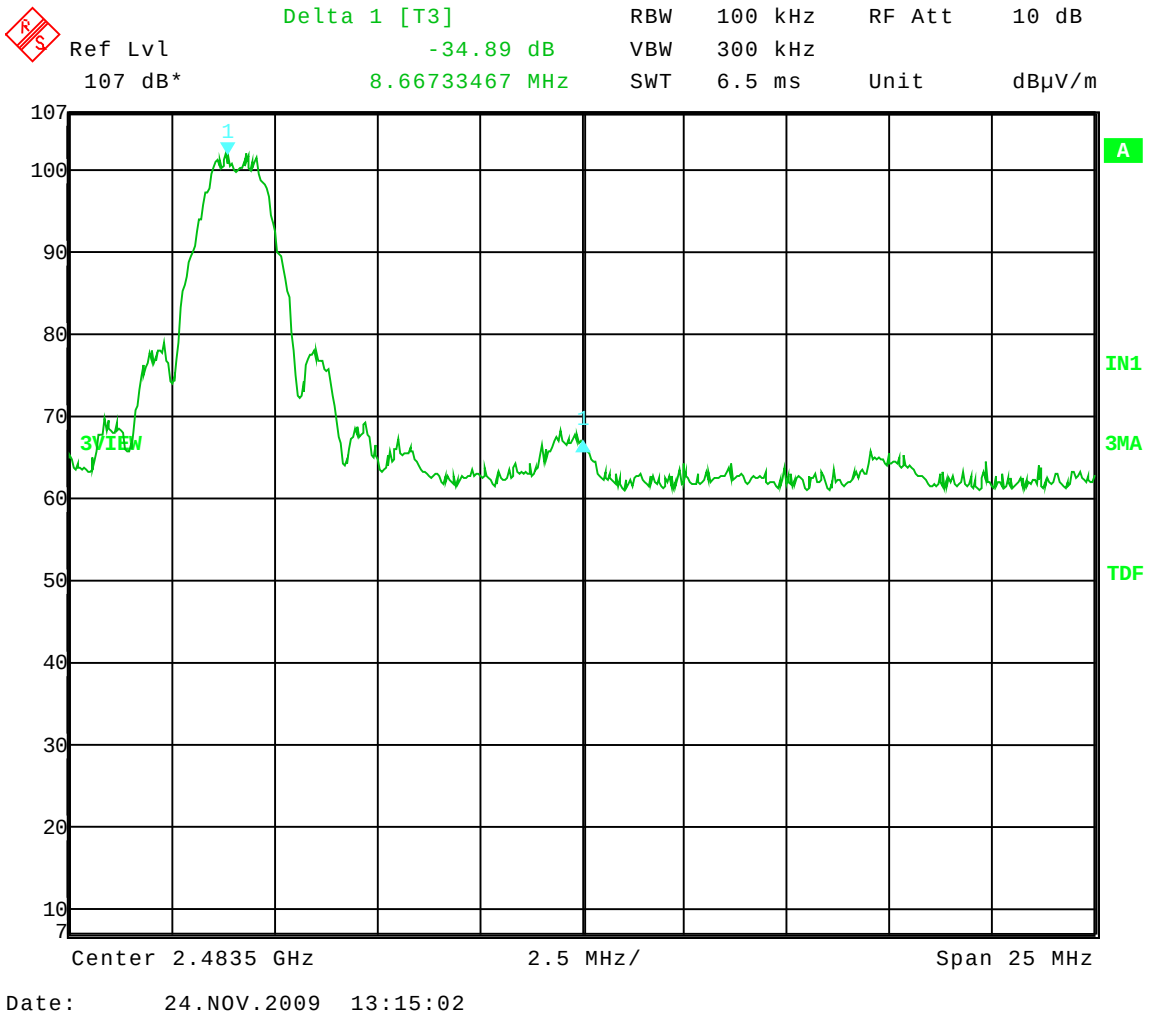
Frequency (MHz)	Antenna Polarity (H/V)	Fundamental Field Strength (dBµV/m)	Duty Cycle Correction (dB)	Delta-Marker (dB)	Band-Edge Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2475 (Peak)	H	93.32	N/A	34.89	58.43	74	15.57
2475 (Avg)	H	93.32	20	34.89	38.43	54	15.57

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-19-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Band edge 2.4835 GHz – 15.247(d) & 15.205
Operator: Adam A

Comment: 2.475 GHz Transmit Frequency



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APPENDIX B

5b. FIELD STRENGTH OF FUNDAMENTAL AND SPURIOUS EMISSION MEASUREMENTS

The radiated measurements made at D.L.S. Electronic Systems, Inc., for the ICM Call Pendant, Model Number: 0800-0375, 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 ICM Call Pendant were made up to 26000 MHz, in accordance with Section 15.33a for Intentional Radiators with a fundamental frequency of 2405-2475 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 15.247 at the open field test site, located at Genoa City, Wisconsin, FCC file number **31040/SIT**. When required, limits were extrapolated 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 25 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, Test procedures for the radiated field strength of spurious emissions is per FCC Guidance Document "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005". 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.

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APPENDIX B

5b. FIELD STRENGTH OF FUNDAMENTAL AND SPURIOUS EMISSION MEASUREMENTS (CON'T)

As stated in Section 15.247(b) the allowed maximum peak output power of the transmitter shall not exceed 1 Watt. In any 100 kHz bandwidth outside these frequency bands (the power that is produced by the modulation products of the spreading sequence), the information sequence and the carrier frequency shall be either at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Attenuation below the general limits specified in 15.209 is not required.

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 73°F at 38% relative humidity.

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

RADIATED DATA AND GRAPH(S) TAKEN FOR E.I.R.P. OF FUNDAMENTAL EMISSION MEASUREMENTS

PART 15.247

ANTENNA E1

NOTE:

Per FCC Guidance Document "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005".

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
Operator: Adam A
Date of test: 11-24-2009
Temperature: 73 deg. F
Humidity: 40% R.H.
Rule Part: FCC Pt1.1310

EIRP - Substitution Method

Model: **ICM Pendant with Antenna E1**

Channel: 2.405 GHz

Frequency and Polarization (MHz)	Max. Field Strength of EUT @ 3 meters (dBuV/m)	Output of Signal Generator when field strength equals that of EUT (dBm)	Correction factor for cable between Signal Gen. and subst. antenna (dB)	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2405 vertical	91.65	-12.20	1.82	9.02	-5.00	30.00	35.00	0.32
2405 horizontal	94.74	-10.70	1.82	9.02	-3.50	30.00	33.50	0.45

EIRP = Signal generator output - cable loss + antenna gain
$ERP_{(\text{ref. to } \frac{1}{2}\lambda \text{ dipole})}$ = Signal generator output - cable loss + antenna gain - 2.15
(Ref. ITU-R SM.329-8 Annex 1[1])

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APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
Operator: Adam A
Date of test: 11-24-2009
Temperature: 73 deg. F
Humidity: 40% R.H.
Rule Part: FCC Pt1.1310

EIRP - Substitution Method

Model: **ICM Pendant with Antenna E1**

Channel: 2.440 GHz

Frequency and Polarization (MHz)	Max. Field Strength of EUT @ 3 meters (dBuV/m)	Output of Signal Generator when field strength equals that of EUT (dBm)	Correction factor for cable between Signal Gen. and subst. antenna (dB)	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2440 vertical	91.39	-12.80	1.85	9.08	-5.57	30.00	35.57	0.28
2440 horizontal	93.52	-11.70	1.85	9.08	-4.47	30.00	34.47	0.36

EIRP = Signal generator output - cable loss + antenna gain
$ERP_{(ref.\ to\ \frac{1}{2}\lambda\ dipole)}$ = Signal generator output - cable loss + antenna gain - 2.15
(Ref. ITU-R SM.329-8 Annex 1[1])

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
Operator: Adam A
Date of test: 11-24-2009
Temperature: 73 deg. F
Humidity: 40% R.H.
Rule Part: FCC Pt1.1310

EIRP - Substitution Method

Model: **ICM Pendant with Antenna E1**								
Channel: 2.475 GHz								
Frequency and Polarization (MHz)	Max. Field Strength of EUT @ 3 meters (dBuV/m)	Output of Signal Generator when field strength equals that of EUT (dBm)	Correction factor for cable between Signal Gen. and subst. antenna (dB)	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2475 vertical	90.25	-13.00	1.88	9.15	-5.73	30.00	35.73	0.27
2475 horizontal	93.32	-11.20	1.88	9.15	-3.93	30.00	33.93	0.40

EIRP = Signal generator output - cable loss + antenna gain
$ERP_{(ref.\ to\ ½\lambda\ dipole)}$ = Signal generator output - cable loss + antenna gain - 2.15
(Ref. ITU-R SM.329-8 Annex 1[1])

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APPENDIX B

RADIATED DATA AND GRAPH(S) TAKEN FOR E.I.R.P. OF FUNDAMENTAL EMISSION MEASUREMENTS

PART 15.247

ANTENNA E2

NOTE:

Per FCC Guidance Document "Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005".

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
Operator: Adam A
Date of test: 11-24-2009
Temperature: 73 deg. F
Humidity: 40% R.H.
Rule Part: FCC Pt1.1310

EIRP - Substitution Method

Model: **ICM Pendant with Antenna E2**

Channel: 2.405 GHz

Frequency and Polarization (MHz)	Max. Field Strength of EUT @ 3 meters (dBuV/m)	Output of Signal Generator when field strength equals that of EUT (dBm)	Correction factor for cable between Signal Gen. and subst. antenna (dB)	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2405 vertical	92.98	-10.80	1.82	9.02	-3.60	30.00	33.60	0.44
2405 horizontal	94.27	-11.10	1.82	9.02	-3.90	30.00	33.90	0.41

EIRP = Signal generator output - cable loss + antenna gain
$ERP_{(ref.\ to\ \frac{1}{2}\lambda\ dipole)}$ = Signal generator output - cable loss + antenna gain - 2.15
(Ref. ITU-R SM.329-8 Annex 1[1])

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
Operator: Adam A
Date of test: 11-24-2009
Temperature: 73 deg. F
Humidity: 40% R.H.
Rule Part: FCC Pt1.1310

EIRP - Substitution Method

Model: **ICM Pendant with Antenna E2**

Channel: 2.440 GHz

Frequency and Polarization (MHz)	Max. Field Strength of EUT @ 3 meters (dBuV/m)	Output of Signal Generator when field strength equals that of EUT (dBm)	Correction factor for cable between Signal Gen. and subst. antenna (dB)	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2440 vertical	93.39	-10.80	1.85	9.08	-3.57	30.00	33.57	0.44
2440 horizontal	94.02	-11.20	1.85	9.08	-3.97	30.00	33.97	0.40

EIRP = Signal generator output - cable loss + antenna gain
$ERP_{(ref.\ to\ ½\lambda\ dipole)}$ = Signal generator output - cable loss + antenna gain - 2.15
(Ref. ITU-R SM.329-8 Annex 1[1])

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
Operator: Adam A
Date of test: 11-24-2009
Temperature: 73 deg. F
Humidity: 40% R.H.
Rule Part: FCC Pt1.1310

EIRP - Substitution Method

Model: **ICM Pendant with Antenna E2**

Channel: 2.475 GHz

Frequency and Polarization (MHz)	Max. Field Strength of EUT @ 3 meters (dBuV/m)	Output of Signal Generator when field strength equals that of EUT (dBm)	Correction factor for cable between Signal Gen. and subst. antenna (dB)	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2475 vertical	92.05	-11.20	1.88	9.15	-3.93	30.00	33.93	0.40
2475 horizontal	92.32	-12.20	1.88	9.15	-4.93	30.00	34.93	0.32

EIRP = Signal generator output - cable loss + antenna gain
$ERP_{(\text{ref. to } \frac{1}{2}\lambda \text{ dipole})}$ = Signal generator output - cable loss + antenna gain - 2.15
(Ref. ITU-R SM.329-8 Annex 1[1])

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APPENDIX B

TRANSMITTER DUTY CYCLE GRAPHS

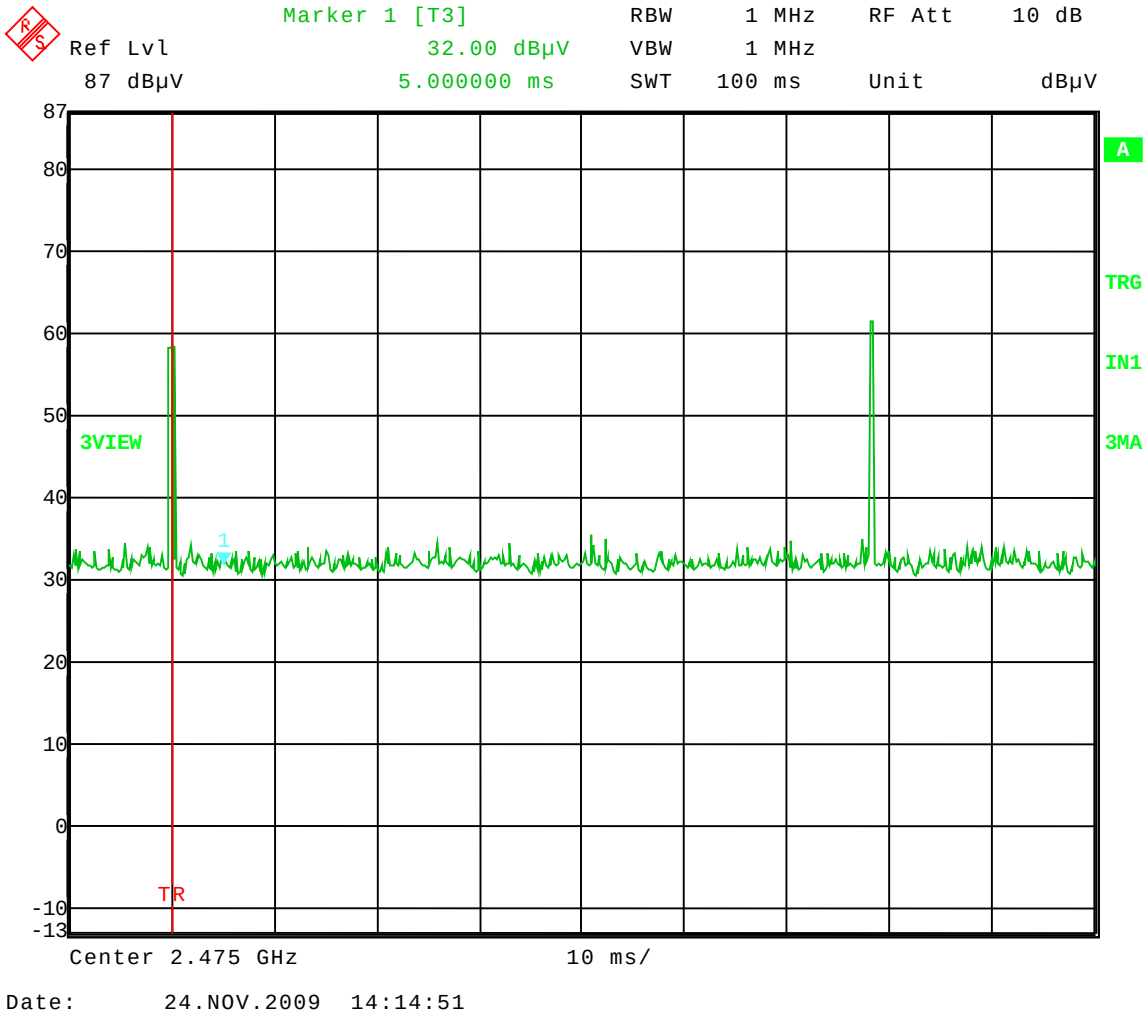
PART 15.35(c)

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-24-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Duty Cycle – maximum duty cycle during normal operation
Operator: Adam A
Rule Part: 15.35(c)

Comment: Total on time in 100 ms = .564 ms x 2 pulses = 1.128 ms
20 log (1.128/100) = -38.95
Duty Cycle Correction Factor = 38.95 dB
Maximum Useful Duty Cycle Correction Factor = 20 dB



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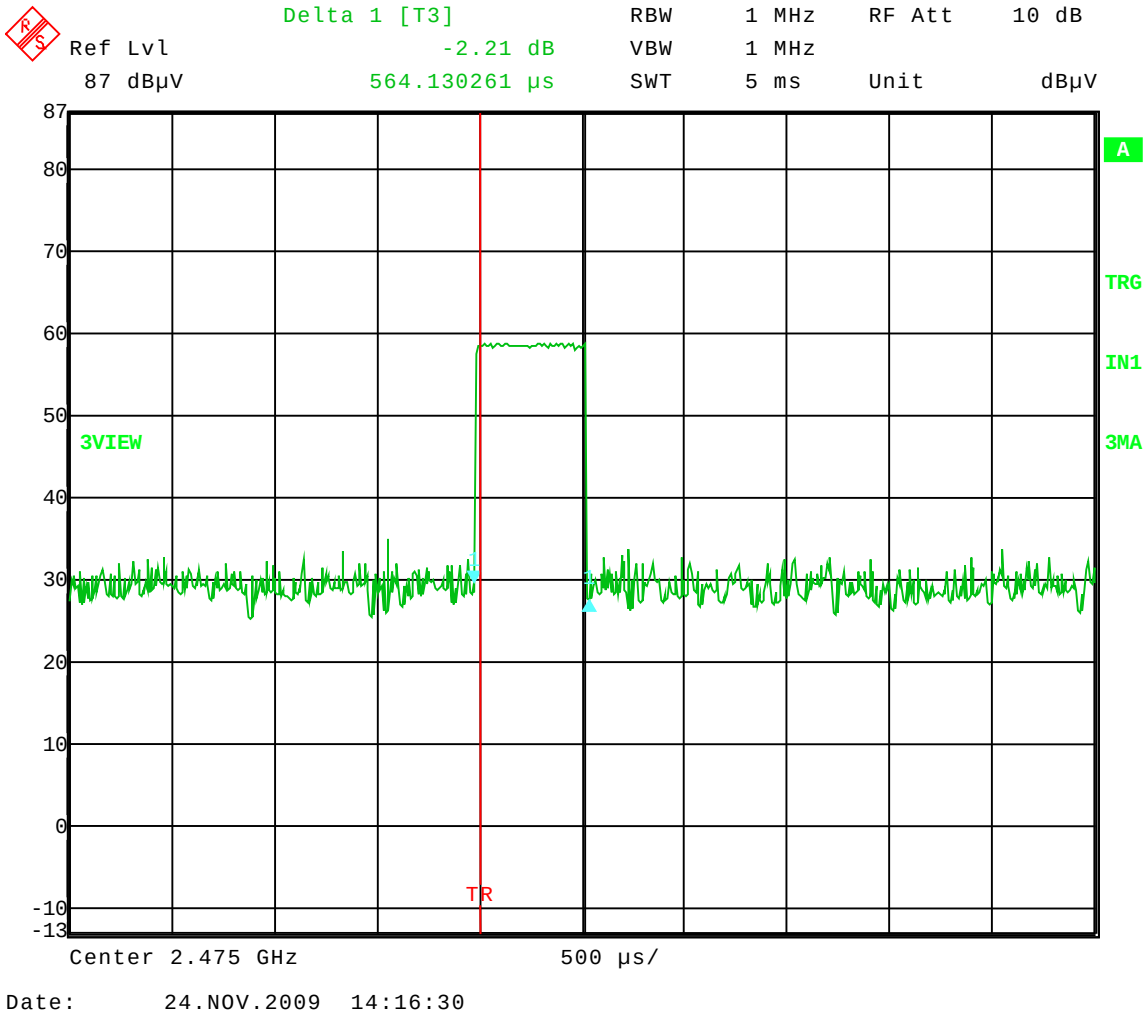
APPENDIX B

Test Date: 11-24-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Duty Cycle – maximum duty cycle during normal operation
Operator: Adam A
Rule Part: 15.35(c)

Comment: Total on time in 100 ms = .564 ms x 2 pulses = 1.128 ms
20 log (1.128/100) = -38.95
Duty Cycle Correction Factor = 38.95 dB
Maximum Useful Duty Cycle Correction Factor = 20 dB



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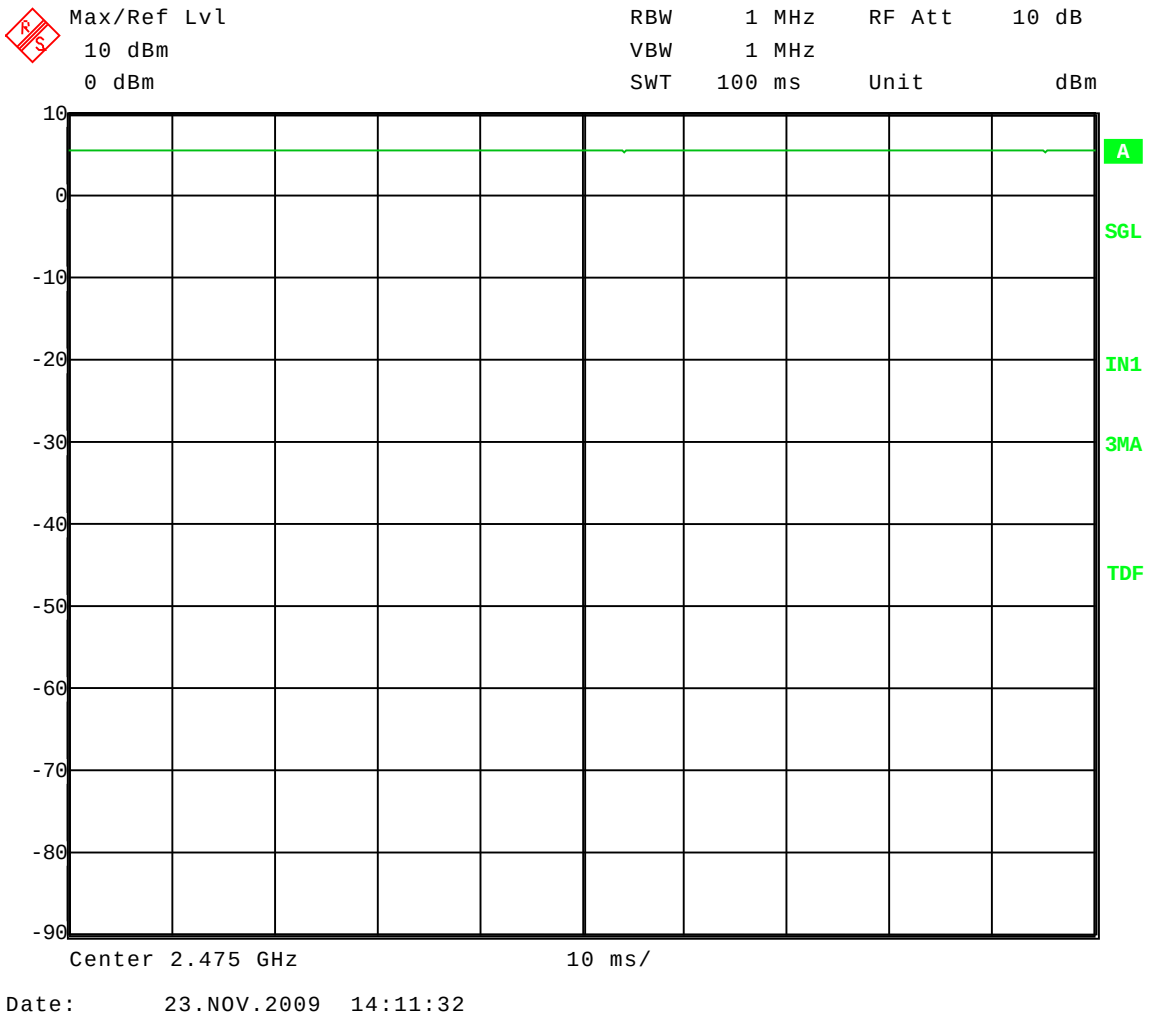
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Duty Cycle – maximum duty cycle during testing
Operator: Adam A
Rule Part: 15.35(c)

Comment: 100% Duty Cycle Used for testing purpose only



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

6 dB BANDWIDTH GRAPHS

PART 15.247

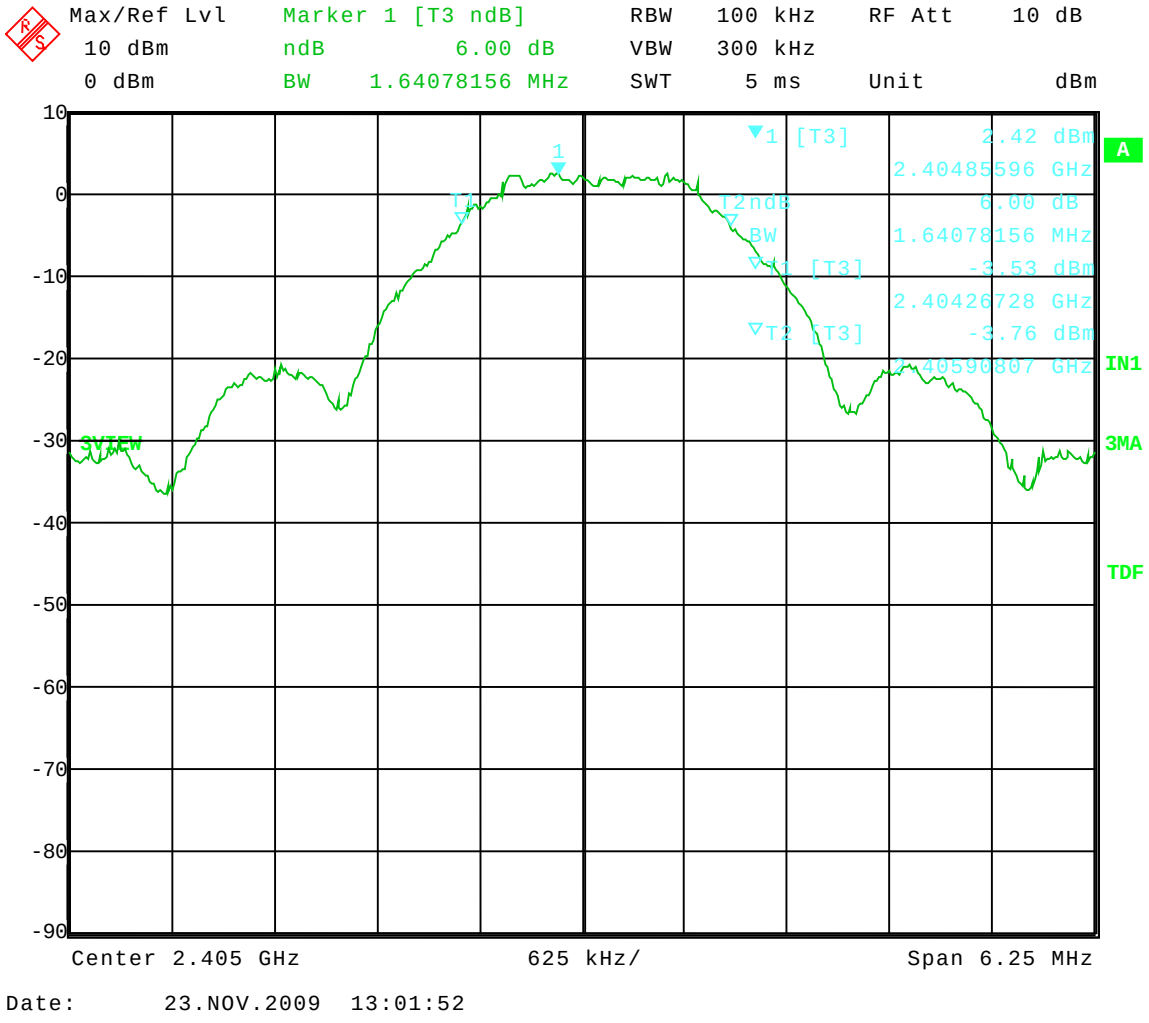
ANTENNA E1

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: 6 dB Bandwidth - Conducted - 15.247(a)(2)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E1

6 dB Bandwidth = 1.641 MHz



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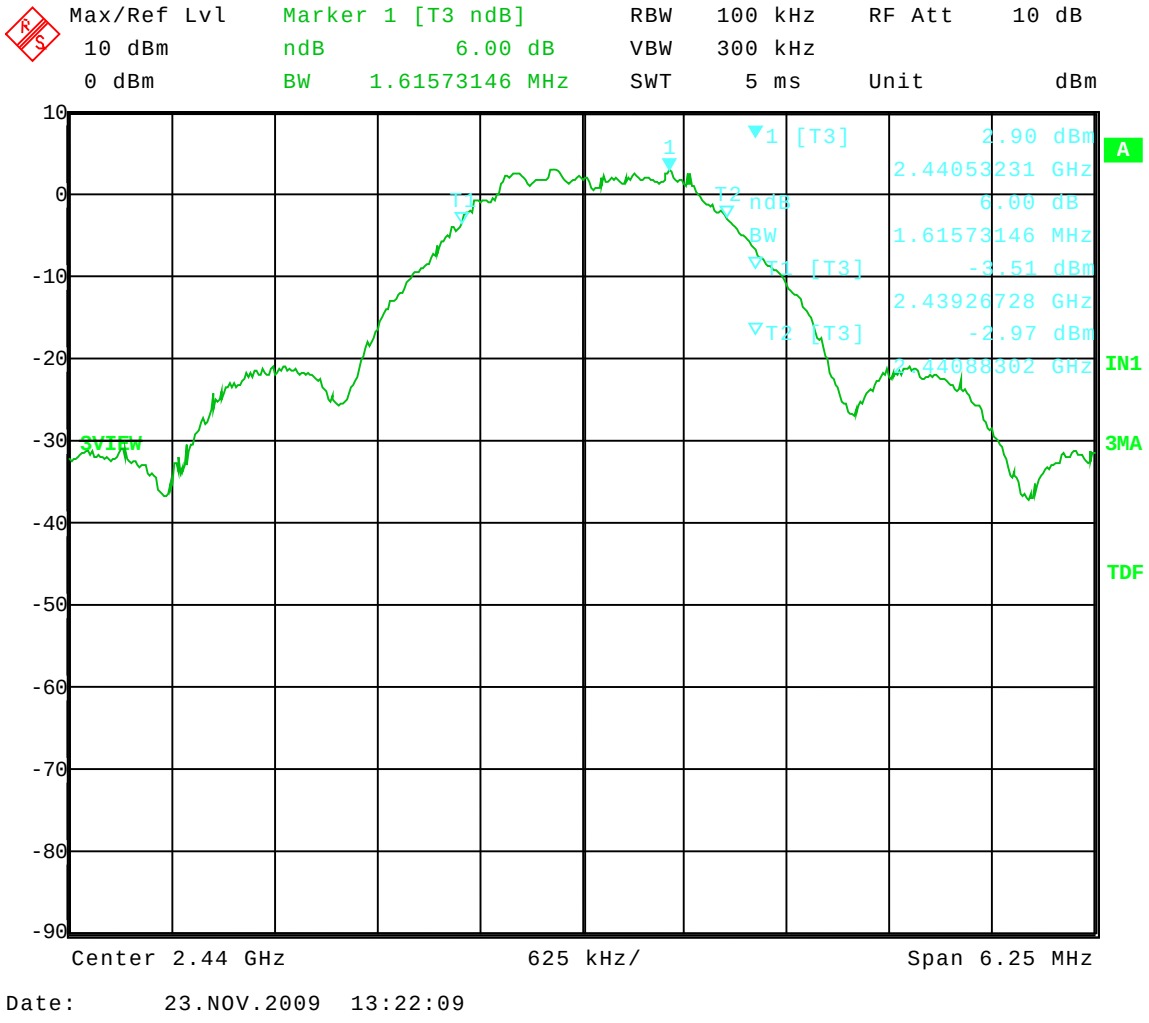
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: 6 dB Bandwidth - Conducted – 15.247(a)(2)
Operator: Adam A
Comment: Mid Channel: Frequency – 2.440 GHz
Antenna E1

6 dB Bandwidth = 1.616 MHz



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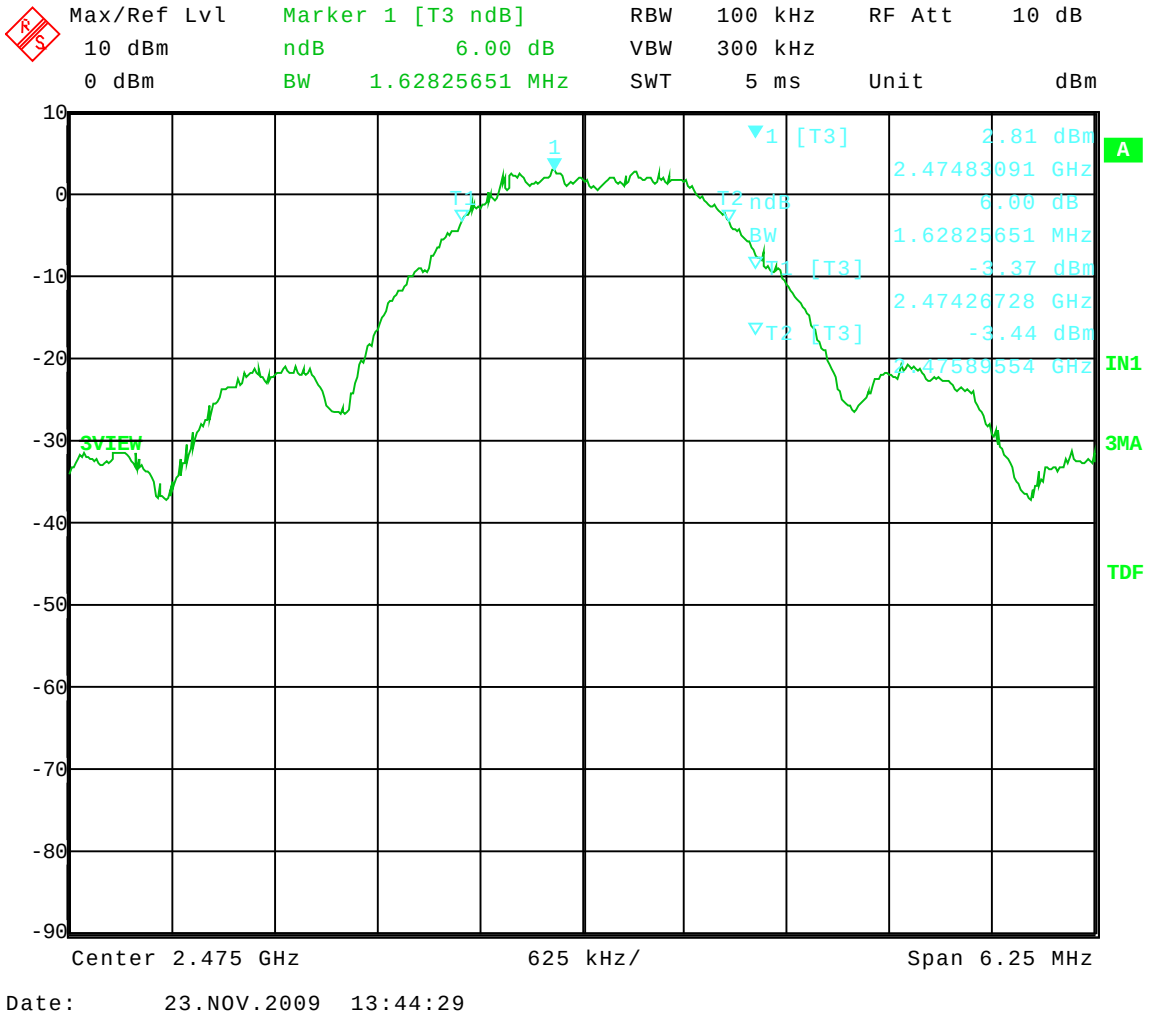
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: 6 dB Bandwidth - Conducted – 15.247(a)(2)
Operator: Adam A
Comment: High Channel: Frequency – 2.475 GHz
Antenna E1

6 dB Bandwidth = 1.628 MHz



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

6 dB BANDWIDTH GRAPHS

PART 15.247

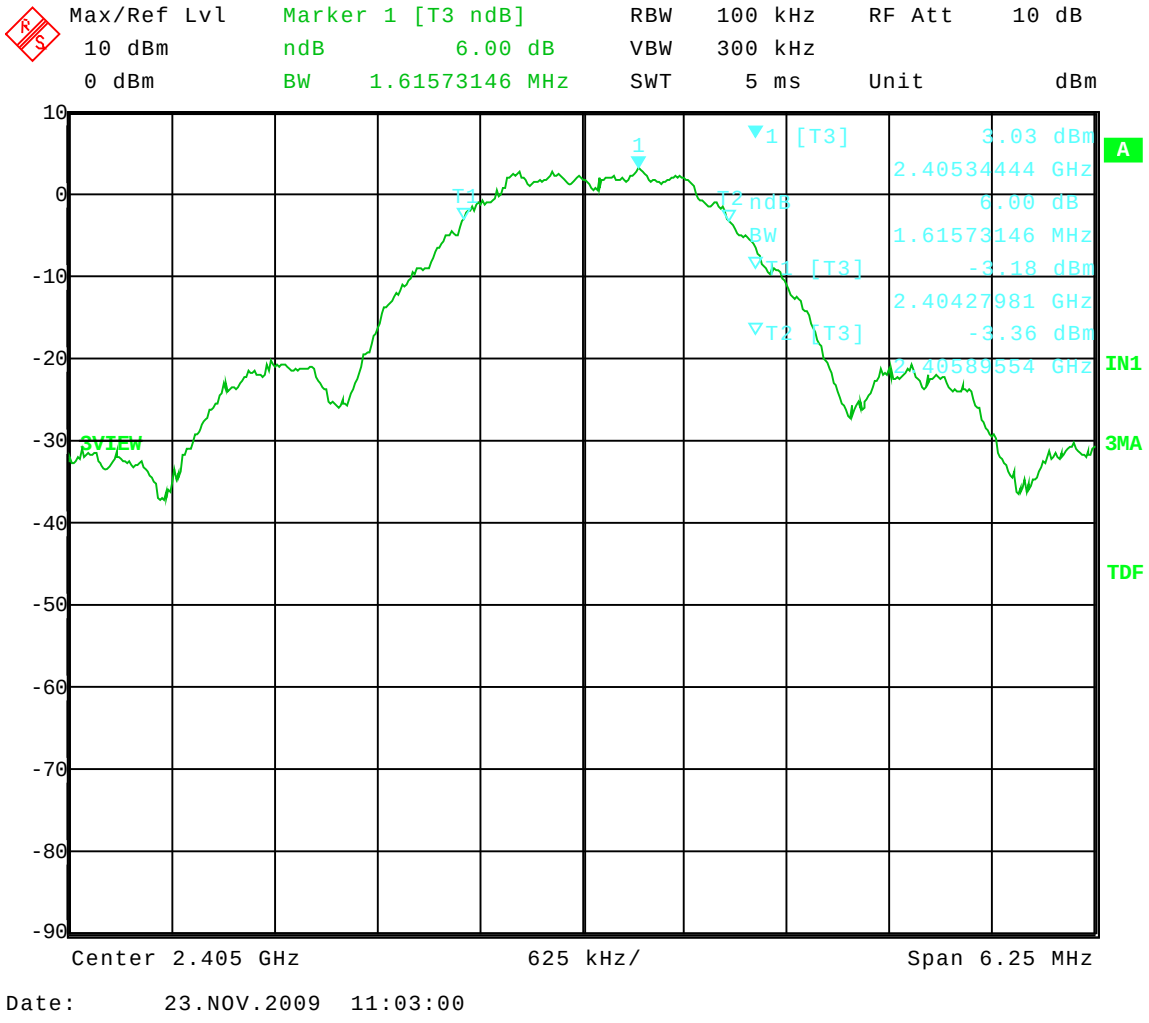
ANTENNA E2

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: 6 dB Bandwidth - Conducted – 15.247(a)(2)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E2

6 dB Bandwidth = 1.616 MHz



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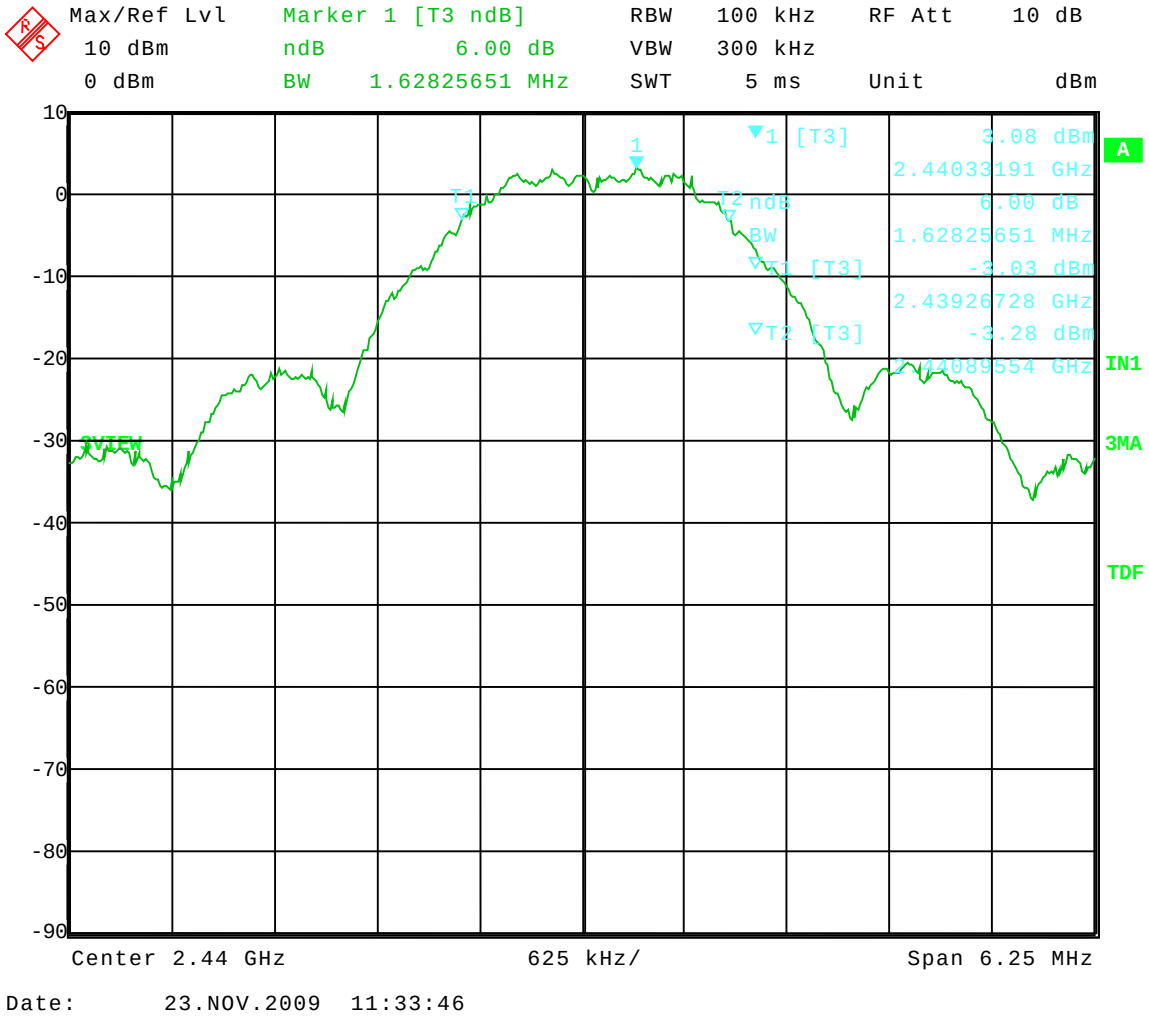
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: 6 dB Bandwidth - Conducted – 15.247(a)(2)
Operator: Adam A
Comment: Mid Channel: Frequency – 2.440 GHz
Antenna E2

6 dB Bandwidth = 1.628 MHz



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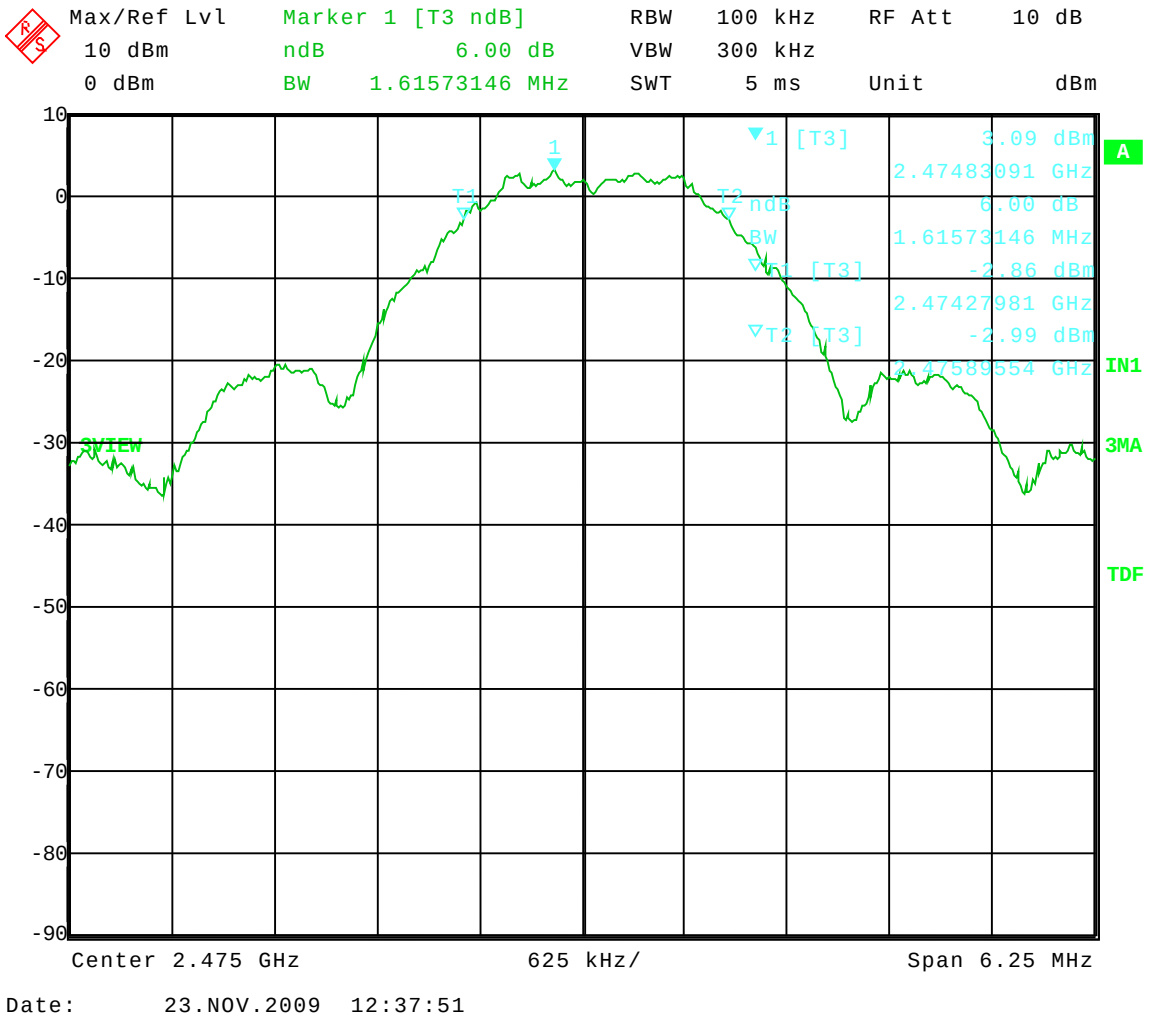
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: 6 dB Bandwidth - Conducted – 15.247(a)(2)
Operator: Adam A
Comment: High Channel: Frequency – 2.475 GHz
Antenna E2

6 dB Bandwidth = 1.616 MHz



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

CONDUCTED PEAK OUTPUT POWER GRAPHS

PART 15.247

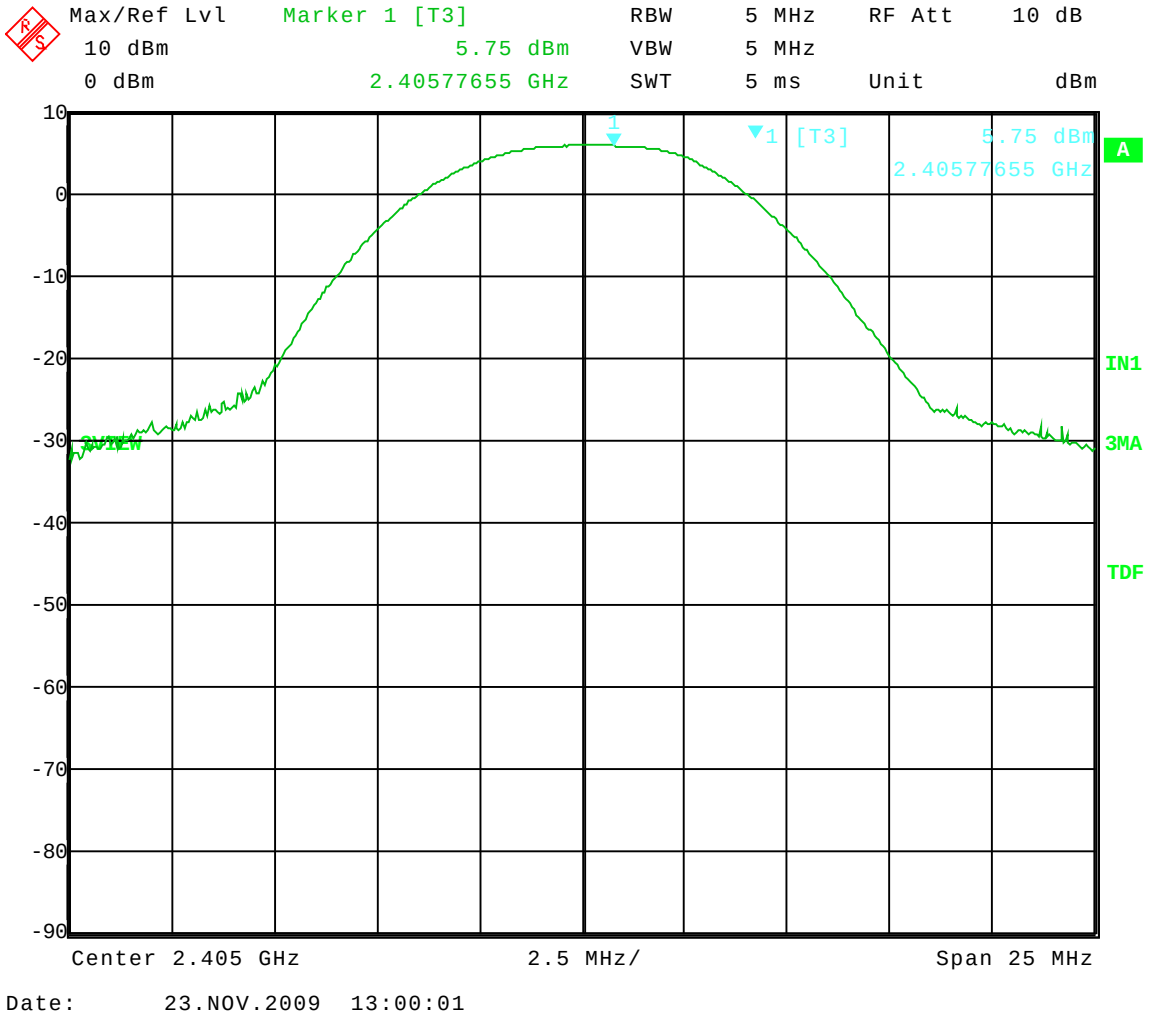
ANTENNA E1

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Output - Conducted – 15.247 (b)(3)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E1

Peak Output Power = 5.75 dBm = **3.76 mW**



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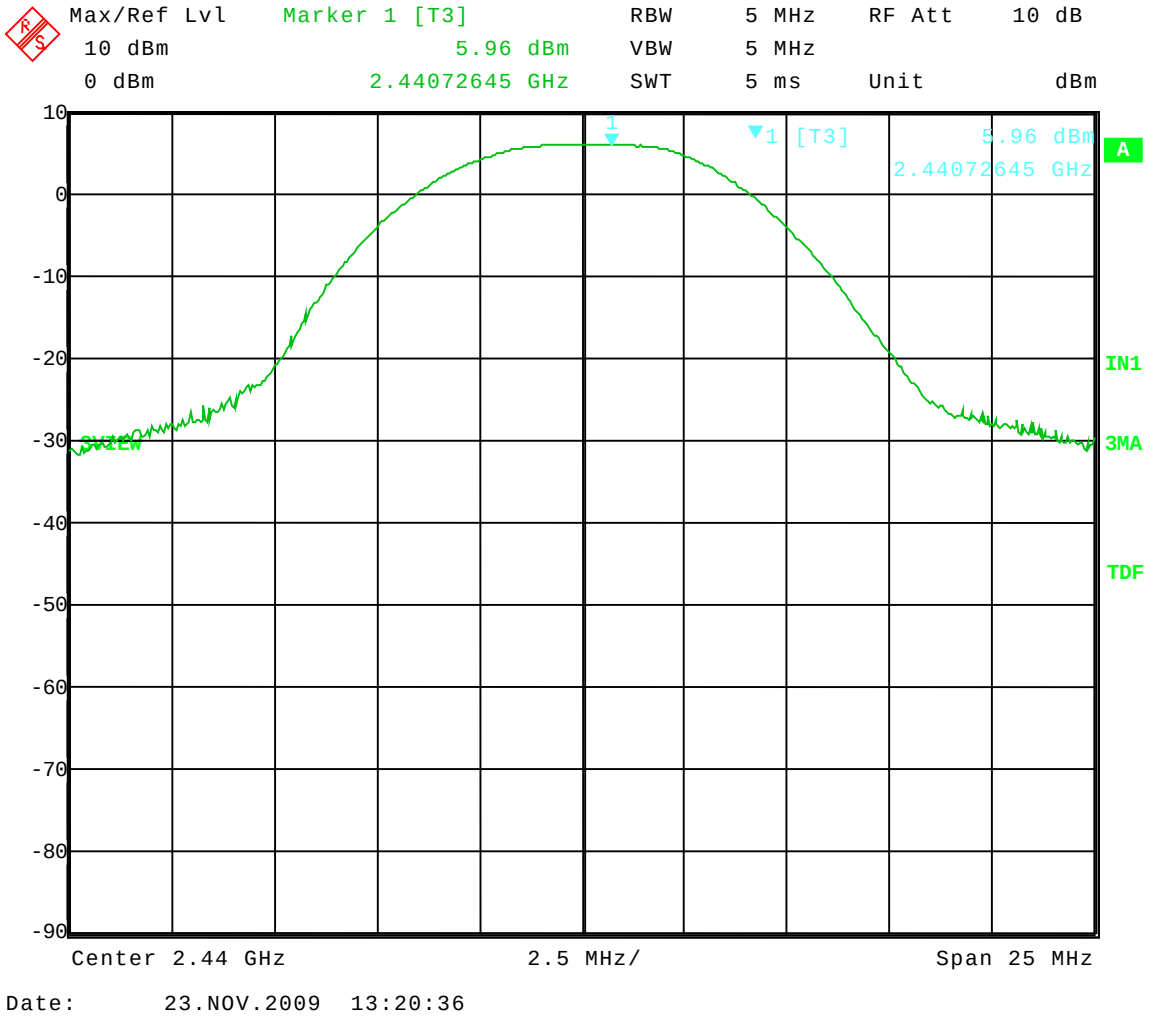
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Output - Conducted – 15.247(b)(3)
Operator: Adam A
Comment: Mid Channel: Frequency – 2.440 GHz
Antenna E1

Peak Output Power = 5.96 dBm = **3.94 mW**



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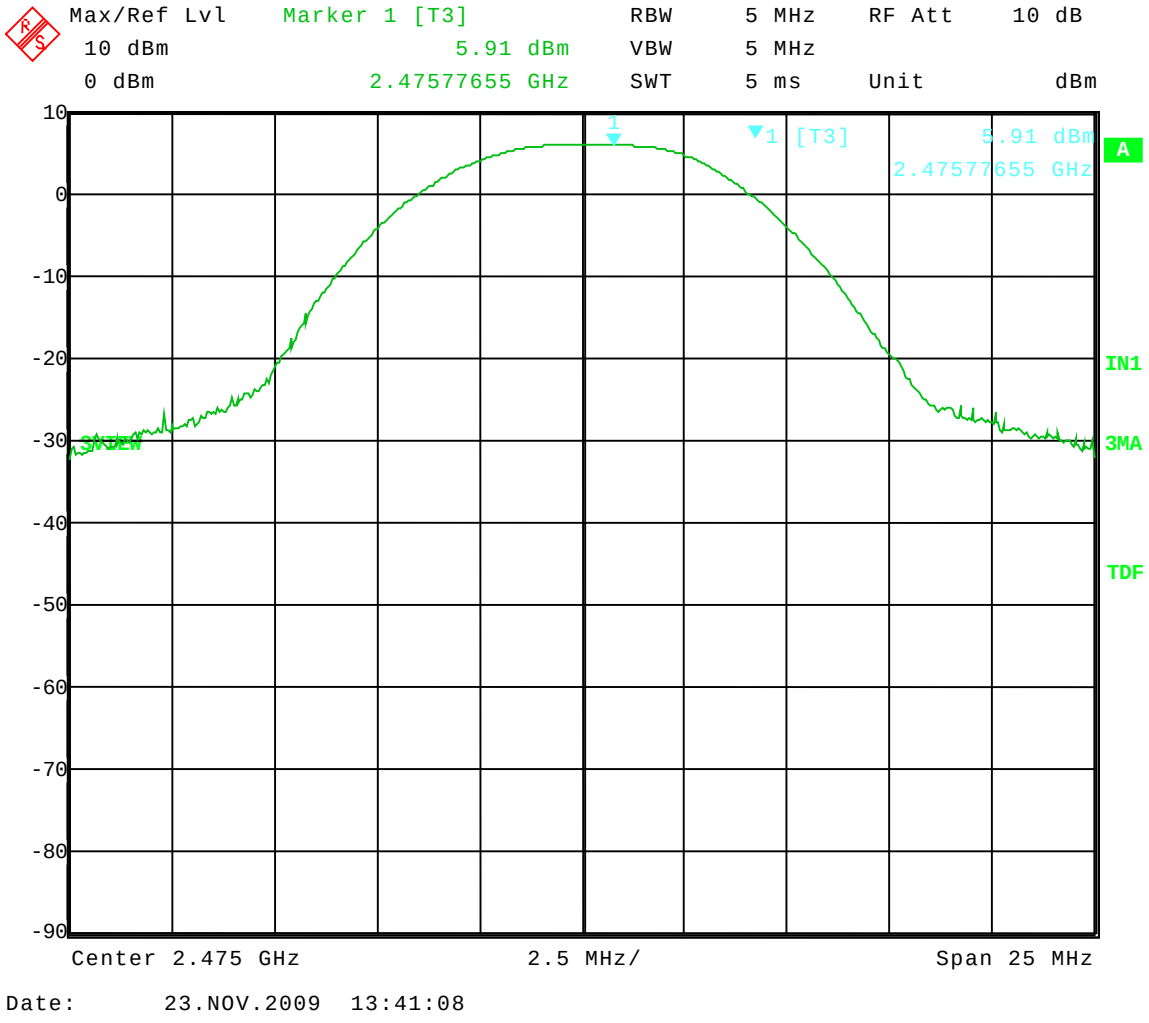
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Output - Conducted – 15.247(b)(3)
Operator: Adam A
Comment: High Channel: Frequency – 2.475 GHz
Antenna E1

Peak Output Power = 5.91 dBm = **3.899 mW**



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APPENDIX B

CONDUCTED PEAK OUTPUT POWER GRAPHS

PART 15.247

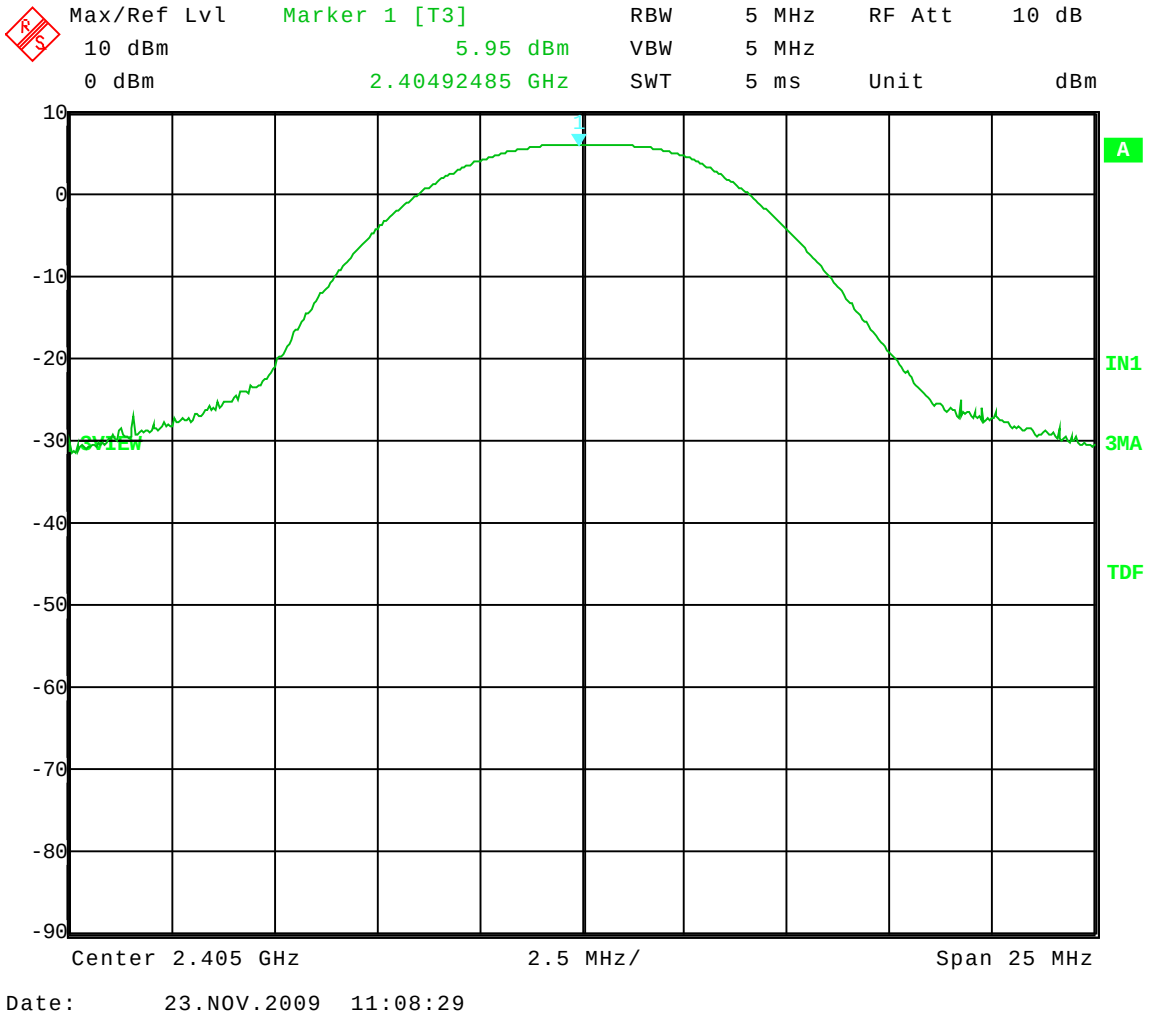
ANTENNA E2

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Output - Conducted – 15.247(b)(3)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E2

Peak Output Power = 5.95 dBm = **3.935 mW**



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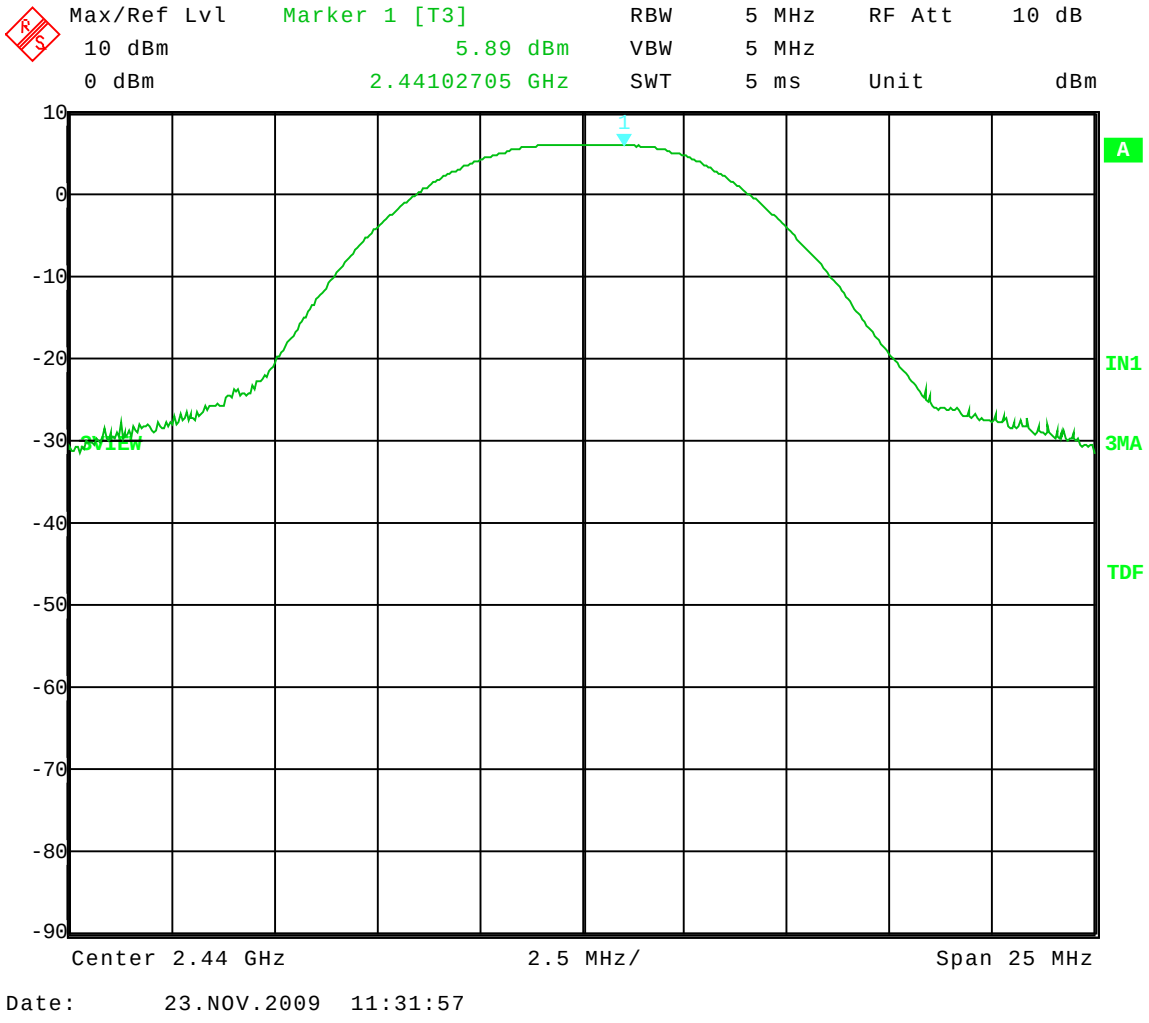
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Output - Conducted – 15.247(b)(3)
Operator: Adam A
Comment: Mid Channel: Frequency – 2.440 GHz
Antenna E2

Peak Output Power = 5.89dBm = **3.88 mW**



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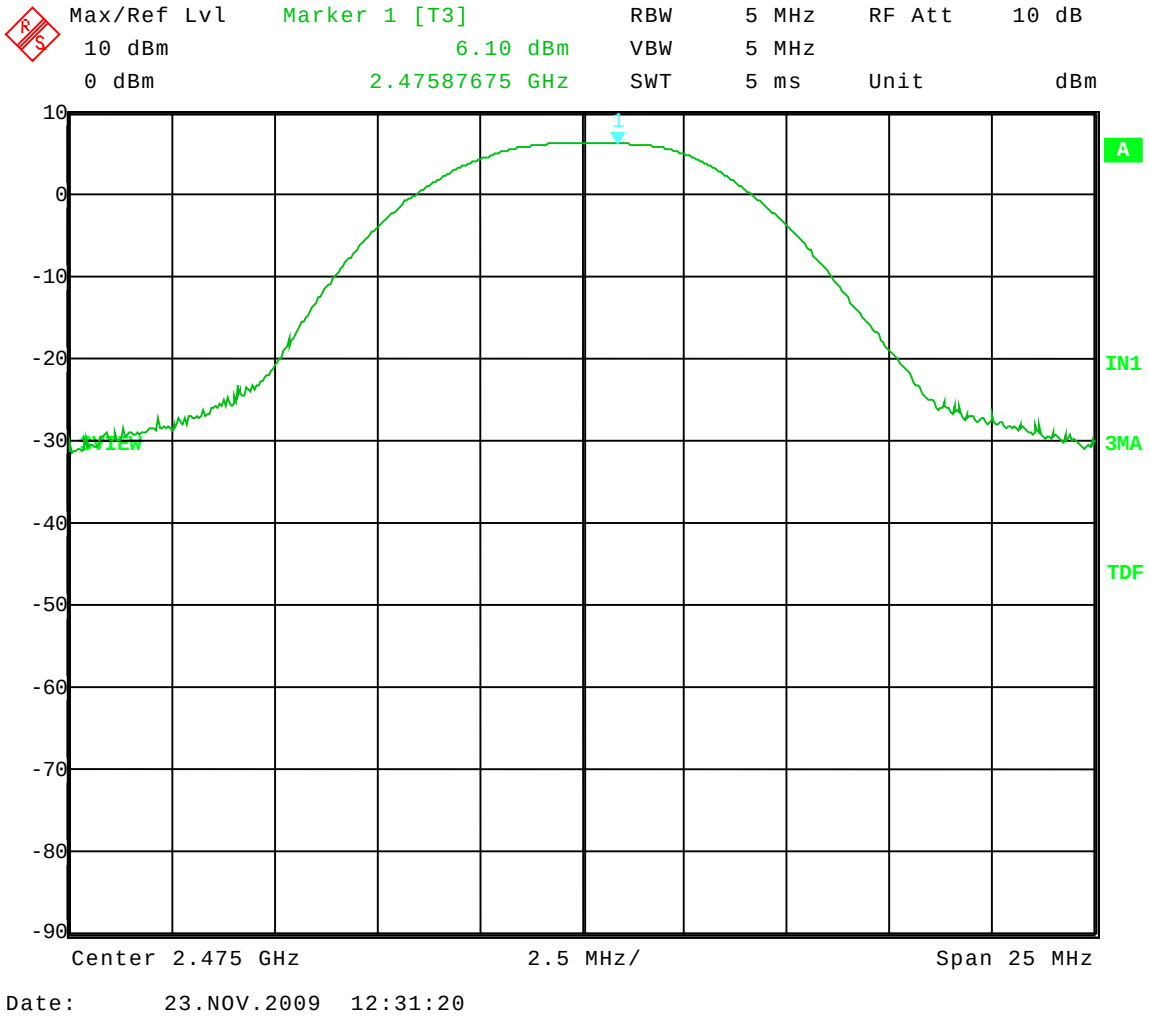
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Output - Conducted – 15.247 (b)(3)
Operator: Adam A
Comment: High Channel: Frequency – 2.475 GHz
Antenna E2

Peak Output Power = 6.10 dBm = **4.07 mW**



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APPENDIX B

PEAK POWER SPECTRAL DENSITY GRAPHS

PART 15.247

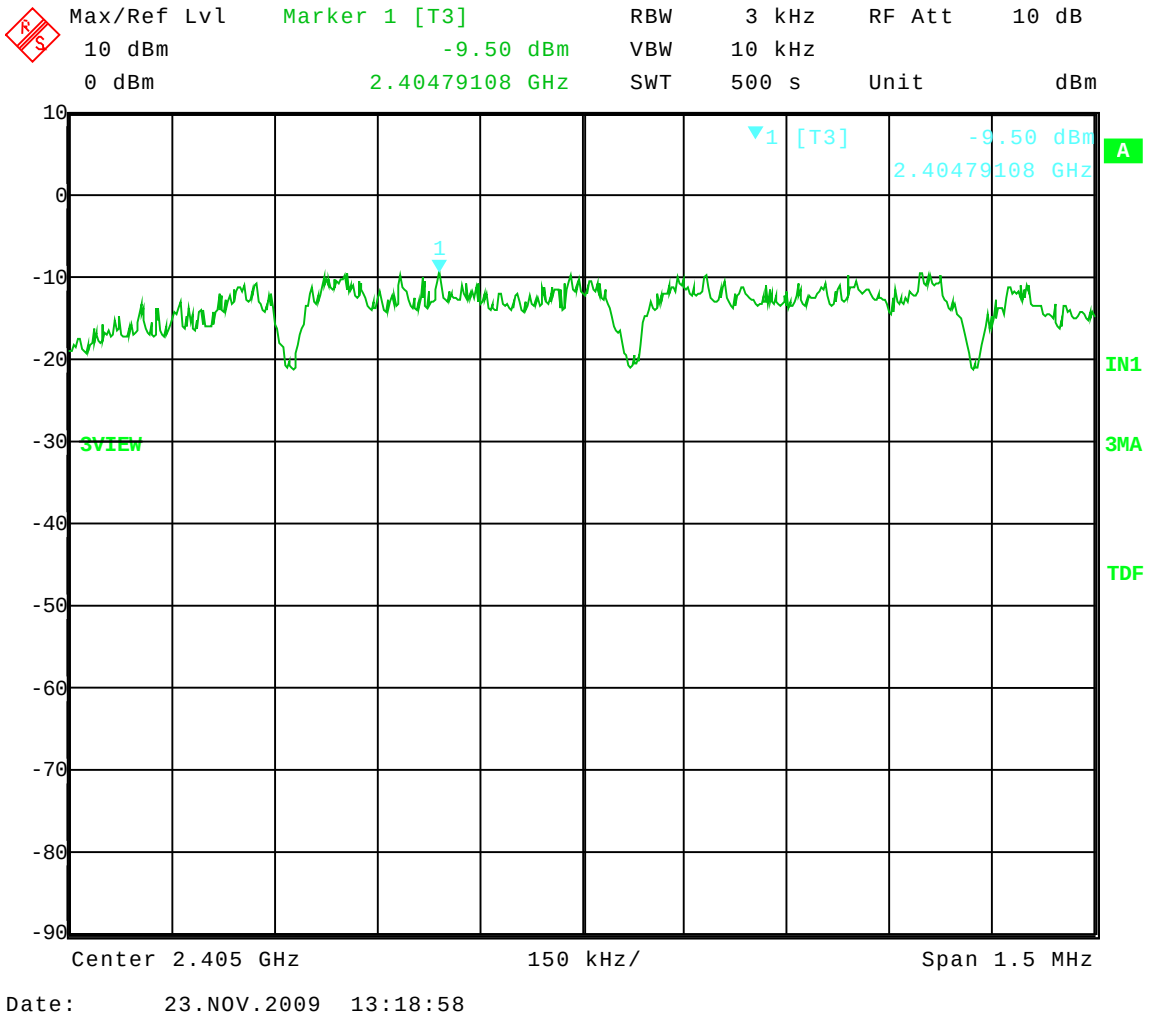
ANTENNA E1

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Spectral Density - Conducted – 15.247(e)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E1
Limit: +8 dBm

3 kHz Bandwidth = -9.50 dBm



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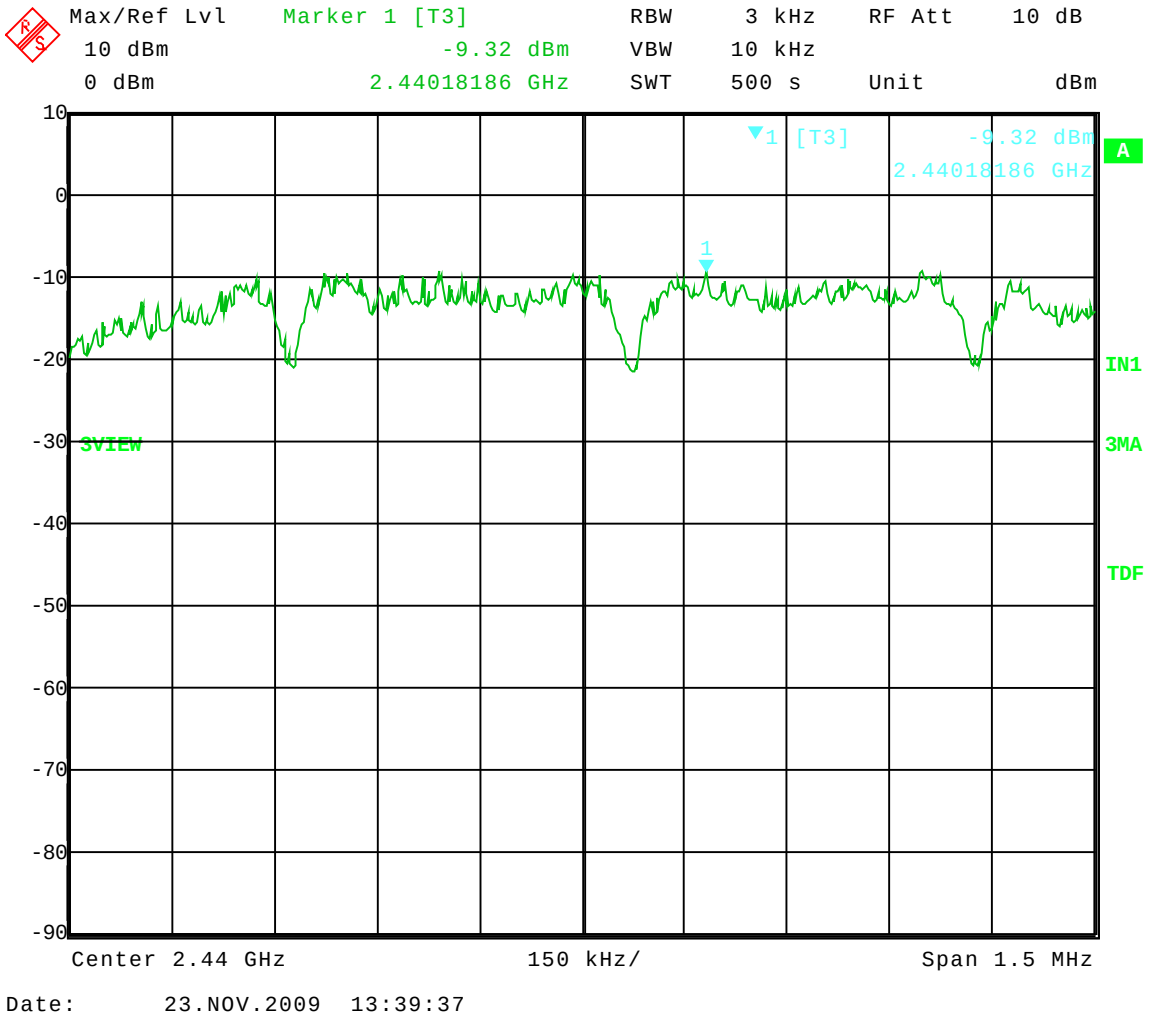
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Spectral Density - Conducted – 15.247(e)
Operator: Adam A
Comment: Mid Channel: Frequency – 2.440 GHz
Antenna E1
Limit: +8 dBm

3 kHz Bandwidth = -9.32 dBm



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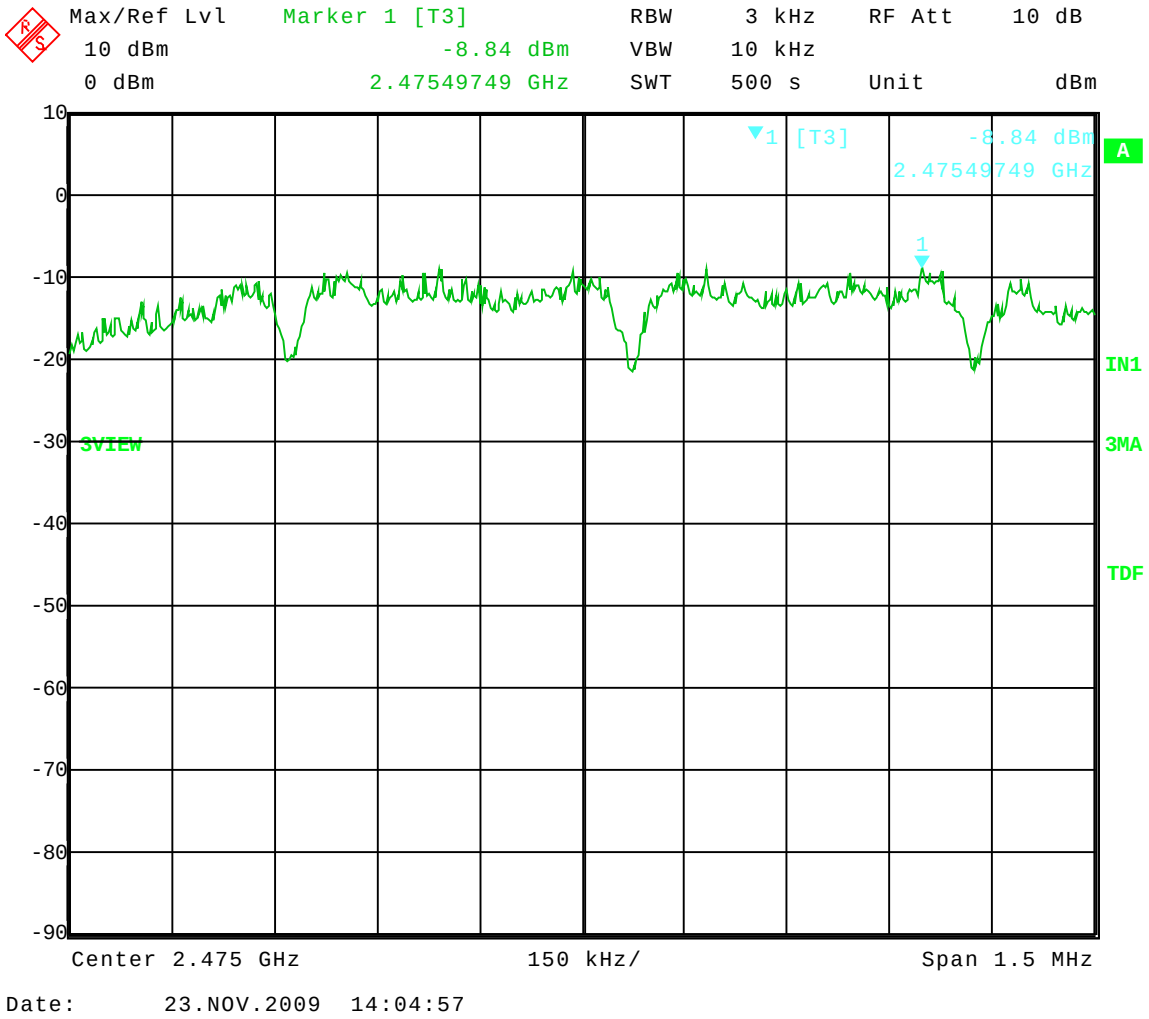
APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Spectral Density - Conducted – 15.247(e)
Operator: Adam A
Comment: High Channel: Frequency – 2.475 GHz
Antenna E1
Limit: +8 dBm

3 kHz Bandwidth = -8.84 dBm



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APPENDIX B

PEAK POWER SPECTRAL DENSITY GRAPHS

PART 15.247

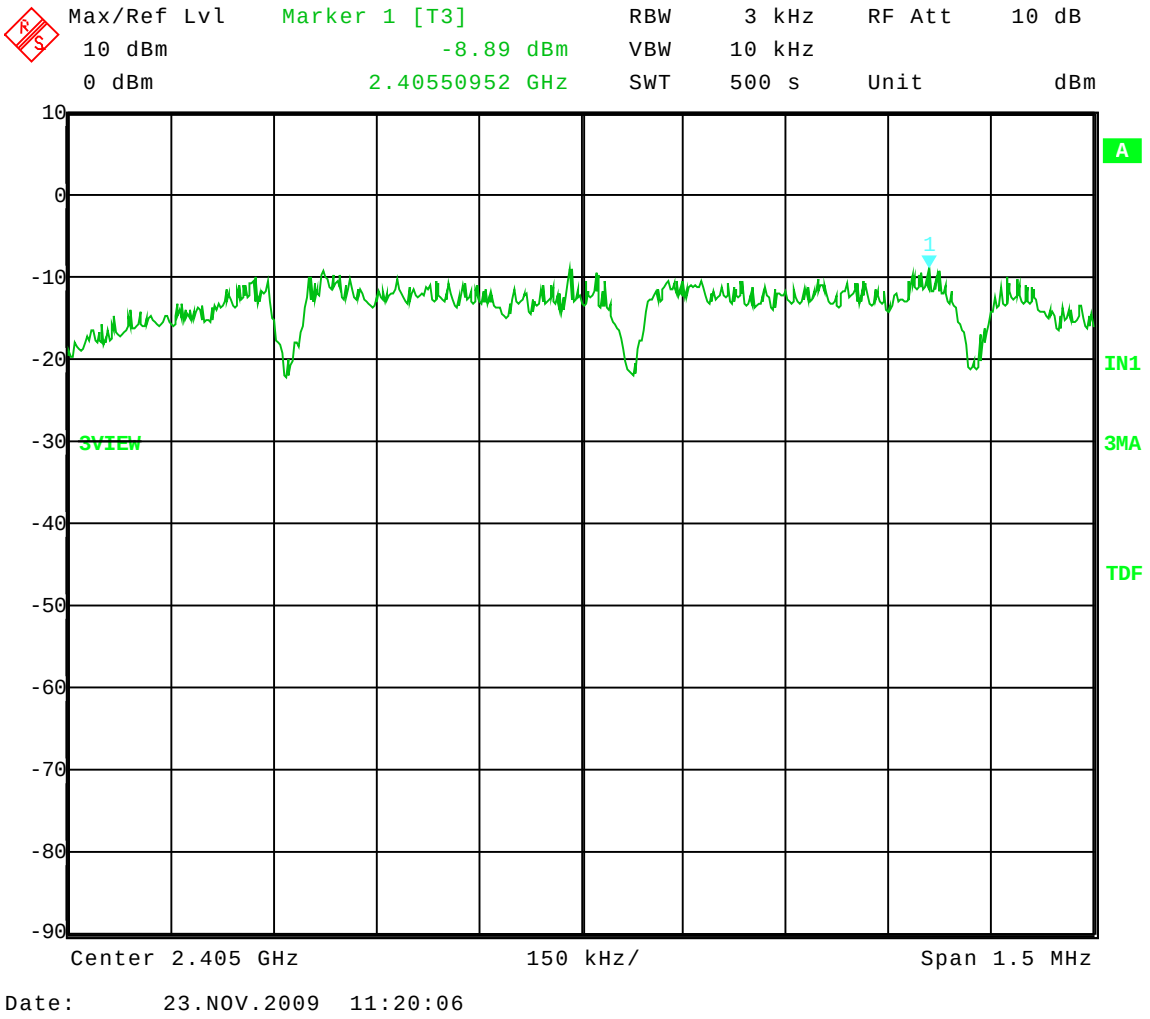
ANTENNA E2

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Spectral Density - Conducted – 15.247(e)
Operator: Adam A
Comment: Low Channel: Frequency – 2.405 GHz
Antenna E2
Limit: +8 dBm

3 kHz Bandwidth = -8.89 dBm

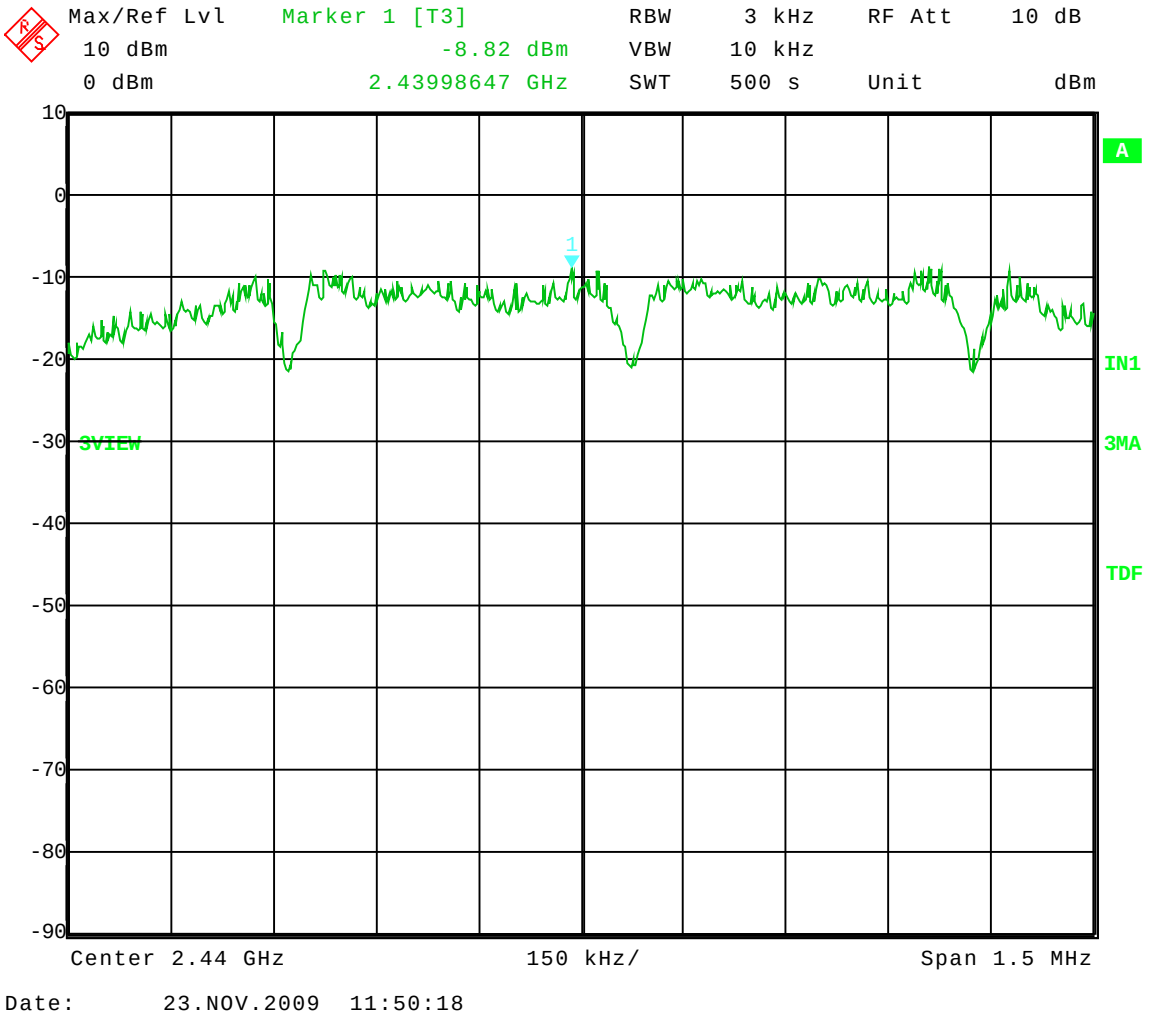


1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Spectral Density - Conducted – 15.247(e)
Operator: Adam A
Comment: Mid Channel: Frequency – 2.440 GHz
Antenna E2
Limit: +8 dBm

3 kHz Bandwidth = -8.82 dBm



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APPENDIX B

Test Date: 11-23-2009
Company: RF Technologies
EUT: ICM Pendant
Test: Peak Power Spectral Density - Conducted – 15.247(e)
Operator: Adam A
Comment: High Channel: Frequency – 2.475 GHz
Antenna E2
Limit: +8 dBm

3 kHz Bandwidth = -6.78 dBm