



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

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: Code Alert Care Manager
FCC ID: KXU-PGR2CCZ24
Kind of Equipment: Wireless Nurse Call and Security Device
Frequency Range: 2405 MHz - 2475 MHz
Test Configuration: Handheld (Tested at 3.7 vdc)
Model Number(s): 9600-0500
Model(s) Tested: 9600-0500
Serial Number(s): N/A
Date of Tests: November 9, 10, & 12, 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.

© Copyright 1983-2009 D.L.S. Electronic Systems, Inc

COPYRIGHT NOTICE

This report must not be reproduced (except in full), without the approval of D.L.S. Electronic Systems, Inc.



Company:
Model Tested:
Report Number:

RF Technologies, Inc.
9600-0500
15811

1250 Peterson Dr., Wheeling, IL 60090

SIGNATURE PAGE

Report By:

Arnom C. Rowe
Test Engineer
EMC-001375-NE

Reviewed By:

William Stumpf
OATS Manager

Approved By:

Brian Mattson
General Manager



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

TABLE OF CONTENTS

i.	Cover Page	1
ii.	Signature Page	2
iii.	Table of Contents	3
iv.	NVLAP Certificate of Accreditation	5
1.0	Summary of Test Report	6
2.0	Introduction	6
3.0	Object	6
4.0	Test Set-Up	7
5.0	Test Equipment	8
6.0	Ambient Measurements	9
7.0	Description of Test Sample	10
8.0	Additional Description of Test Sample	11
9.0	Photo Information and Test Set-Up	11
10.0	Photos Taken During Testing	12
11.0	Results of Tests	18
12.0	Conclusion	18
	TABLE 1 – EQUIPMENT LIST	19



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

TABLE OF CONTENTS

Appendix A – AC Power Line Conducted Emissions Test20

1a. AC Power Line Conducted Emission Measurements21

Appendix B – Electric Field Radiated Emissions Tests26

1b. Spurious Emissions at the Antenna Terminals/Antenna Connector27

1b. RF Conducted Emission Data and Charts made at the Antenna Terminals28

2b. RF Conducted Emissions Photos Taken During Testing.....41

3b. Restricted Bands42

4b. Restricted Band and Band Edge Compliance42

4b. Data and Graph(s) taken showing the Restricted Band Compliance43

4b. Data and Graph(s) taken showing the Lower Band Edge.....47

4b. Data and Graph(s) taken of the Upper Band Edge with Restricted Band.....50

5b. Field Strength of Fundamental and Spurious Emission Measurements53

5b. 30 MHz – 1000 MHz Radiated Graph(s) taken for Fundamental and Spurious Emission.....55

5b. Radiated Data and Graph(s) taken for Fundamental and Spurious Emission.....59

6b. Transmitter Duty Cycle Graphs Taken During testing63

7b. 6 dB Bandwidth Graphs taken during testing67

8b. Conducted Peak Output Power Graphs Taken During testing.....71

9b. Peak Power Spectral Density Graphs Taken During testing75

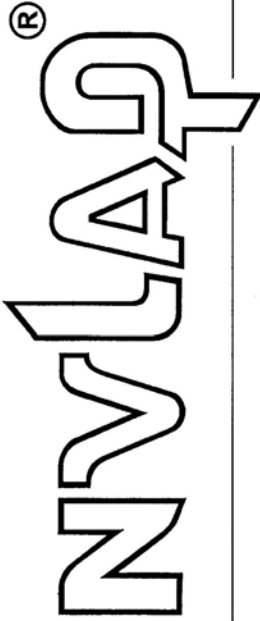


1250 Peterson Dr., Wheeling, IL 60090

Company:
Model Tested:
Report Number:

RF Technologies, Inc.
9600-0500
15811

United States Department of Commerce
National Institute of Standards and Technology



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 Communiqué dated January 2009).*

2009-10-01 through 2010-09-30

Effective dates



Dolly S. Buce

For the National Institute of Standards and Technology

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



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

1.0 SUMMARY OF TEST REPORT

It was found that the Code Alert Care Manager, Model Number(s) 9600-0500 **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.

2.0 INTRODUCTION

On November 9, 10, & 12, 2009, a series of radio frequency interference measurements was performed on Code Alert Care Manager, Model Number(s) 9600-0500, 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.



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

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..



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

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.



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

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.



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

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 with other pagers to create a mesh of wireless connectivity.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 99 mm x Width: 63.5 mm x Height: 17.5 mm

7.3 LINE FILTER USED:

N/A

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

N/A

Clock Frequencies:

32 MHz

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

1. ZigBee Pager PCB Assembly PN: 0830-0054 Rev. A
2. Zigbee Pager Scroll Wheel PCB Assembly PN: 0830-0070 Rev. A



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

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 ICM Care Manager was configured with firmware to operate in continuous transmit and continuous receive on three channels of 2.405, 2.440, and 2.475 GHz. Selecting modes was accomplished by pressing the menu button until the desired mode was obtained.

9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 Code Alert Care Manager

Model Number: 9600-0500 Serial Number: N/A

Item 1 AC/DC Adapter RFT # 0180-0044 with non-shielded Cable. 1

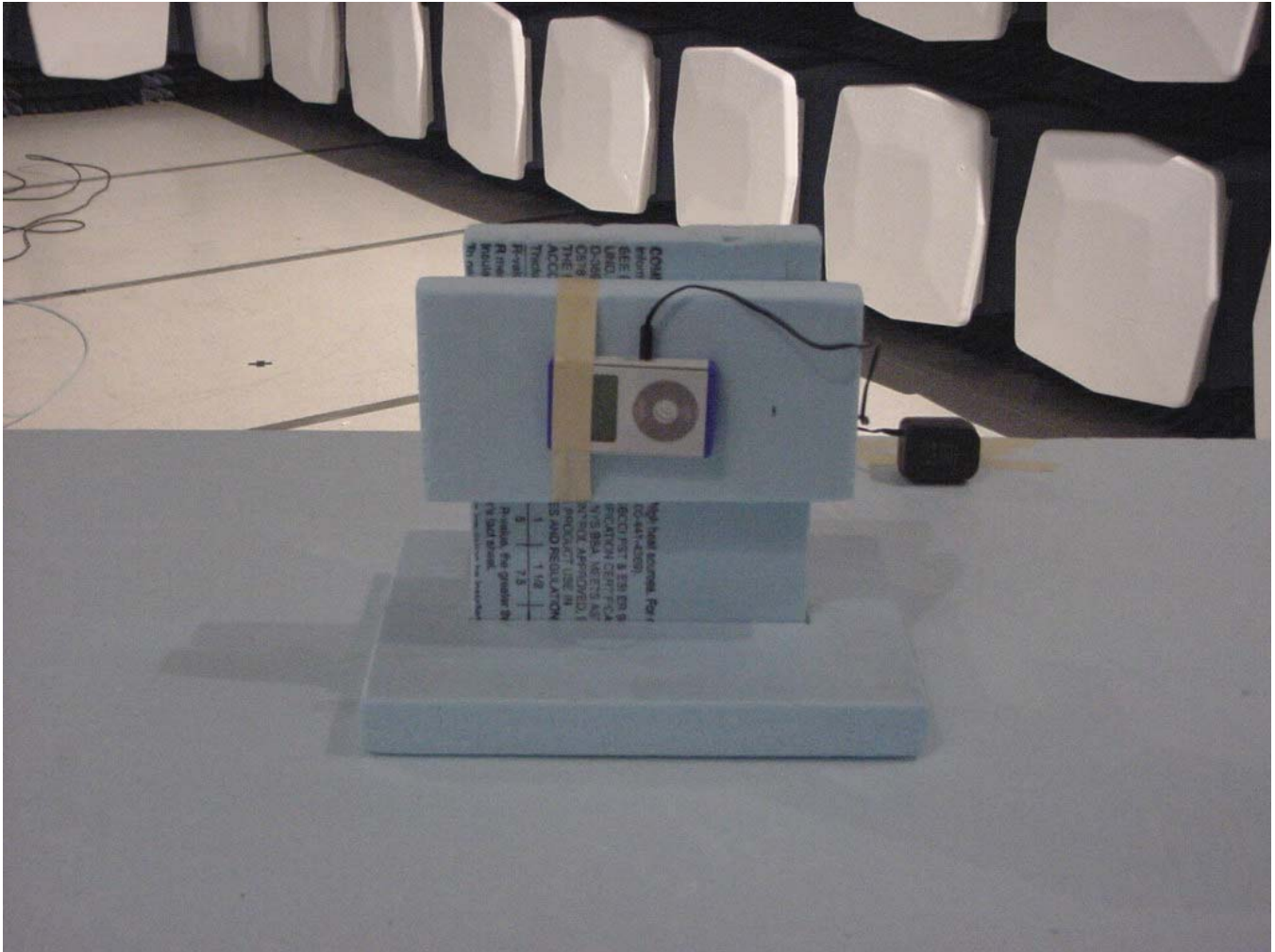
Model Number: ILD41-120500; Serial Number: ZID41023U-9



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING



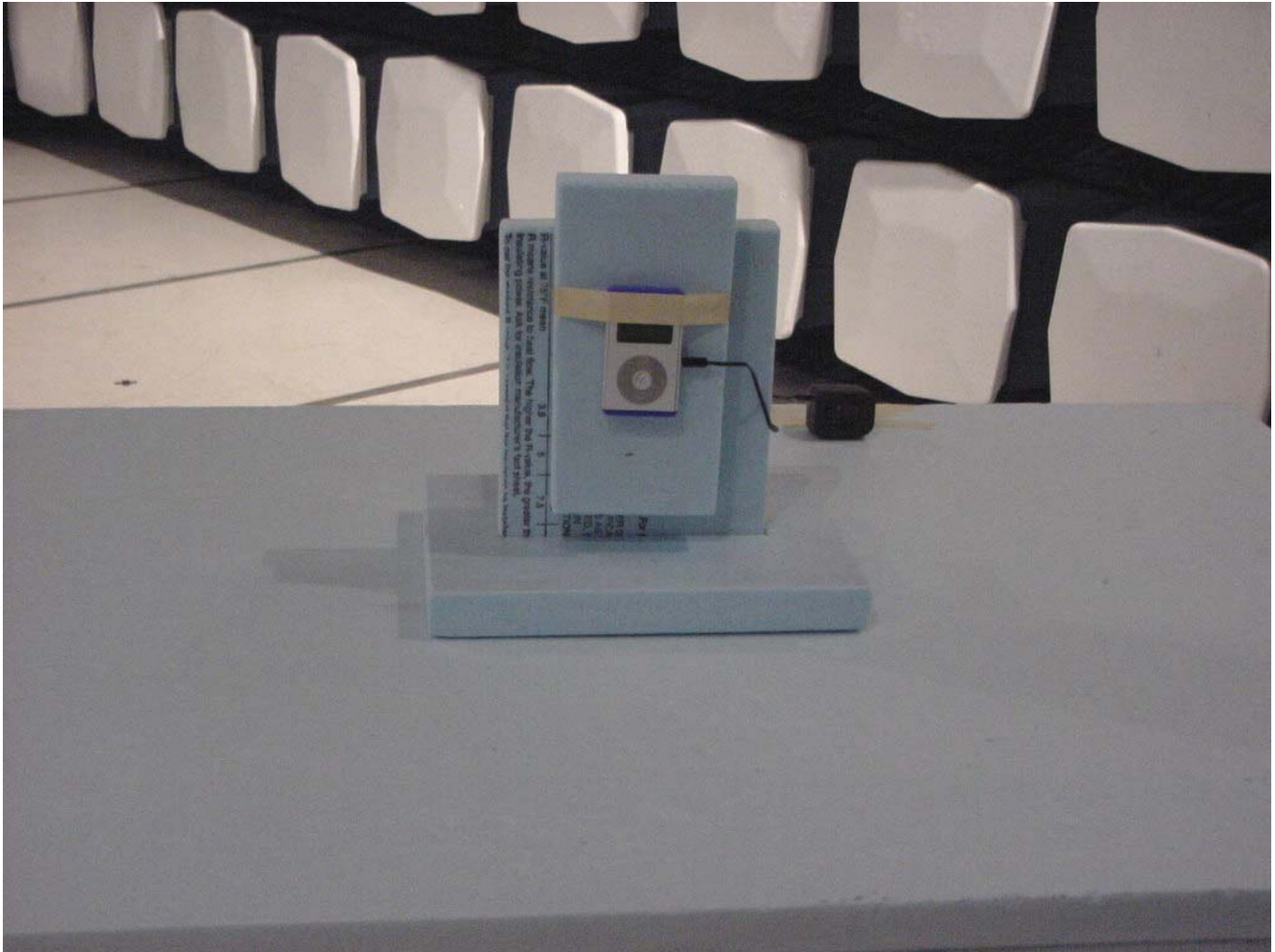
X Position Radiated Front



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)



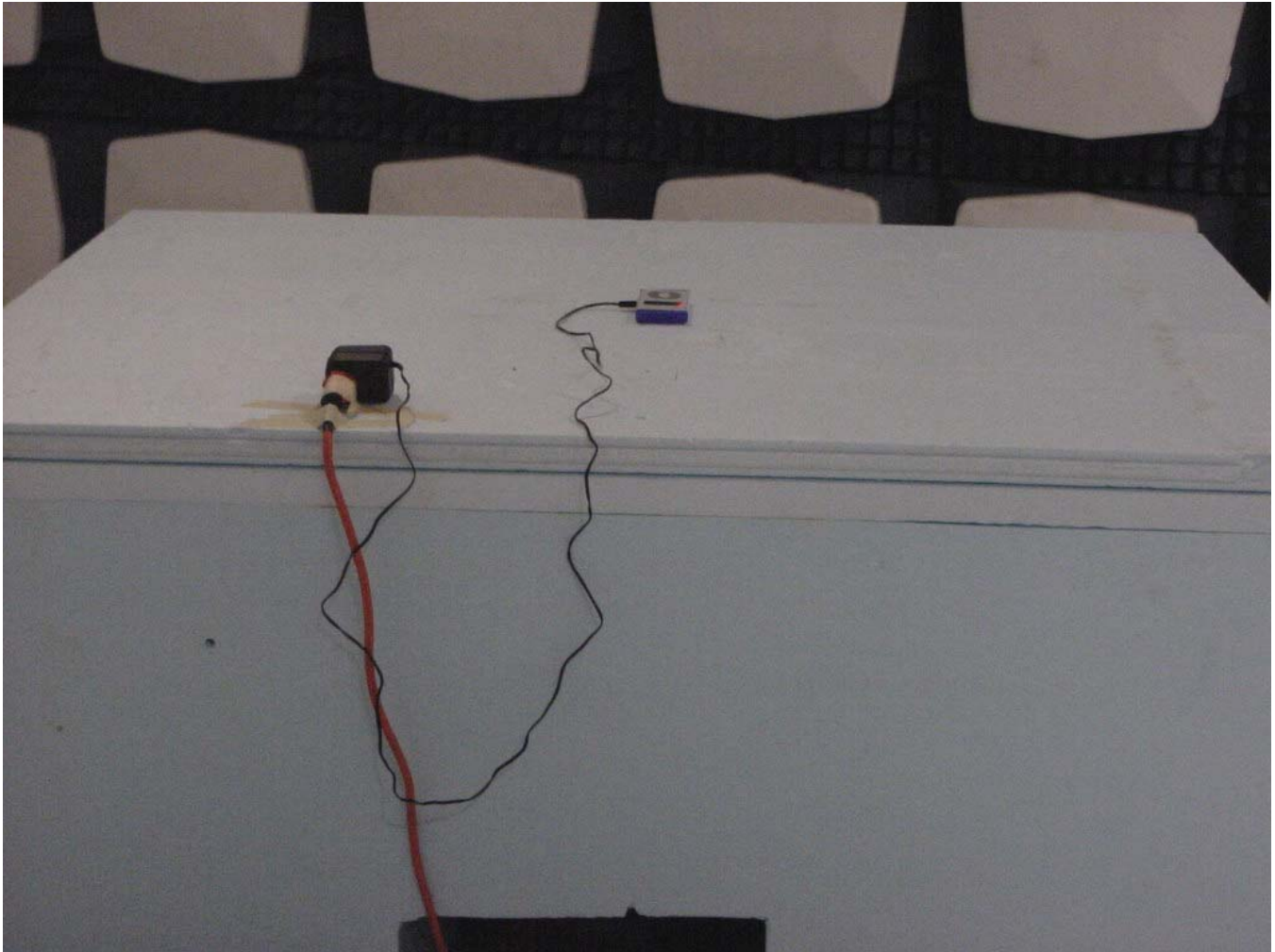
Y Position Radiated Front



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)



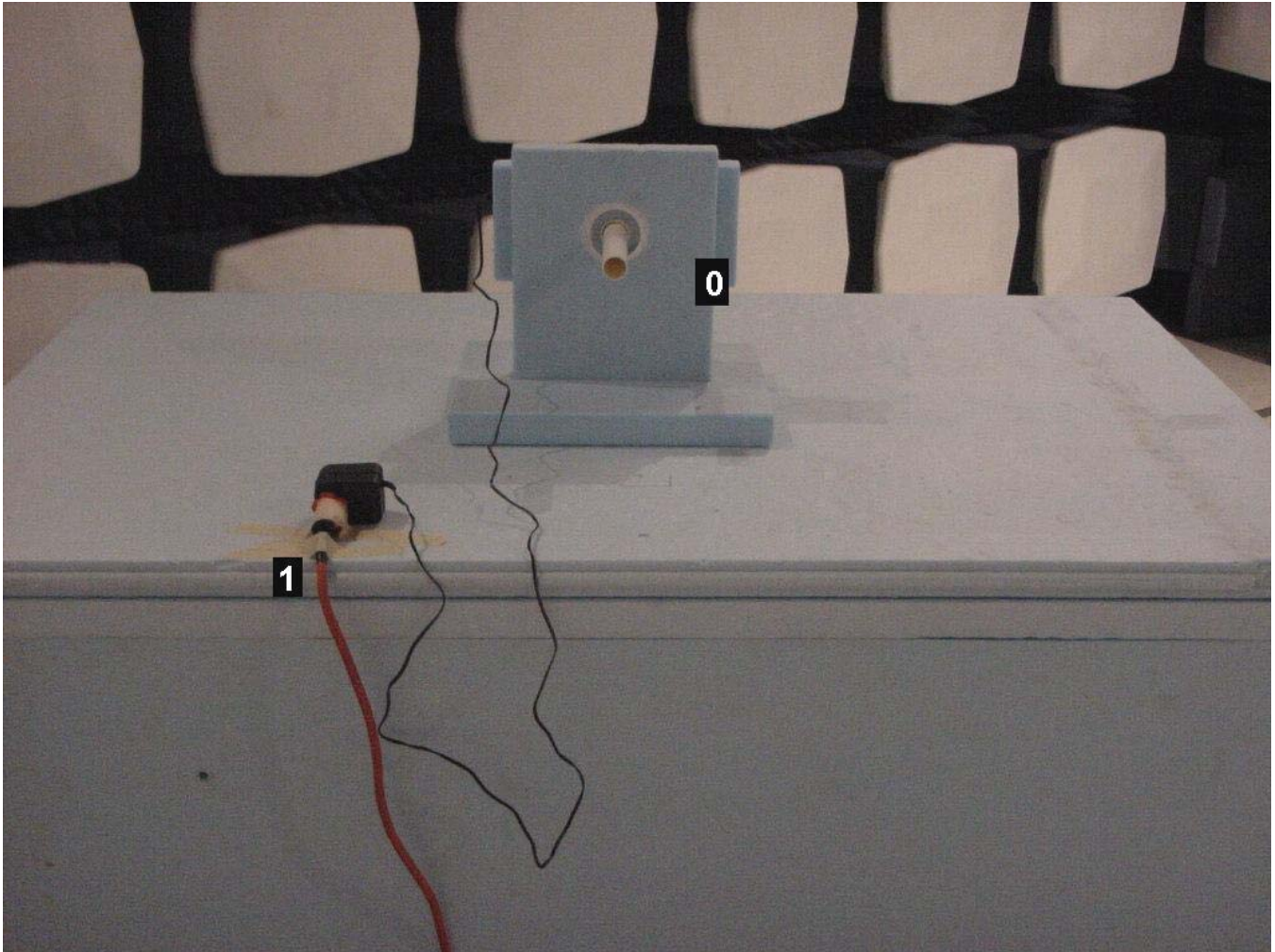
Z Position Radiated Front



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)



Radiated Back



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

10.0 POWER LINE CONDUCTED PHOTO TAKEN DURING TESTING



AC Line Conducted Front



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

10.0 POWER LINE CONDUCTED PHOTO TAKEN DURING TESTING



AC Line Conducted Back



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

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 Code Alert Care Manager, Model Number(s) 9600-0500 **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.



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

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
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	12/09
LISN	Solar	9252-50-R-24-BNC	961019	10 kHz – 30 MHz	7/10
Filter- High-Pass	SOLAR	7930-120	090702	120 kHz	2/10
Limiter	Electro-Metrics	EM-7600	706	10 kHz – 30 MHz	1/10

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



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX A

TEST PROCEDURE

Part 15, Subpart C, Section 15.207

ANSI C63.4-2003



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

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 **69°F** at **36%** relative humidity.

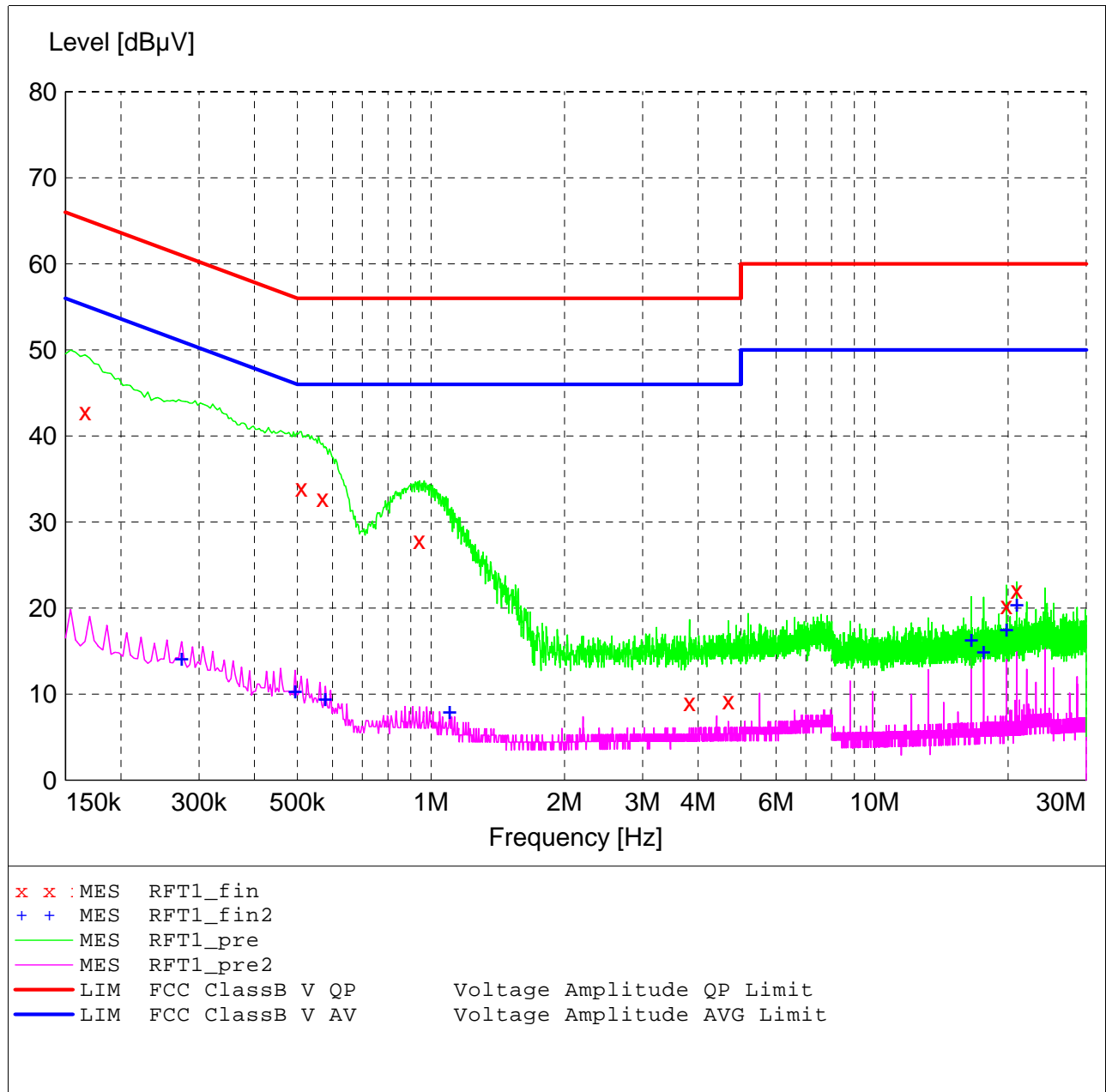
FCC Part 15 Class B

Voltage Mains Test

EUT: ICM Care Manager
 Manufacturer: RF Technologies
 Operating Condition: 69 deg. F, 36% R.H.
 Test Site: DLS O.F. Screenroom
 Operator: Adam
 Test Specification: Line 1
 Comment: 120 V 60 Hz
 Date: 11-11-2009

SCAN TABLE: "Line Cond Scrn RmFin"

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



MEASUREMENT RESULT: "RFT1_fin"

11/11/2009 4:22PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.166000	42.80	12.5	65	22.4	QP	---	---
0.510000	34.00	10.4	56	22.0	QP	---	---
0.570000	32.80	10.5	56	23.2	QP	---	---
0.942000	27.90	10.0	56	28.1	QP	---	---
3.826000	9.10	10.1	56	46.9	QP	---	---
4.682000	9.20	10.1	56	46.8	QP	---	---
19.822000	20.30	10.7	60	39.7	QP	---	---
20.922000	22.10	10.8	60	37.9	QP	---	---

MEASUREMENT RESULT: "RFT1_fin2"

11/11/2009 4:22PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.274000	14.20	10.8	51	36.8	CAV	---	---
0.494000	10.40	10.4	46	35.7	CAV	---	---
0.578000	9.50	10.5	46	36.5	CAV	---	---
1.102000	8.00	10.0	46	38.0	CAV	---	---
16.518000	16.40	10.6	50	33.6	CAV	---	---
17.622000	15.00	10.7	50	35.0	CAV	---	---
19.822000	17.60	10.7	50	32.4	CAV	---	---
20.922000	20.50	10.8	50	29.5	CAV	---	---

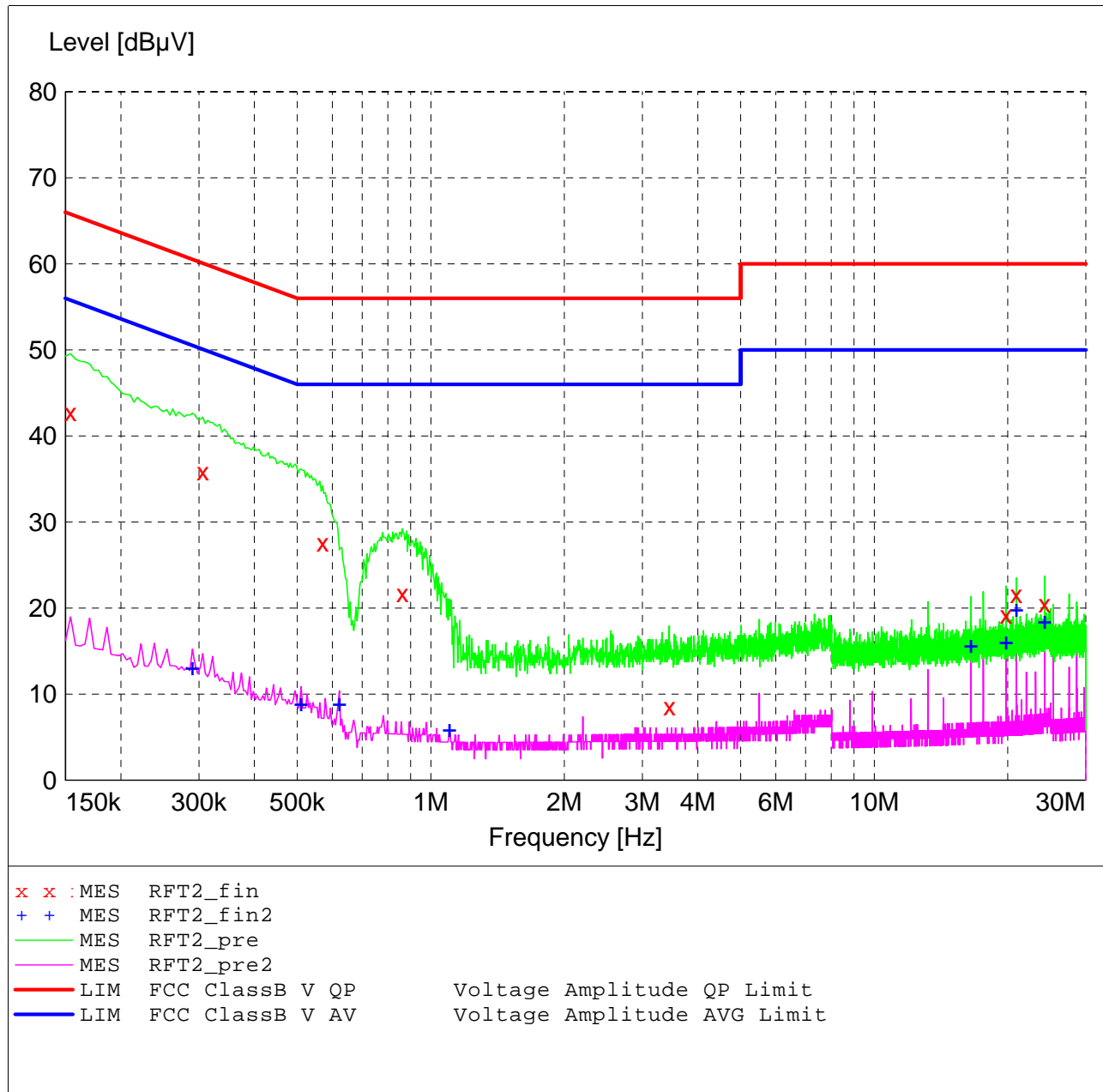
FCC Part 15 Class B

Voltage Mains Test

EUT: ICM Care Manager
 Manufacturer: RF Technologies
 Operating Condition: 69 deg. F, 36% R.H.
 Test Site: DLS O.F. Screenroom
 Operator: Adam
 Test Specification: Line 2
 Comment: 120 V 60 Hz
 Date: 11-11-2009

SCAN TABLE: "Line Cond Scrn RmFin"

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



MEASUREMENT RESULT: "RFT2_fin"

11/11/2009 4:27PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.154000	42.70	12.7	66	23.1	QP	---	---
0.306000	35.90	10.7	60	24.2	QP	---	---
0.570000	27.60	10.5	56	28.4	QP	---	---
0.862000	21.70	10.1	56	34.3	QP	---	---
3.450000	8.60	10.1	56	47.4	QP	---	---
19.822000	19.20	10.7	60	40.8	QP	---	---
20.922000	21.60	10.8	60	38.4	QP	---	---
24.226000	20.50	11.0	60	39.5	QP	---	---

MEASUREMENT RESULT: "RFT2_fin2"

11/11/2009 4:27PM

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.290000	13.10	10.7	51	37.4	CAV	---	---
0.510000	8.90	10.4	46	37.1	CAV	---	---
0.622000	8.90	10.4	46	37.1	CAV	---	---
1.102000	6.00	10.0	46	40.0	CAV	---	---
16.518000	15.70	10.6	50	34.3	CAV	---	---
19.822000	16.10	10.7	50	33.9	CAV	---	---
20.922000	19.90	10.8	50	30.1	CAV	---	---
24.226000	18.50	11.0	50	31.5	CAV	---	---



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

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.



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

- 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 10th harmonic of the fundamental.

As stated in 15.203 the Code Alert Care Manager 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 Code Alert Care Manager 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:



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

RF CONDUCTED EMISSION DATA AND GRAPH(S)
TAKEN FOR
SPURIOUS EMISSION MEASUREMENTS MADE
AT THE ANTENNA TERMINALS
PART 15.247(d)



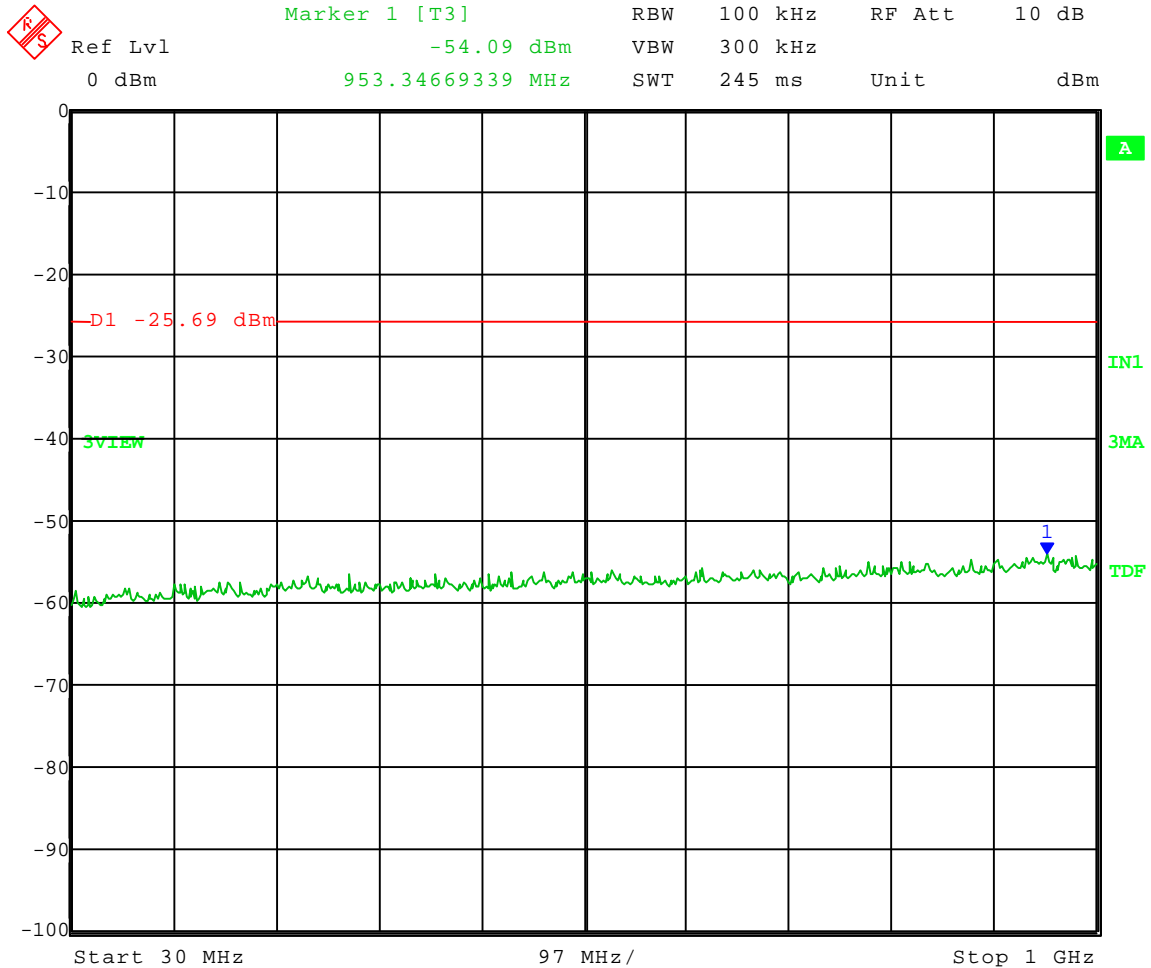
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **Low Channel - 2.405 GHz**
Frequency Range: 30 to 1000 MHz
Limit = -25.69 dBm

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



Date: 9.NOV.2009 09:32:38



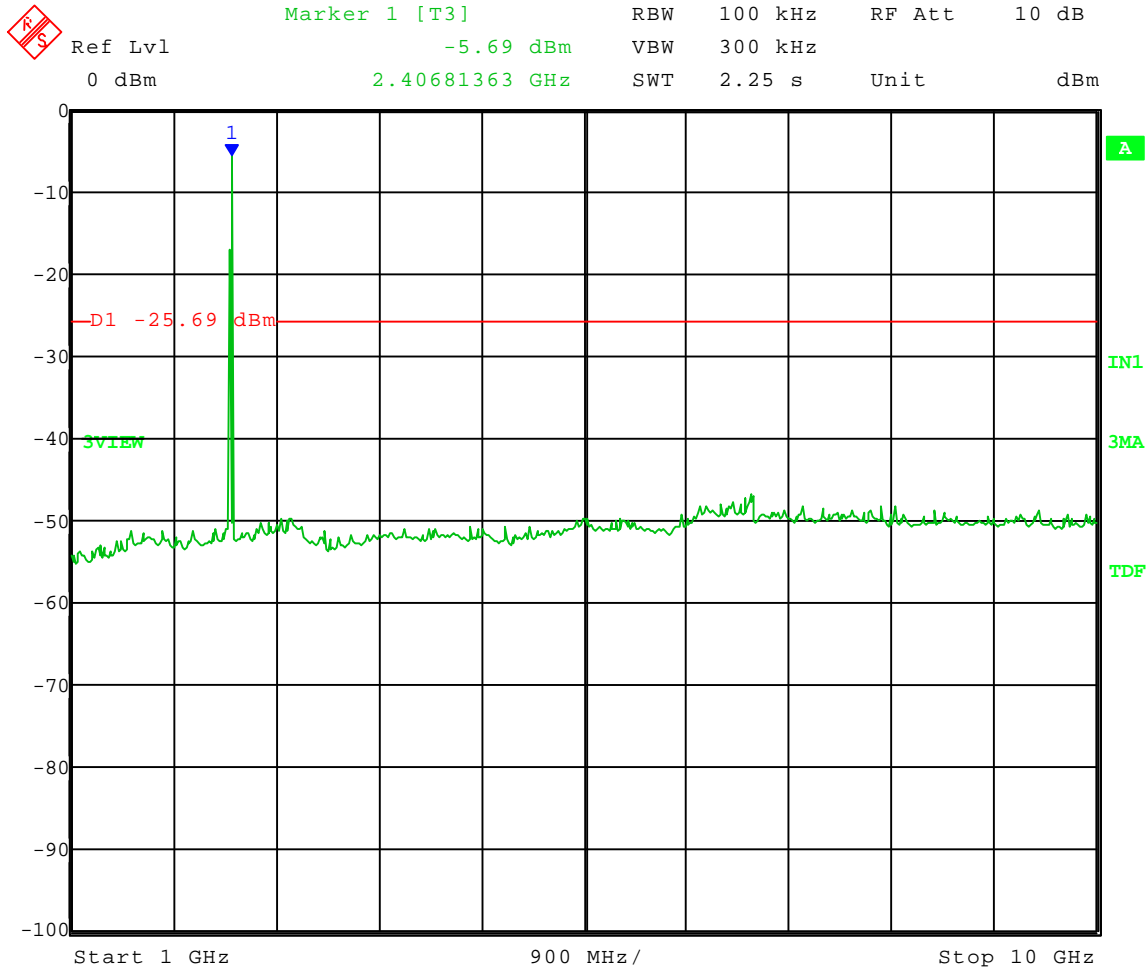
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **Low Channel - 2.405 GHz**
Frequency Range: 1 to 10 GHz
Limit = -25.69 dBm

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



Date: 9.NOV.2009 09:27:38



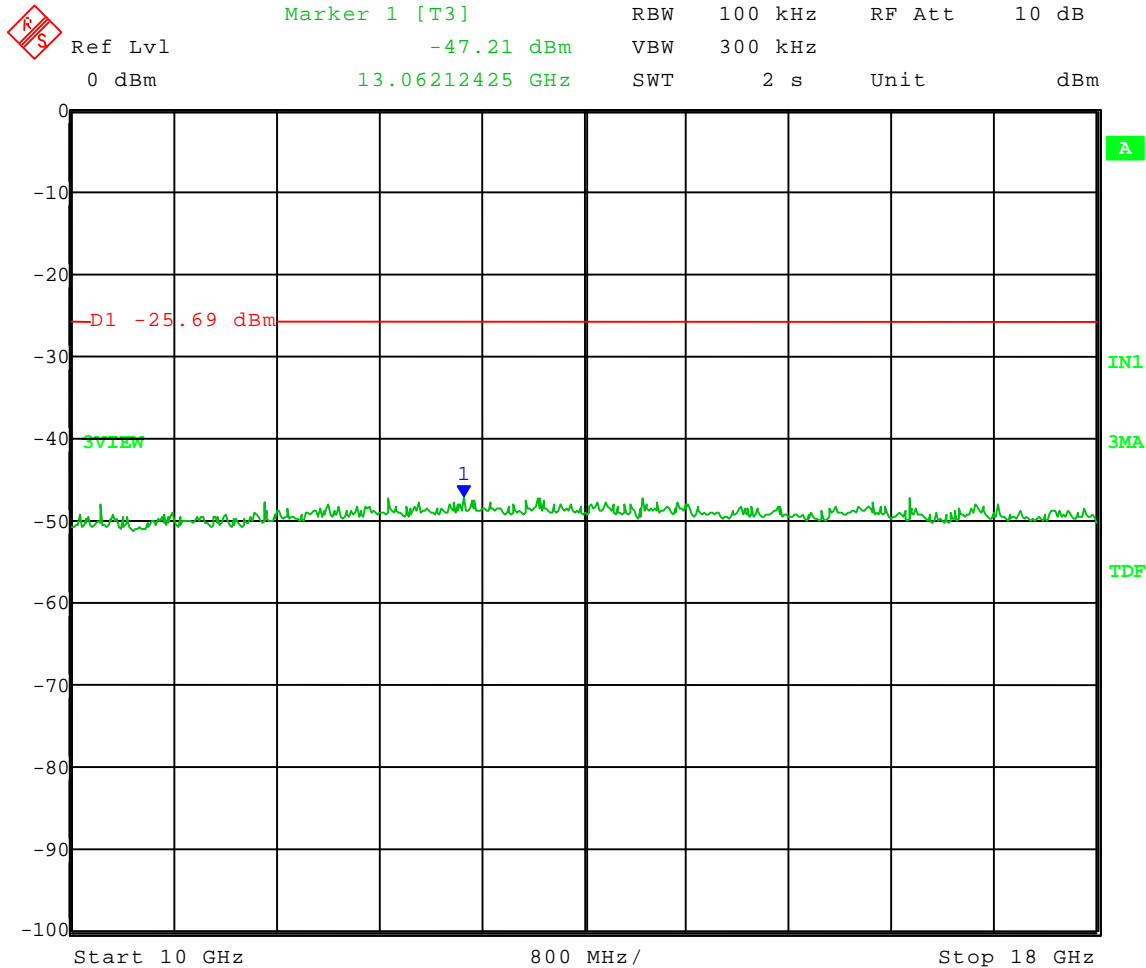
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **Low Channel - 2.405 GHz**
Frequency Range: 10 to 18 GHz
Limit = -25.69 dBm

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



Date: 9.NOV.2009 09:29:33



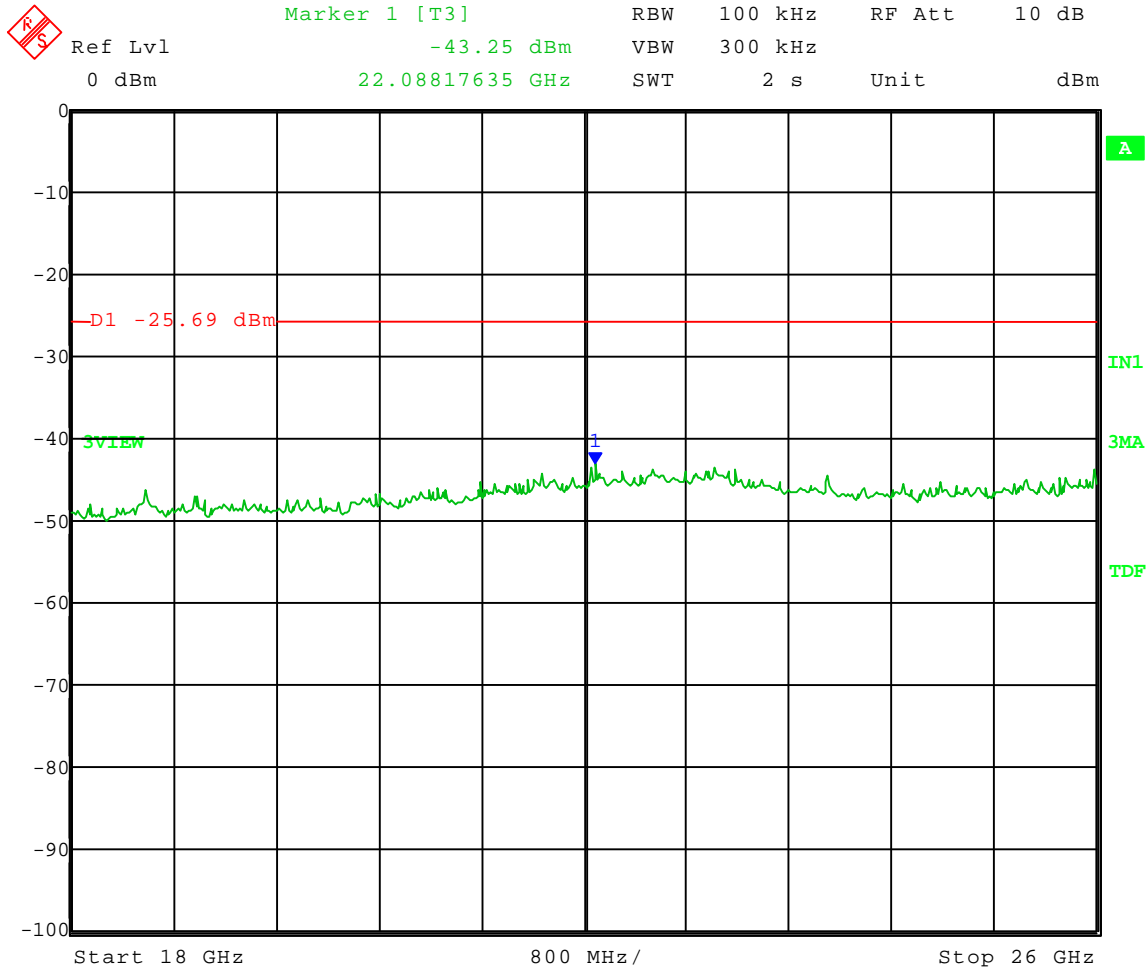
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **Low Channel - 2.405 GHz**
Frequency Range: 18 to 26 GHz
Limit = -25.69 dBm

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



Date: 9.NOV.2009 09:30:48



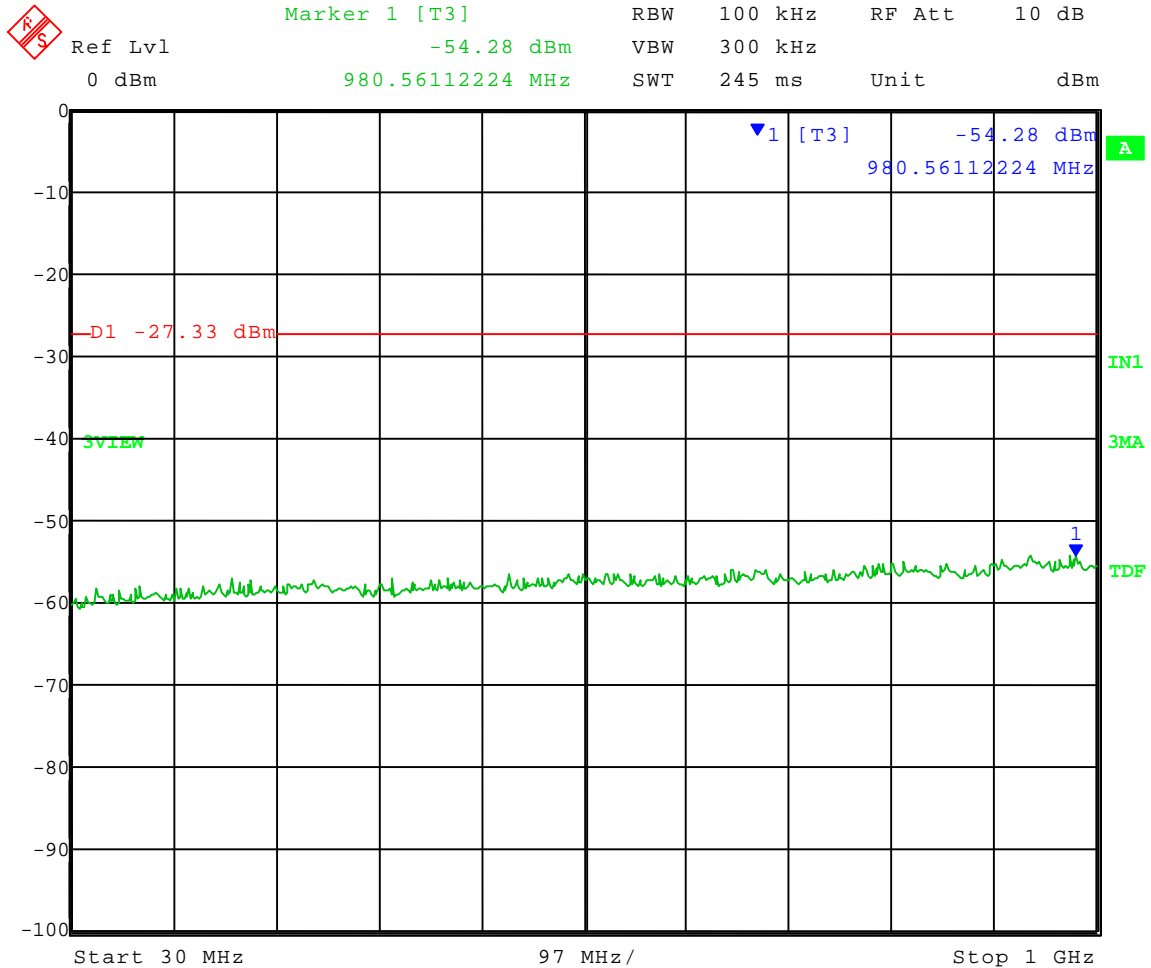
Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
 Company: RF Technologies
 EUT: ICM Care Manager
 Test: Spurious Emissions - Conducted - 15.247 (d)
 Operator: Adam A
 Comment: **Mid Channel - 2.440 GHz**
 Frequency Range: 30 to 1000 MHz
 Limit = -27.33 dBm

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



Date: 9.NOV.2009 10:23:10



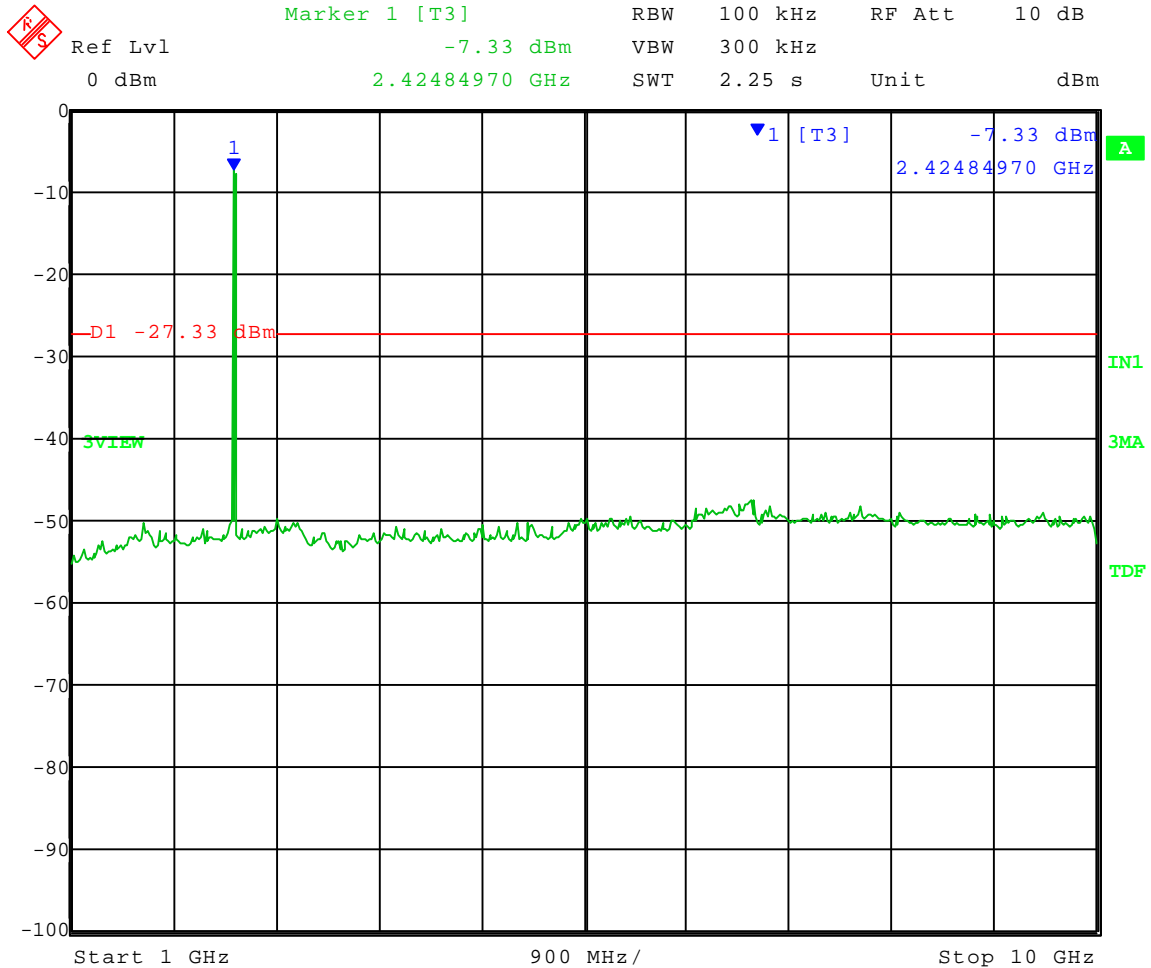
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **Mid Channel - 2.440 GHz**
Frequency Range: 1 to 10 GHz
Limit = -27.33 dBm

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



Date: 9.NOV.2009 10:19:16



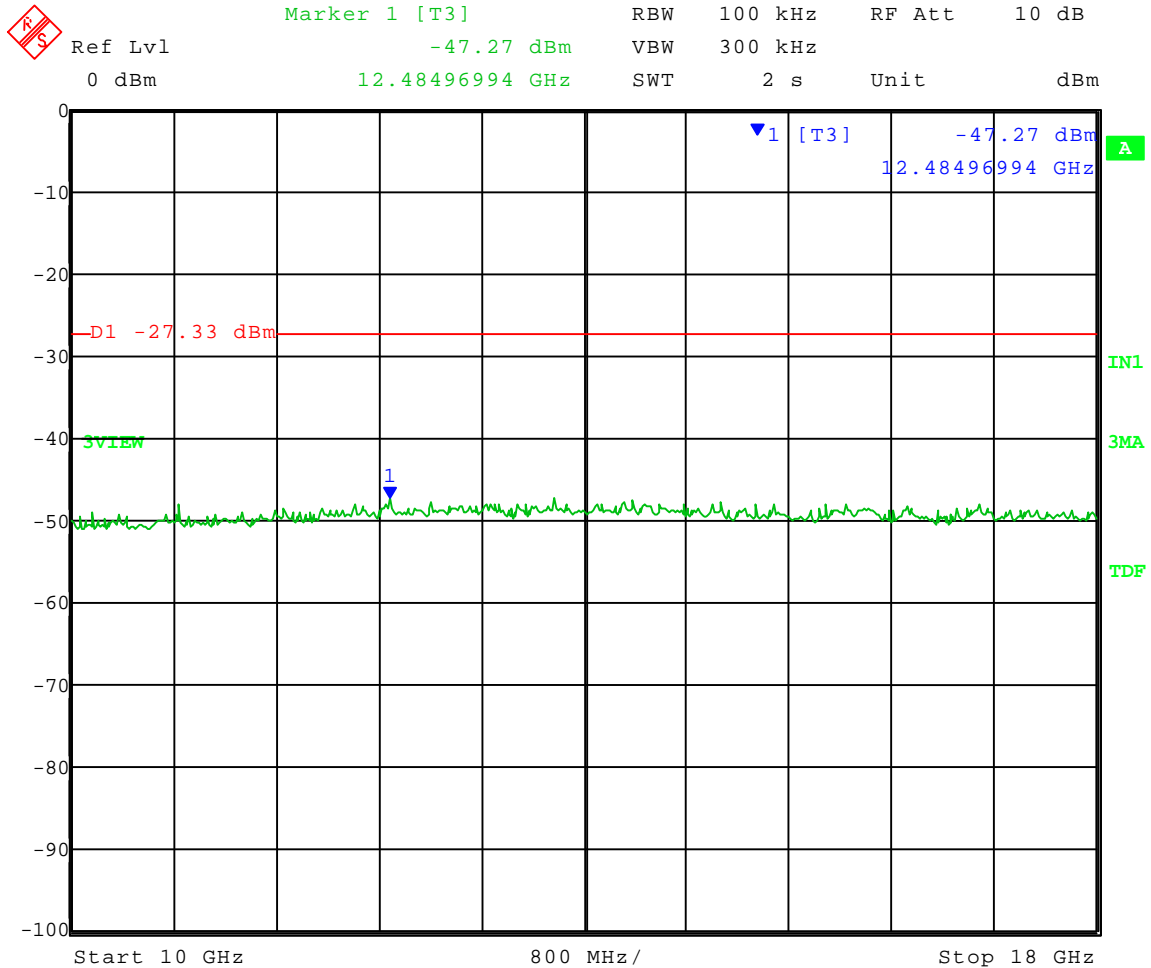
Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
 Company: RF Technologies
 EUT: ICM Care Manager
 Test: Spurious Emissions - Conducted - 15.247 (d)
 Operator: Adam A
 Comment: **Mid Channel - 2.440 GHz**
 Frequency Range: 10 to 18 GHz
 Limit = -27.33 dBm

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



Date: 9.NOV.2009 10:20:35



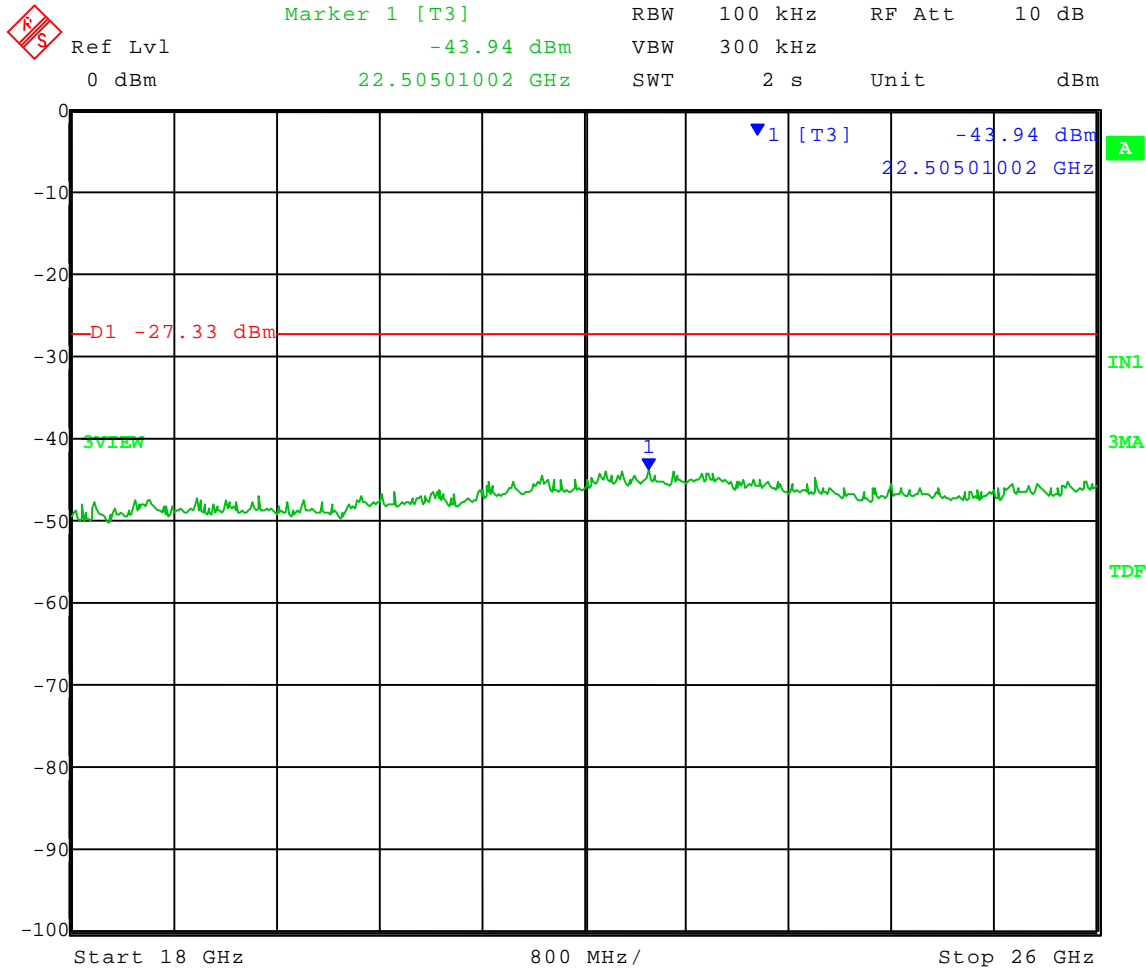
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **Mid Channel - 2.440 GHz**
Frequency Range: 18 to 26 GHz
Limit = -27.33 dBm

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



Date: 9.NOV.2009 10:21:43



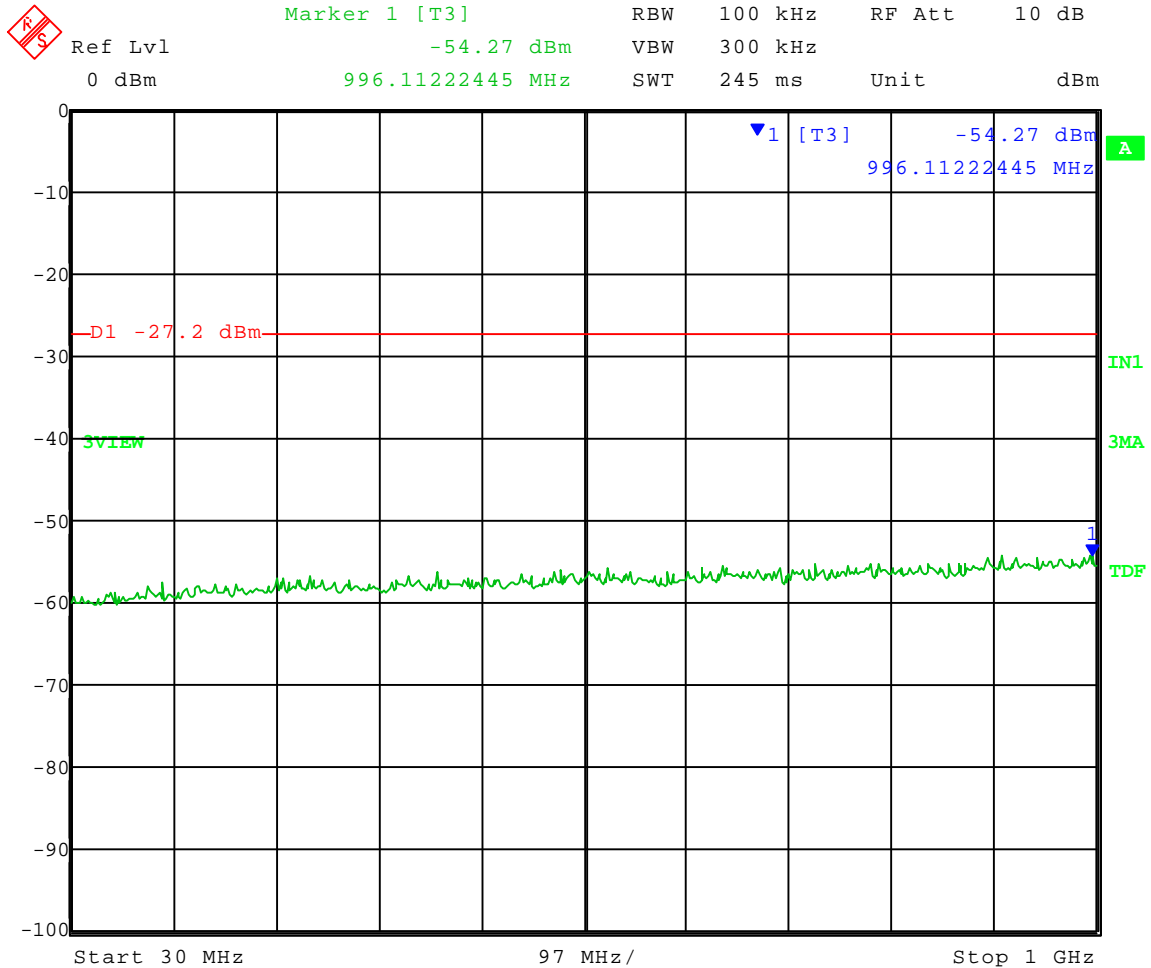
Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
 Company: RF Technologies
 EUT: ICM Care Manager
 Test: Spurious Emissions - Conducted - 15.247 (d)
 Operator: Adam A
 Comment: High Channel - 2.475 GHz
 Frequency Range: 30 to 1000 MHz
 Limit = -27.2 dBm

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



Date: 9.NOV.2009 11:21:44



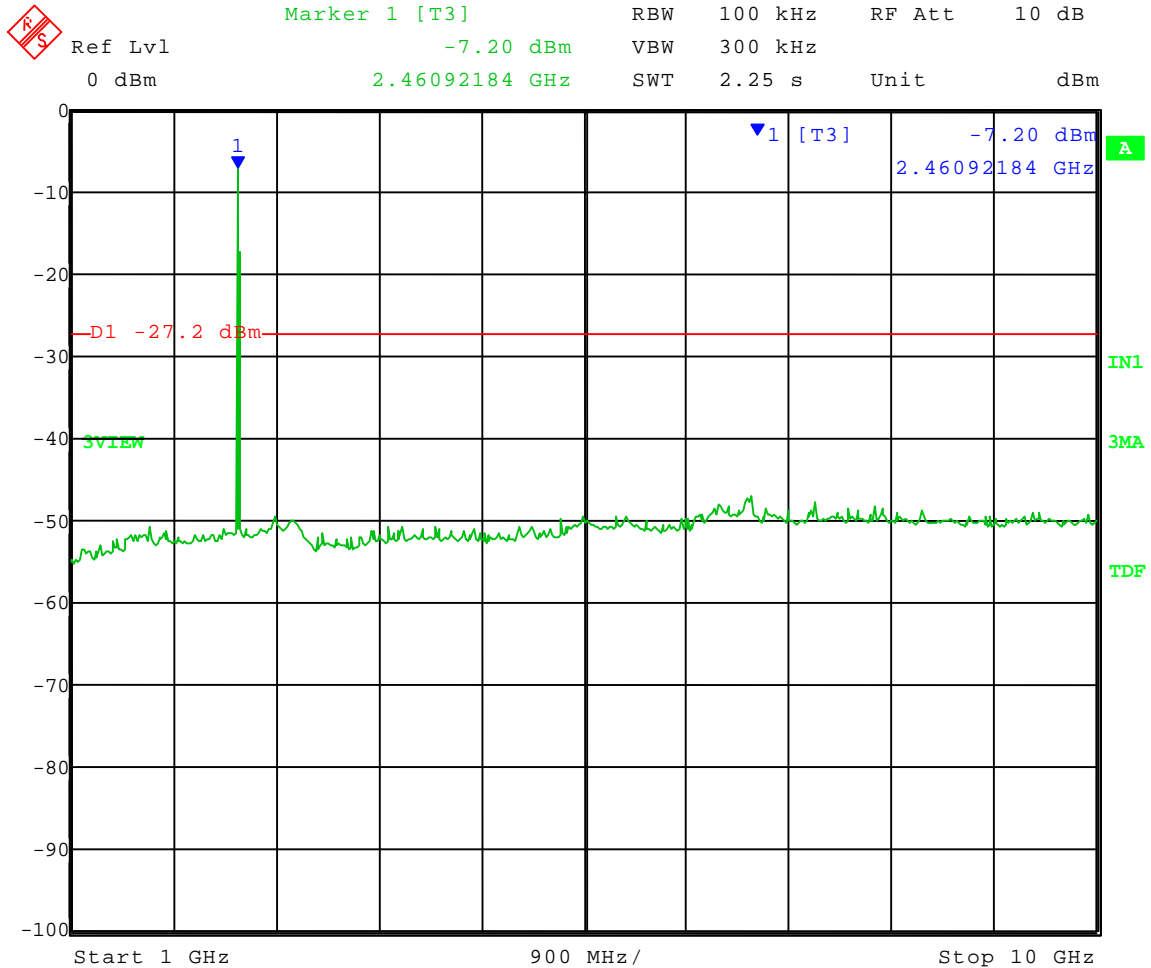
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **High Channel - 2.475 GHz**
Frequency Range: 1 to 10 GHz
Limit = -27.2 dBm

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



Date: 9.NOV.2009 11:18:24



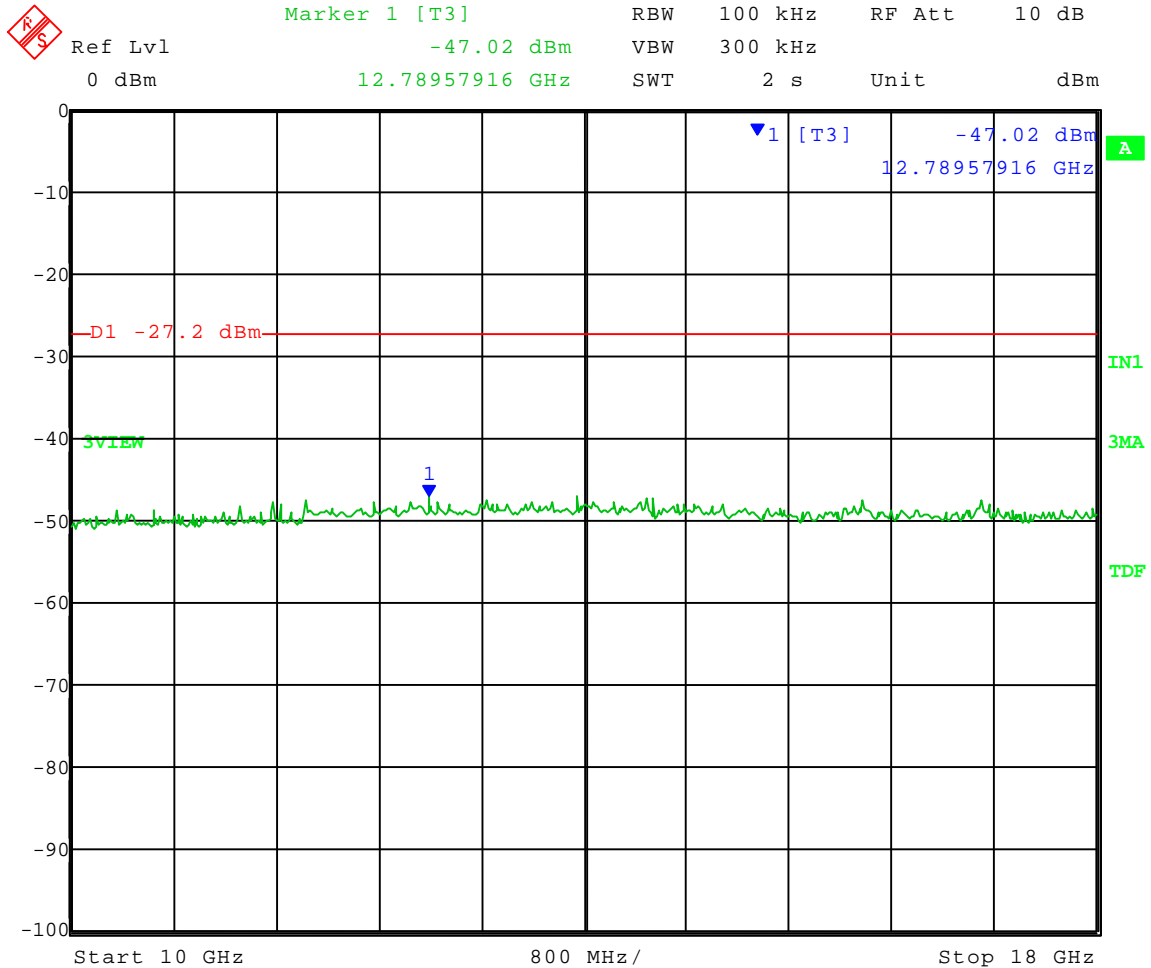
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **High Channel - 2.475 GHz**
Frequency Range: 10 to 18 GHz
Limit = -27.2 dBm

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



Date: 9.NOV.2009 11:19:30



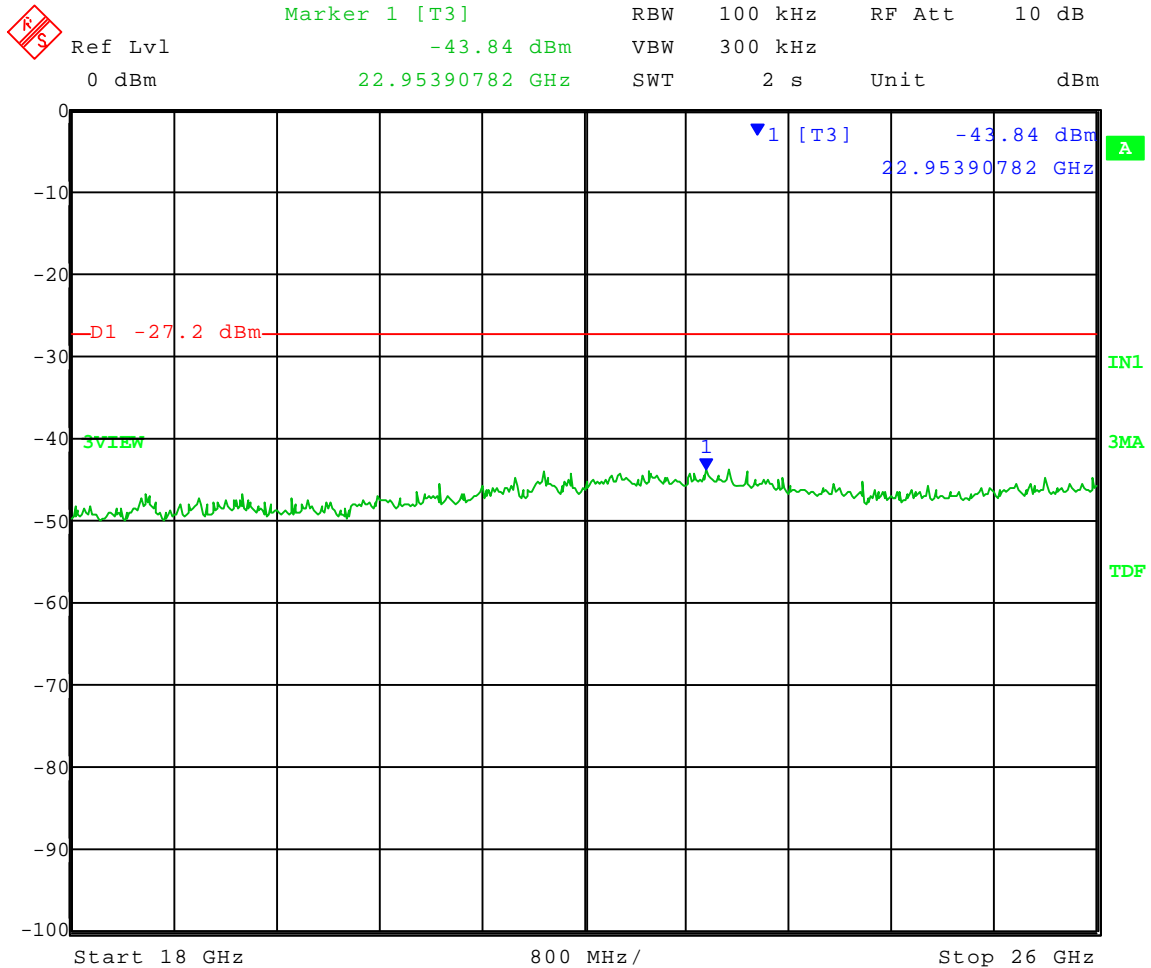
Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Spurious Emissions - Conducted - 15.247 (d)
Operator: Adam A
Comment: **High Channel - 2.475 GHz**
Frequency Range: 18 to 26 GHz
Limit = -27.2 dBm

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



Date: 9.NOV.2009 11:20:35

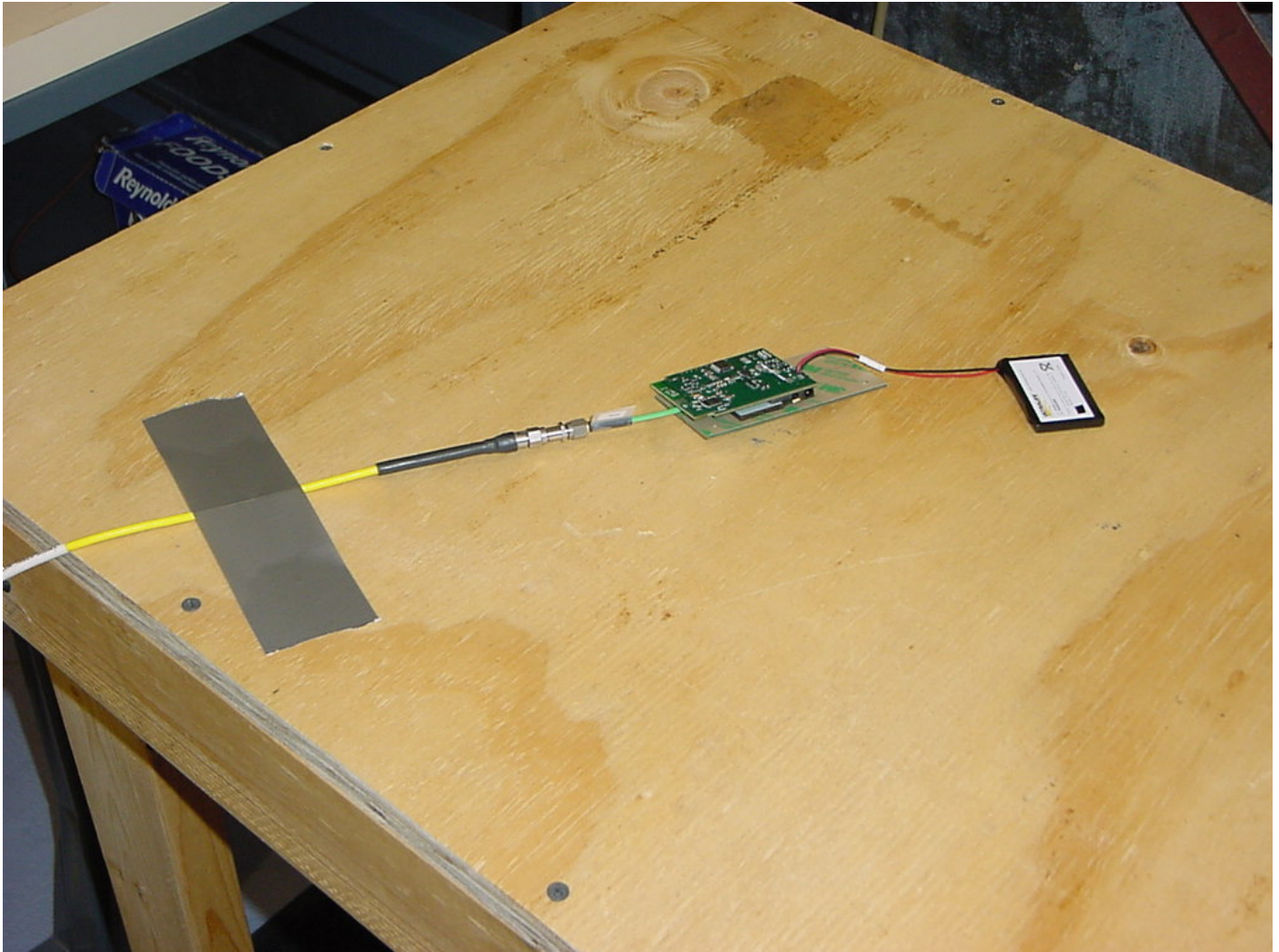


Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

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





Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

3b. RESTRICTED BANDS

As stated in Section 15.205a, the fundamental emission from the Code Alert Care Manager 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

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

DATA AND GRAPH(S) TAKEN SHOWING THE RESTRICTED BAND COMPLIANCE

PART 15.247(d) & 15.205



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Radiated Spurious Emissions 30 MHz to 26 GHz

Tested at a 3 Meter Distance

EUT: ICM Care Manager
Manufacturer: RF Technologies
Operating Condition: 72 deg F; 42% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Low Channel - 2.405 GHz
Date: 11/10/2009

- Notes:** (1) Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.
 (2) ALL measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (3) All other emissions at least 20 dB under the limit.

Channel 2.405 GHz:

Frequency (GHz)	Measurement Type	Ant. Pol.	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)	Comment
4.81	Average	Vert	51.87	32.89	-32.0	52.8	20	32.8	54	21.2	Res. Band
4.81	Max Peak	Vert	51.87	32.89	-32.0	52.8	-----	52.8	74	21.2	Res. Band
4.81	Average	Horz	50.82	32.89	-32.0	51.8	20	31.8	54	22.2	Res. Band
4.81	Max Peak	Horz	50.82	32.89	-32.0	51.8	-----	51.8	74	22.2	Res. Band



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

**Radiated Spurious Emissions 30 MHz to 26 GHz
 Tested at a 3 Meter Distance**

EUT: ICM Care Manager
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 21% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Mid Channel - 2.440 GHz
Date: 11/10/2009

Notes: (1) Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.
 (2) ALL measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (3) All other emissions at least 20 dB under the limit.

Channel 2.440 GHz:

Frequency (GHz)	Measurement Type	Ant. Pol.	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)	Comment
4.88	Average	Vert	54.48	32.98	-31.8	55.6	20	35.6	54	18.4	Res. Band
4.88	Max Peak	Vert	54.48	32.98	-31.8	55.6	-----	55.6	74	18.4	Res. Band
4.88	Average	Horz	52.27	32.98	-31.8	53.4	20	33.4	54	20.6	Res. Band
4.88	Max Peak	Horz	52.27	32.98	-31.8	53.4	-----	53.4	74	20.6	Res. Band



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Radiated Spurious Emissions 30 MHz to 26 GHz
 Tested at a 3 Meter Distance

EUT: ICM Care Manager
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 21% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: High Channel – 2.475 GHz
Date: 11/10/2009

Notes: (1) Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.
 (2) ALL measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (3) All other emissions at least 20 dB under the limit.

Channel 2.475 GHz:

Frequency (GHz)	Measurement Type	Ant. Pol.	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)	Comment
4.95	Average	Vert	51.34	33.07	-31.6	52.8	20	32.8	54	21.2	Res. Band
4.95	Max Peak	Vert	51.34	33.07	-31.6	52.8	-----	52.8	74	21.2	Res. Band
4.95	Average	Horz	49.92	33.07	-31.6	51.4	20	31.4	54	22.6	Res. Band
4.95	Max Peak	Horz	49.92	33.07	-31.6	51.4	-----	51.4	74	22.6	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

DATA AND GRAPH(S) TAKEN SHOWING

THE LOWER BAND EDGE

PART 15.247

BAND EDGE FALLS ON THE RESTRICTED

FREQUENCY BAND

NOTE:

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



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

Test Methodology

The EUT was investigated at the low and high channels of operation to determine band-edge compliance.

Because the upper band-edge coincides with a restricted band, bandedge compliance for the upper band-edge was determined using the radiated mark-delta method as outlined in FCC DA 00-705. 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.

The lower band-edge compliance was determined using the marker-delta method in which the radio frequency power that is produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

Lower Band-Edge Marker Delta Method

Frequency (MHz)	Antenna Polarity (H/V)	Fundamental Field Strength (dB μ V/m)	Duty Cycle Correction (dB)	Delta-Marker (dB)	Band-Edge Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
2405 (Peak)	H	95.77	N/A	33.64	62.13	74	11.87
2405 (Avg)	H	95.77	20	33.64	42.13	54	11.87

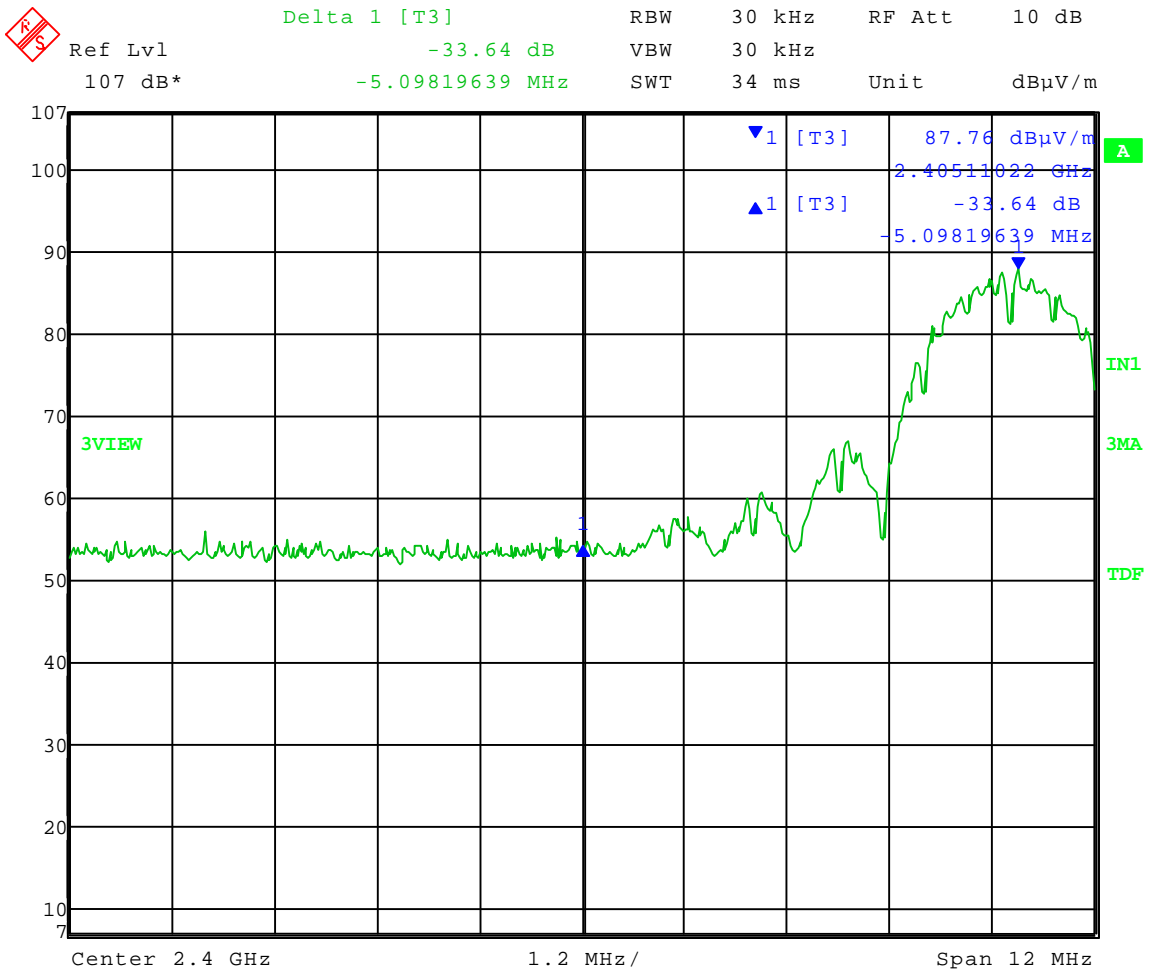


Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-10-2009
 Company: RF Technologies
 EUT: ICM Care Manager
 Test: Lower Band-Edge Radiated – Marker Delta Method
 Operator: Adam A
 Rule Part: FCC Part 15.247 (d) and FCC Part 15.205
 Comment: **Low Channel – 2.405 GHz**



Date: 10.NOV.2009 13:32:53



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

DATA AND GRAPH(S) TAKEN SHOWING

UPPER BAND EDGE

COMPLIANCE WITH RESTRICTED BAND

PART 15.247

NOTE:

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



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Methodology

The EUT was investigated at the low and high channels of operation to determine band-edge compliance.

Because the upper band-edge coincides with a restricted band, bandedge compliance for the upper band-edge was determined using the radiated mark-delta method as outlined in FCC DA 00-705. 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.

The lower band-edge compliance was determined using the marker-delta method in which the radio frequency power that is produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

Upper Band-Edge Marker Delta Method

Frequency (MHz)	Antenna Polarity (H/V)	Fundamental Field Strength (dB μ V/m)	Duty Cycle Correction (dB)	Delta-Marker (dB)	Band-Edge Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
2475 (Peak)	H	93.26	N/A	31.37	61.89	74	12.11
2475 (Avg)	H	93.26	20	31.37	41.89	54	12.11

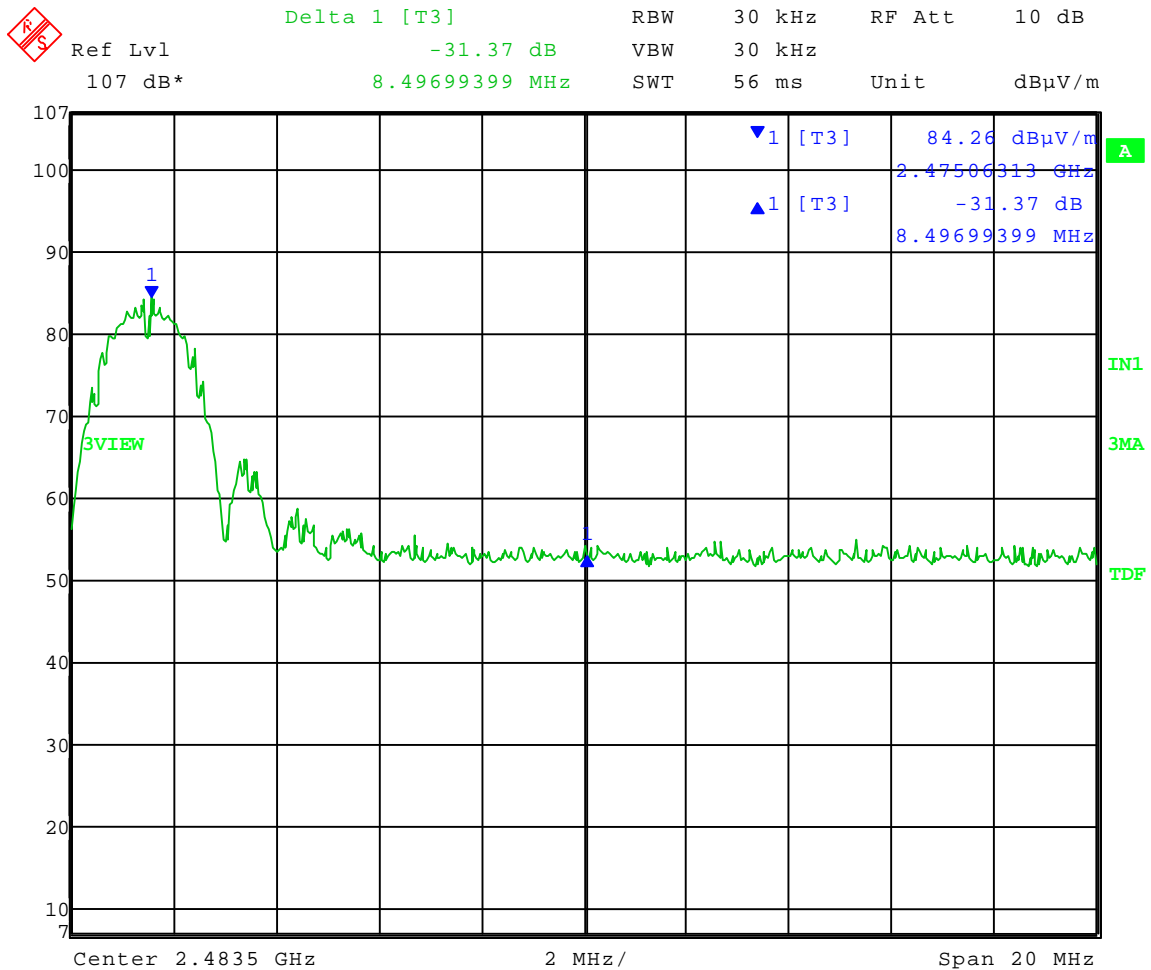


Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Test Date: 11-10-2009
 Company: RF Technologies
 EUT: ICM Care Manager
 Test: Upper Band-Edge Radiated – Marker Delta Method
 Operator: Adam A
 Rule Part: FCC Part 15.247 (d) and FCC Part 15.205
 Comment: **High Channel – 2.475 GHz**



Date: 10.NOV.2009 14:28:12



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

5b. FIELD STRENGTH OF FUNDAMENTAL AND SPURIOUS EMISSION MEASUREMENTS

The radiated measurements made at D.L.S. Electronic Systems, Inc., for the Code Alert Care Manager, Model Number: 9600-0500, 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 Code Alert Care Manager were made up to 26 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.



Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

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 70°F at 21% relative humidity.



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

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

PART 15.247

30 MHz – 1000 MHz

NOTE:

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



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
 Operator: Adam A
 Date of test: 11-10-2009
 Temperature: 73 deg. F
 Humidity: 42% R.H.
 Test Specifications: FCC Pt. 1.1310

EIRP - Substitution Method

Model: ICM Care Manager								
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	91.07	-13.50	1.82	9.02	-6.30	30.00	36.30	0.23
2405 horizontal	95.77	-10.30	1.82	9.02	-3.10	30.00	33.10	0.49

EIRP = Signal generator output - cable loss + antenna gain

ERP_(ref. to 1/2λ dipole) = Signal generator output - cable loss + antenna gain - 2.15

(Ref. ITU-R SM.329-8 Annex 1[1])



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
 Operator: Adam A
 Date of test: 11-10-2009
 Temperature: 73 deg. F
 Humidity: 41% R.H.
 Test Specifications: FCC Pt. 1.1310

EIRP - Substitution Method

Model: ICM Care Manager								
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	89.87	-14.70	1.85	9.09	-7.46	30.00	37.46	0.18
2440 horizontal	92.25	-13.80	1.85	9.09	-6.56	30.00	36.56	0.22

EIRP = Signal generator output - cable loss + antenna gain

ERP_(ref. to 1/2λ dipole) = Signal generator output - cable loss + antenna gain - 2.15

(Ref. ITU-R SM.329-8 Annex 1[1])



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

DLS Electronic Systems, Inc.

Company: RF Technologies
 Operator: Adam A
 Date of test: 11-10-2009
 Temperature: 73 deg. F
 Humidity: 42% R.H.
 Test Specifications: FCC Pt. 1.1310

EIRP - Substitution Method

Model: ICM Care Manager								
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	91.34	-13.30	1.88	9.15	-6.03	30.00	36.03	0.25
2475 horizontal	93.26	-12.90	1.88	9.15	-5.63	30.00	35.63	0.27

EIRP = Signal generator output - cable loss + antenna gain

ERP_(ref. to 1/2λ 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

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

APPENDIX B

RADIATED DATA AND GRAPH(S) TAKEN FOR SPURIOUS EMISSION MEASUREMENTS

PART 15.247



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Radiated Spurious Emissions 30 MHz to 26 GHz

Tested at a 3 Meter Distance

EUT: ICM Care Manager
Manufacturer: RF Technologies
Operating Condition: 72 deg F; 42% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Low Channel - 2.405 GHz
Date: 11/10/2009

- Notes:** (1) Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.
 (2) ALL measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (3) All other emissions at least 20 dB under the limit.

Channel 2.405 GHz:

Frequency (GHz)	Measurement Type	Ant. Pol.	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)	Comment
4.81	Average	Vert	51.87	32.89	-32.0	52.8	20	32.8	54	21.2	Res. Band
4.81	Max Peak	Vert	51.87	32.89	-32.0	52.8	-----	52.8	74	21.2	Res. Band
4.81	Average	Horz	50.82	32.89	-32.0	51.8	20	31.8	54	22.2	Res. Band
4.81	Max Peak	Horz	50.82	32.89	-32.0	51.8	-----	51.8	74	22.2	Res. Band



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Radiated Spurious Emissions 30 MHz to 26 GHz
 Tested at a 3 Meter Distance

EUT: ICM Care Manager
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 21% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Mid Channel - 2.440 GHz
Date: 11/10/2009

Notes: (1) Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.
 (2) ALL measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (3) All other emissions at least 20 dB under the limit.

Channel 2.440 GHz:

Frequency (GHz)	Measurement Type	Ant. Pol.	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)	Comment
4.88	Average	Vert	54.48	32.98	-31.8	55.6	20	35.6	54	18.4	Res. Band
4.88	Max Peak	Vert	54.48	32.98	-31.8	55.6	-----	55.6	74	18.4	Res. Band
4.88	Average	Horz	52.27	32.98	-31.8	53.4	20	33.4	54	20.6	Res. Band
4.88	Max Peak	Horz	52.27	32.98	-31.8	53.4	-----	53.4	74	20.6	Res. Band



Company: RF Technologies, Inc.
 Model Tested: 9600-0500
 Report Number: 15811

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

Radiated Spurious Emissions 30 MHz to 26 GHz
 Tested at a 3 Meter Distance

EUT: ICM Care Manager
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 21% R.H.
Test Site: Chamber G1
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: High Channel – 2.475 GHz
Date: 11/10/2009

Notes: (1) Since unit was not able to transmit continuously, compliance is shown by comparing Peak data against the Average limits.
 (2) ALL measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (3) All other emissions at least 20 dB under the limit.

Channel 2.475 GHz:

Frequency (GHz)	Measurement Type	Ant. Pol.	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)	Comment
4.95	Average	Vert	51.34	33.07	-31.6	52.8	20	32.8	54	21.2	Res. Band
4.95	Max Peak	Vert	51.34	33.07	-31.6	52.8	-----	52.8	74	21.2	Res. Band
4.95	Average	Horz	49.92	33.07	-31.6	51.4	20	31.4	54	22.6	Res. Band
4.95	Max Peak	Horz	49.92	33.07	-31.6	51.4	-----	51.4	74	22.6	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

TRANSMITTER DUTY CYCLE GRAPHS

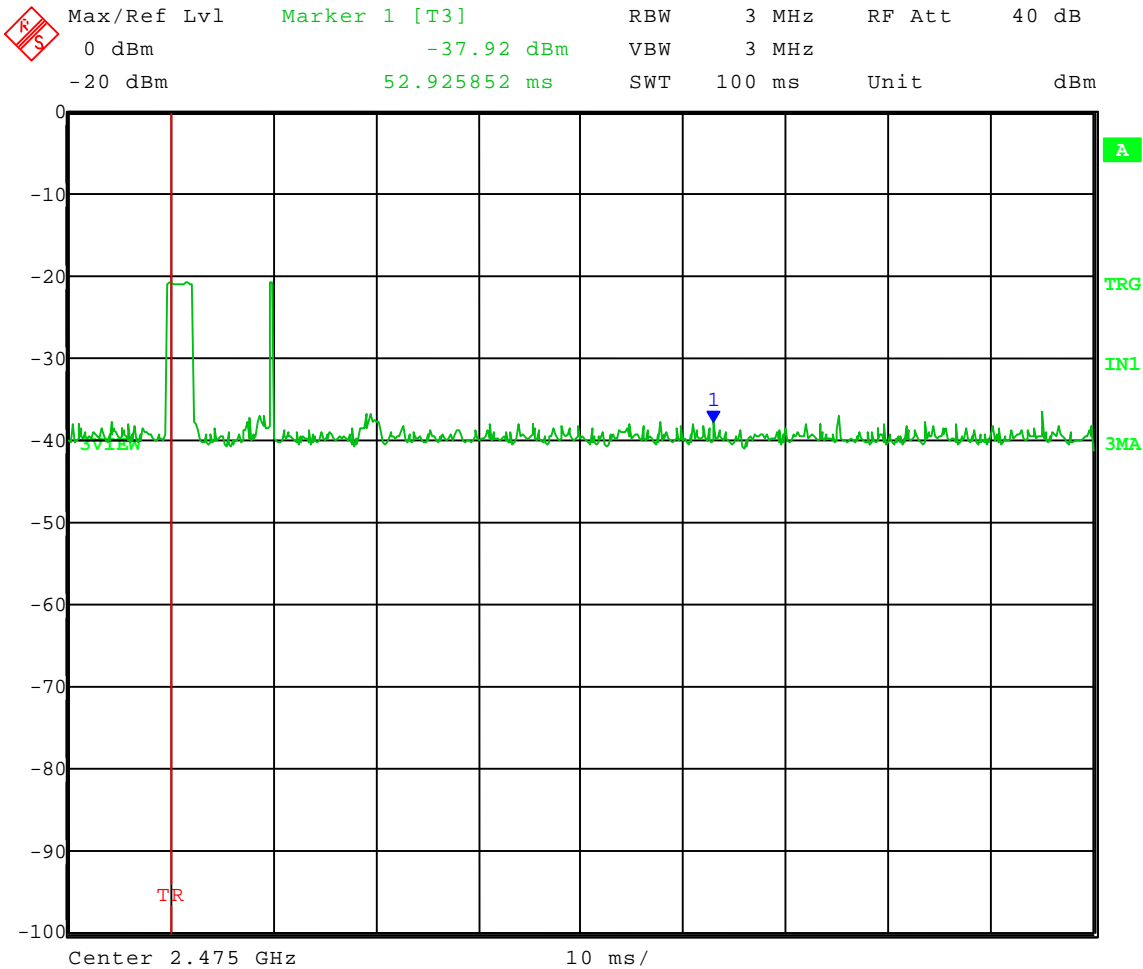
PART 15.35(c)



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-12-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Duty Cycle – maximum duty cycle during normal operation
Operator: Adam A
Rule Part: FCC Part 15.35 (c)
Comment: Narrow Pulse = .895 ms
Wide Pulse = 2.59 ms
Total on time in 100 ms = 2.59 + .895 = 3.485 ms
20 log (3.485/100) = -29.15
Duty Cycle Correction Factor = 29.15 dB
Maximum Useful Duty Cycle Correction Factor = 20 dB



Date: 12.NOV.2009 13:48:37

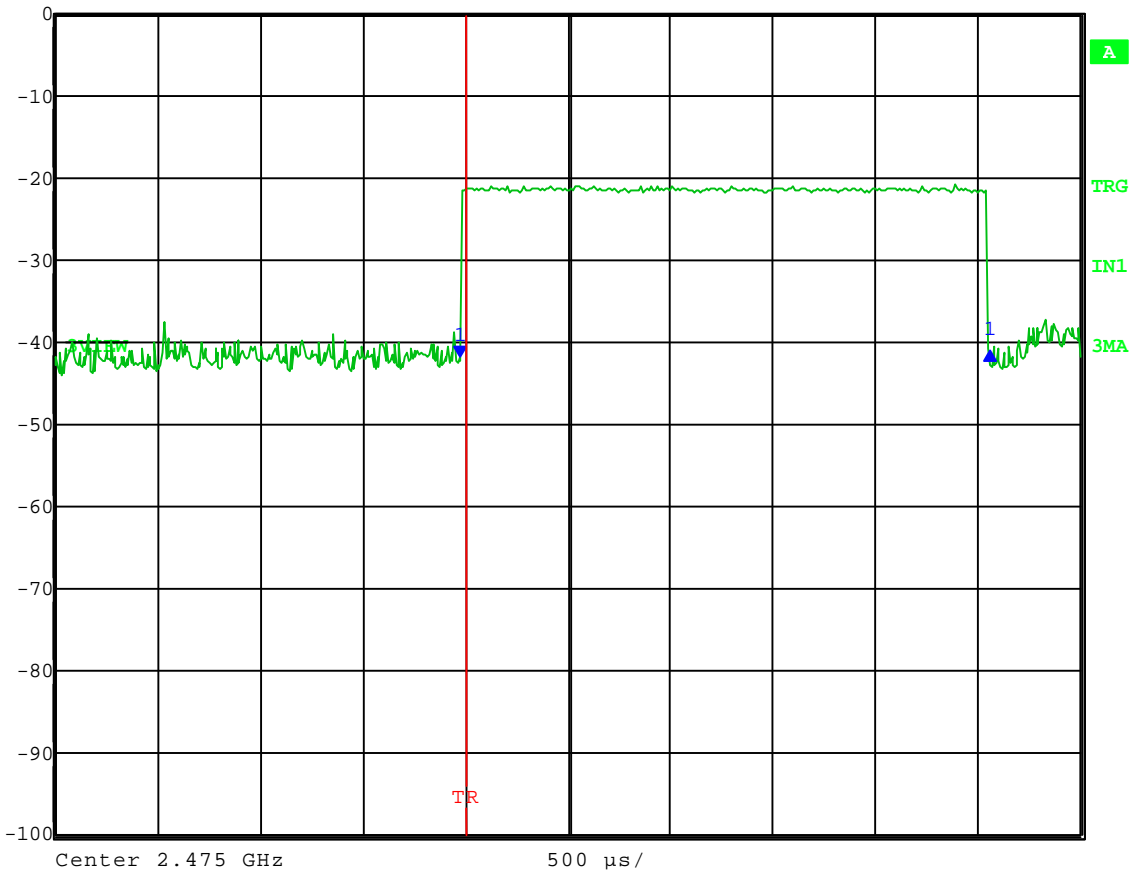


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-12-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Duty Cycle – maximum duty cycle during normal operation
Operator: Adam A
Rule Part: FCC Part 15.35 (c)
Comment: Narrow Pulse = .895 ms
Wide Pulse = 2.59 ms
Total on time in 100 ms = 2.59 + .895 = 3.485 ms
20 log (3.485/100) = -29.15
Duty Cycle Correction Factor = 29.15 dB
Maximum Useful Duty Cycle Correction Factor = 20 dB

Max/Ref Lvl Delta 1 [T3] RBW 3 MHz RF Att 40 dB
0 dBm 0.83 dB VBW 3 MHz
-20 dBm 2.588178 ms SWT 5 ms Unit dBm



Date: 12.NOV.2009 13:50:00

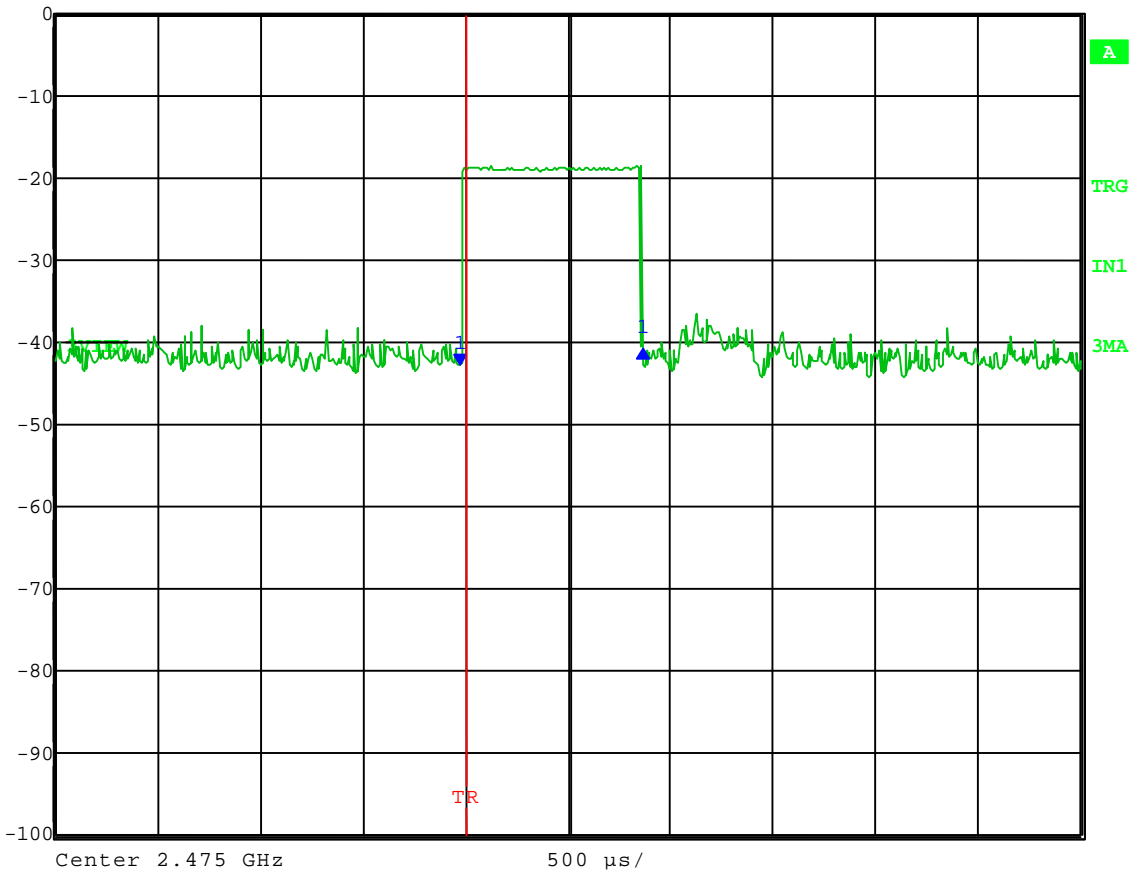


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-12-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Duty Cycle – maximum duty cycle during normal operation
Operator: Adam A
Rule Part: FCC Part 15.35 (c)
Comment: Narrow Pulse = .895 ms
Wide Pulse = 2.59 ms
Total on time in 100 ms = 2.59 + .895 = 3.485 ms
20 log (3.485/100) = -29.15
Duty Cycle Correction Factor = 29.15 dB
Maximum Useful Duty Cycle Correction Factor = 20 dB

Max/Ref Lvl Delta 1 [T3] RBW 3 MHz RF Att 40 dB
0 dBm 1.95 dB VBW 3 MHz
-20 dBm 894.791583 μs SWT 5 ms Unit dBm



Date: 12.NOV.2009 13:51:56



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

6 dB BANDWIDTH GRAPHS

PART 15.247

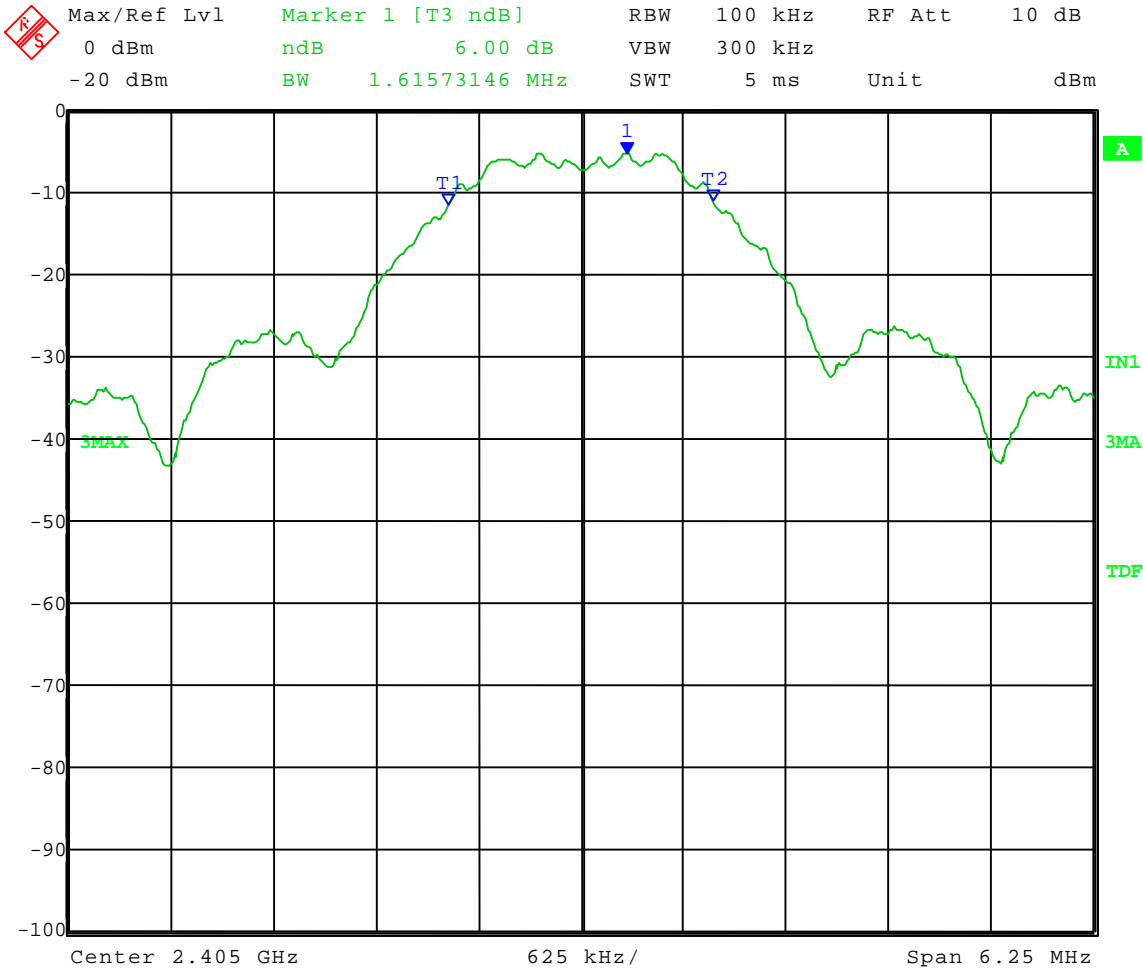


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: 6 dB Bandwidth - Conducted - 15.247 (a)(2)
Operator: Adam A
Comment: Low Channel - 2.405 GHz

6 dB Bandwidth = 1.616 MHz



Date: 9.NOV.2009 08:48:38

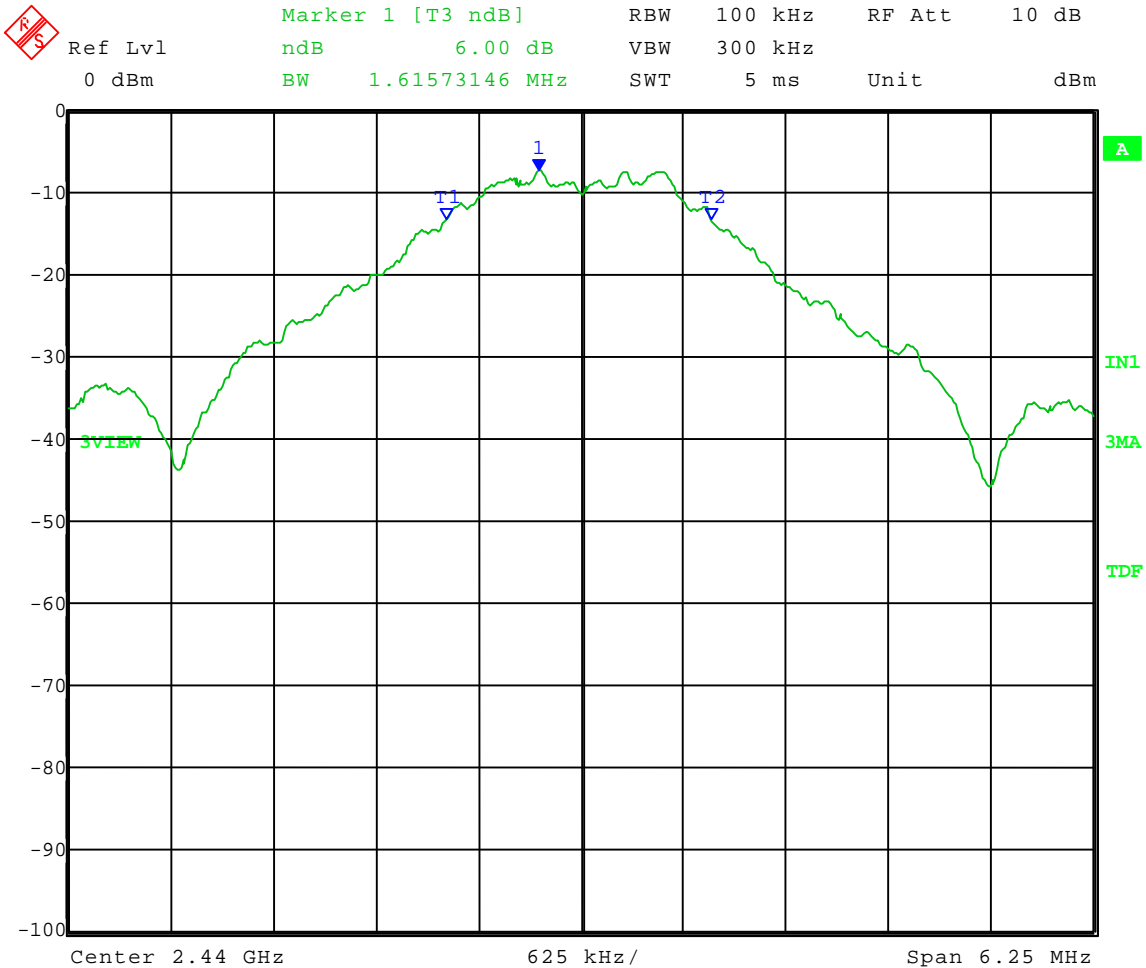


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: 6 dB Bandwidth - Conducted - 15.247 (a)(2)
Operator: Adam A
Comment: Middle Channel - 2.440 GHz

6 dB Bandwidth = 1.616 MHz



Date: 9.NOV.2009 09:43:26

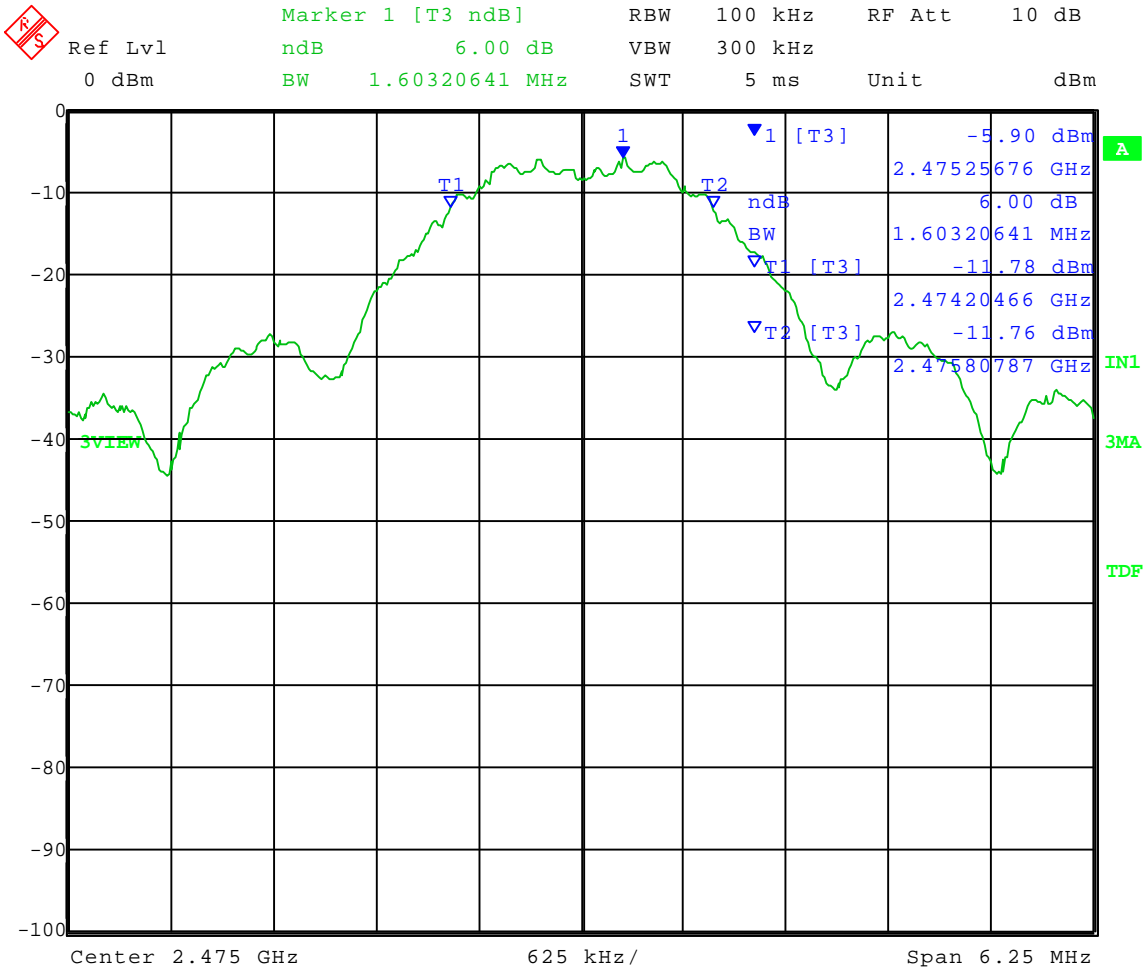


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: 6 dB Bandwidth - Conducted - 15.247 (a)(2)
Operator: Adam A
Comment: High Channel - 2.475 GHz

6 dB Bandwidth = 1.603 MHz



Date: 9.NOV.2009 10:51:29



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

CONDUCTED PEAK OUTPUT POWER GRAPHS

PART 15.247

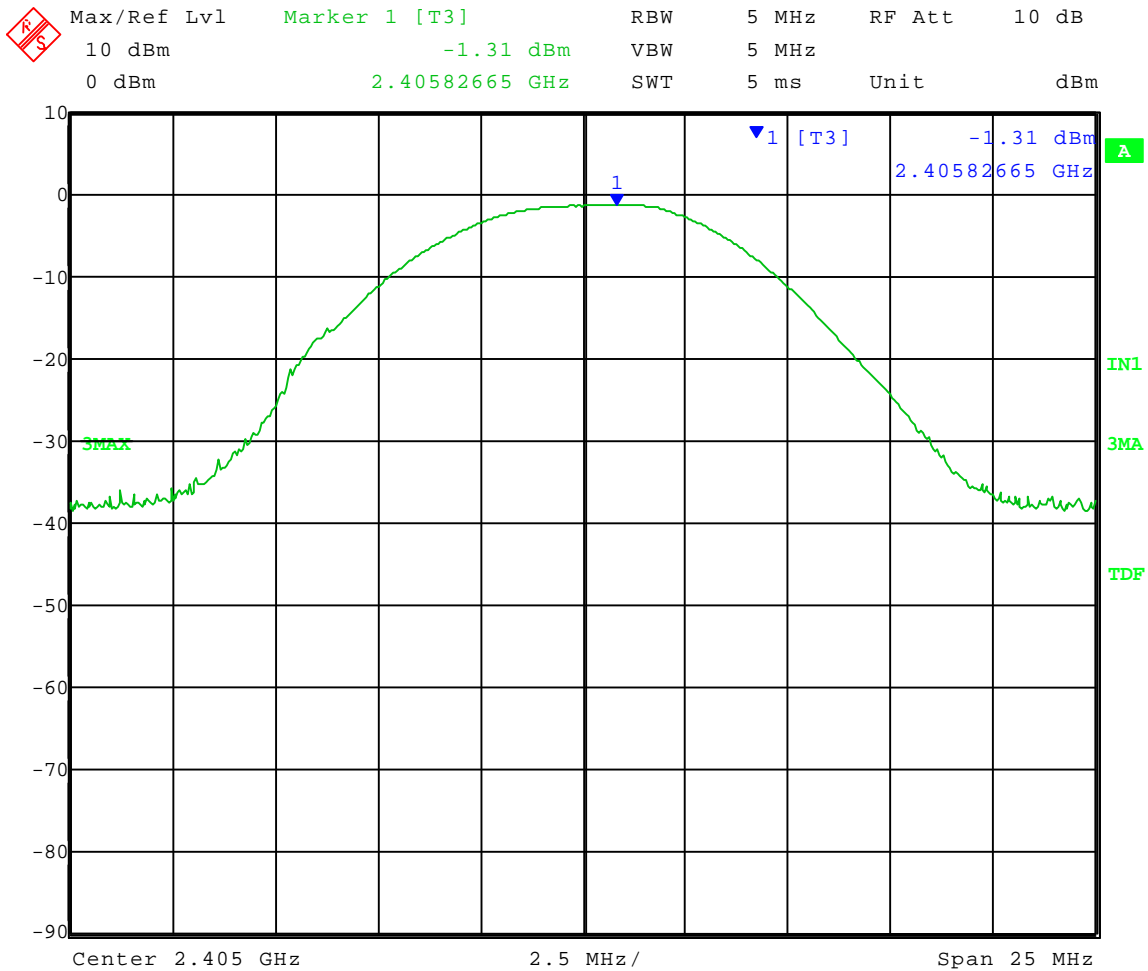


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Peak Power Output - Conducted - 15.247 (b)(3)
Operator: Adam A
Comment: Low Channel - 2.405 GHz

Peak Output Power = -1.31 dBm = .74 mW



Date: 9.NOV.2009 08:57:29

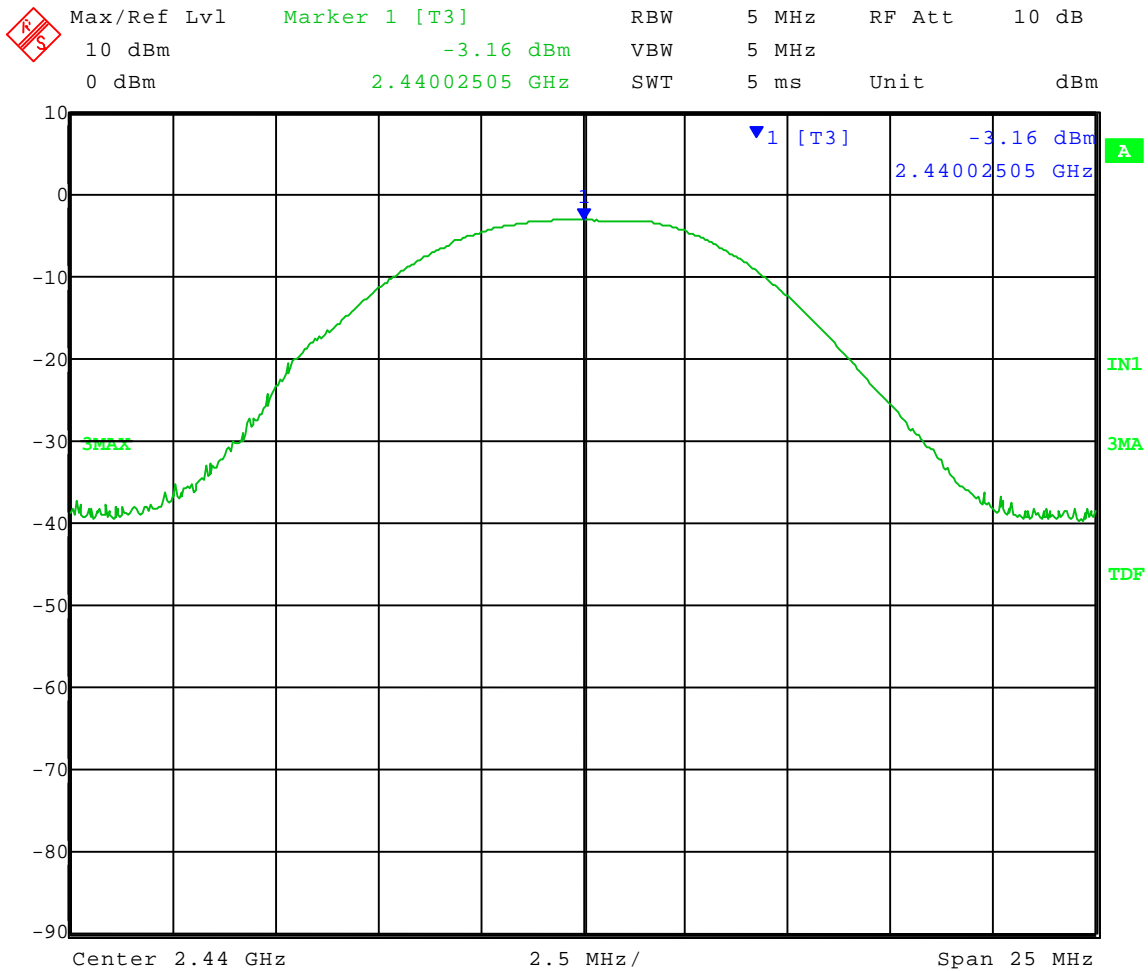


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Peak Power Output - Conducted - 15.247 (b)(3)
Operator: Adam A
Comment: Middle Channel - 2.440 GHz

Peak Output Power = -3.16 dBm = .48 mW



Date: 9.NOV.2009 09:55:18

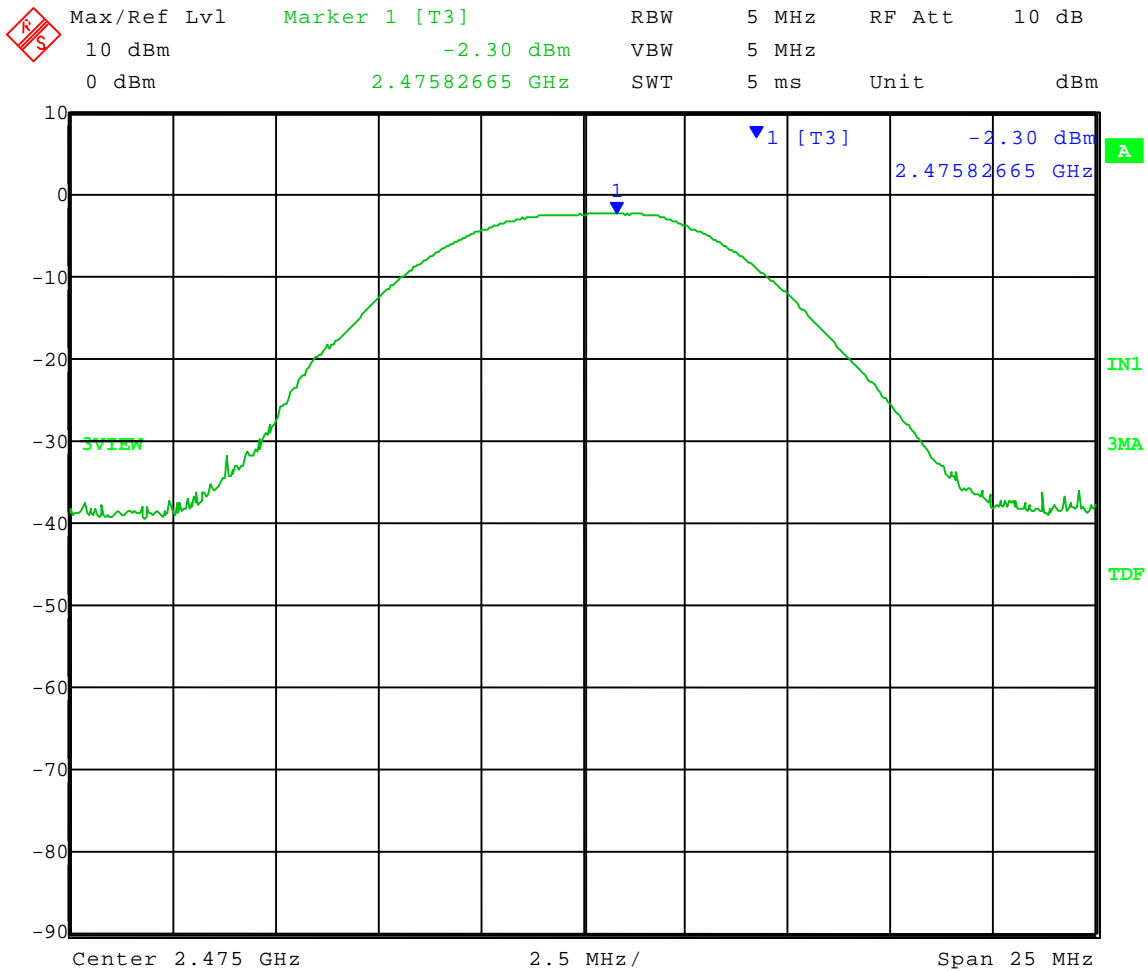


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Peak Power Output - Conducted - 15.247 (b)(3)
Operator: Adam A
Comment: High Channel - 2.475 GHz

Peak Output Power = -2.30 dBm = .59 mW



Date: 9.NOV.2009 10:55:36



1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

PEAK POWER SPECTRAL DENSITY GRAPHS

PART 15.247

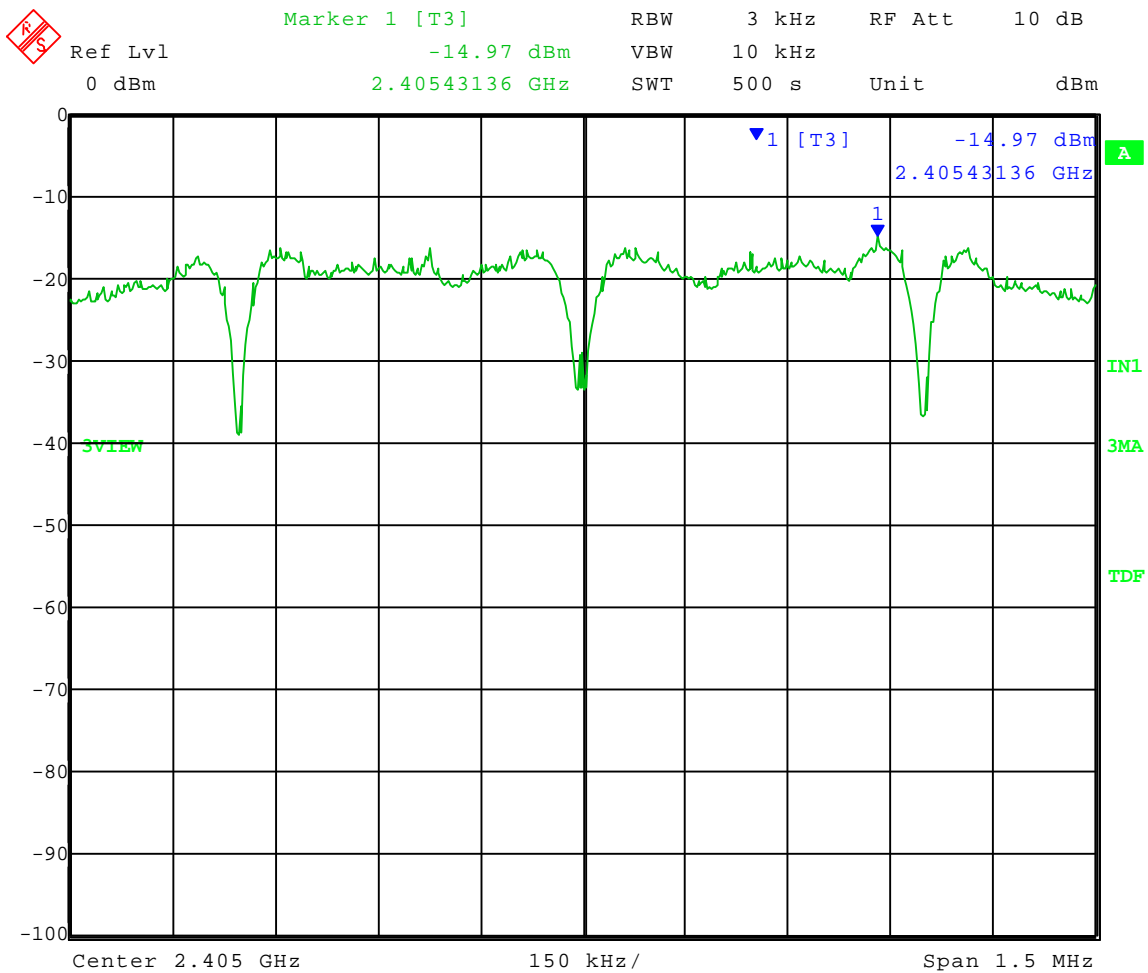


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Peak Power Spectral Density - Conducted - 15.247 (e)
Operator: Adam A
Comment: Low Channel - 2.405 GHz

3 kHz Bandwidth = -14.97 dBm



Date: 9.NOV.2009 09:15:24

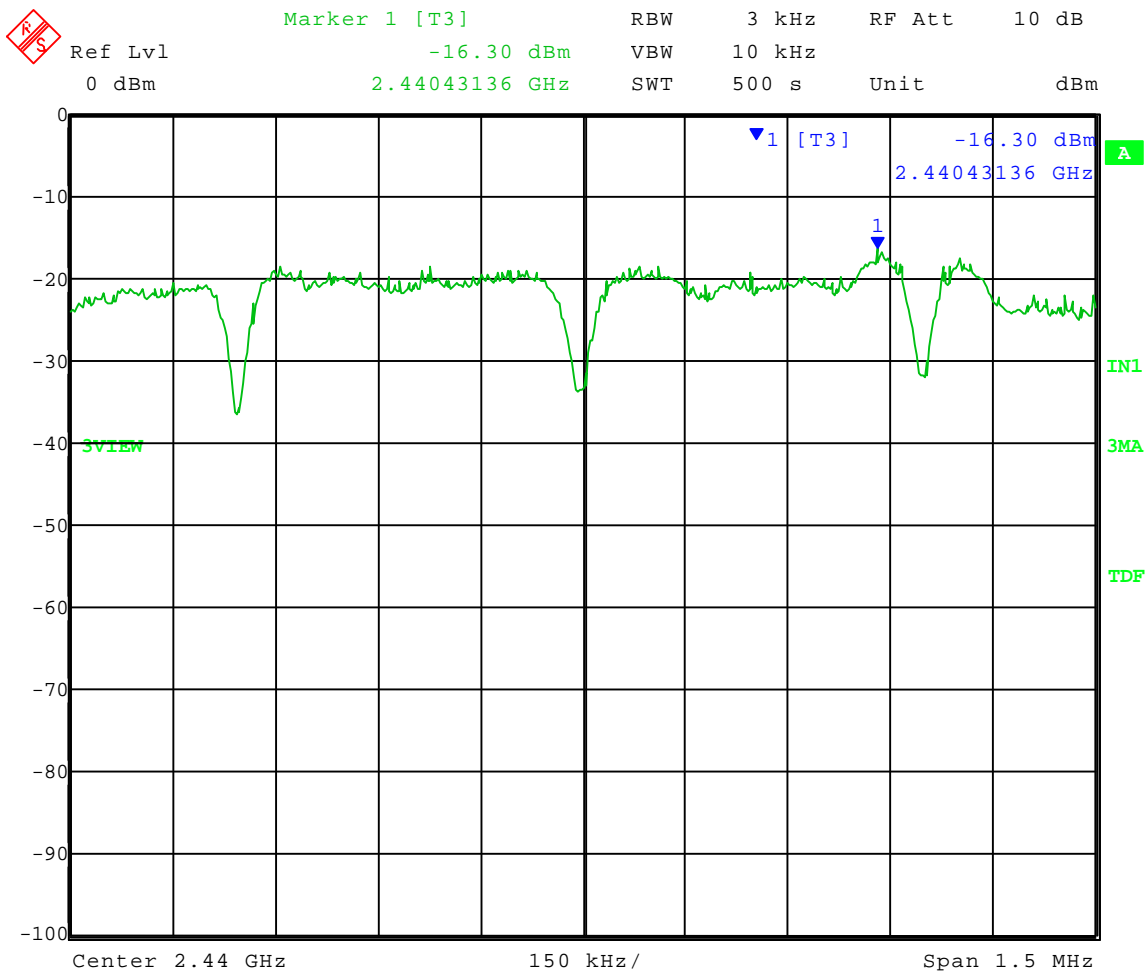


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.
Model Tested: 9600-0500
Report Number: 15811

Test Date: 11-09-2009
Company: RF Technologies
EUT: ICM Care Manager
Test: Peak Power Spectral Density - Conducted - 15.247 (e)
Operator: Adam A
Comment: Middle Channel - 2.440 GHz

3 kHz Bandwidth = -16.30 dBm



Date: 9.NOV.2009 10:09:46

