

Model Tested: 0800-0288 Report Number: 12553

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: Help Alert Pendant

Kind of Equipment: Wireless Nurse Call Device

Test Configuration: Wireless connection (Tested at 3.0 vdc)

Model Number(s): 0800-0288

Model(s) Tested: 0800-0288

Serial Number(s): NA

Date of Tests: August 14, 17 & 23, 2006

Test Conducted For: RF Technologies, Inc.

3125 N. 126th Street

Brookfield, Wisconsin 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- 2006 D.L.S. Electronic Systems, Inc

COPYRIGHT NOTICE

This report or any portion their of, may not be reproduced or modified in any form without the expressed written consent of D.L.S. Electronic Systems, Inc.



Model Tested: 0800-0288 Report Number: 12553

SIGNATURE PAGE

Report By:

mon C Kowe

Arnom C. Rowe Test Engineer EMC-001375-NE

Reviewed By:

William Stumpf OATS Manager

Approved By:

Brian Mattson General Manager

Company Official:

RF Technologies, Inc.



Company: RF Technologies, Inc. Model Tested: 0800-0288

Model Tested: 0800-02 Report Number: 12553

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	<i>6</i>
3.0	Object	<i>6</i>
4.0	Test Set-Up	7
5.0	Test Equipment	7
6.0	Ambient Measurements	8
7.0	Description of Test Sample	9
8.0	Additional Description of Test Sample.	10
9.0	Photo Information and Test Set-Up	11
10.0	Radiated Photos Taken During Testing	12
11.0	Results of Tests	14
12.0	Conclusion	14
TAF	RLE 1 – FOLIPMENT LIST	15



Company: RF Technologies, Inc. Model Tested: 0800-0288

Report Number: 12553

TABLE OF CONTENTS

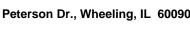
Appe	ndix A – Electric Field Radiated Emissions Test	17
1.0	Conducted Emission Measurements	18
2.0	Spurious Emissions at the Antenna Terminals	19
2.0	Conducted Emission Data and Charts made at the Antenna Terminals	20
3.0	Conducted Emissions Photos Taken During Testing.	33
4.0	Restricted Bands	34
5.0	Band Edge and Restrict Band Compliance	34
5.0	Data and Graph(s) taken showing the Band Edge Compliance	35
5.0	Data and Graph(s) taken showing the Restrict Band Compliance	38
5.0	Data and Graph(s) taken showing the Radiated Upper Band edge	42
6.0	Field Strength of Spurious Emission Measurements	45
6.0	Radiated Data and Graph(s) taken for Fundamental and Spurious Emission Measurements	47
7.0	6 dB Bandwidth Graphs taken during testing	57
6.0	Peak Power Spectral Density Graph(s) taken during testing	61
7.0	Number of IEEE 802.15.4 Zigbee Frequencies taken during testing	65
7.0	Time of Occupancy Graphs taken during testing	67
7.0	Conducted Peak Output Power Graphs Taken During testing	74

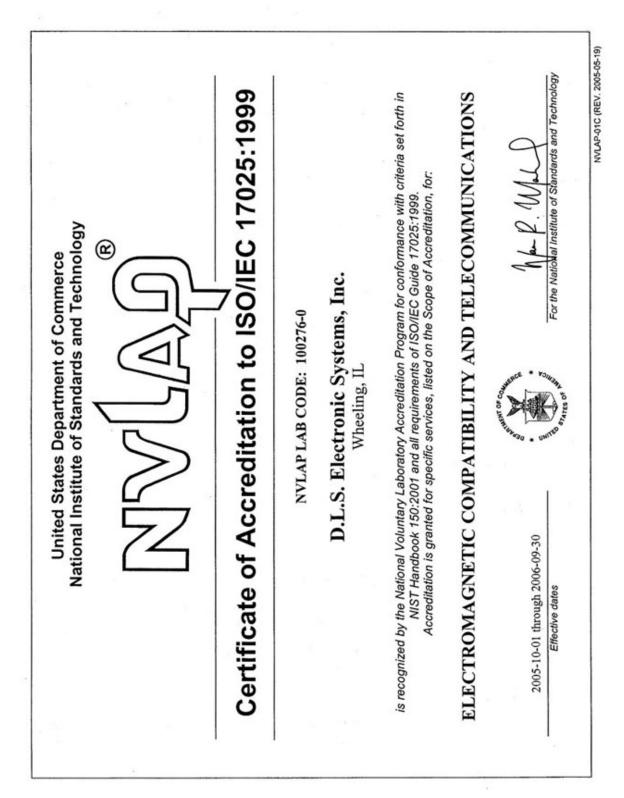


1250 Peterson Dr., Wheeling, IL 60090

Company: RF Technologies, Inc.

Model Tested: 0800-0288 Report Number: 12553







Model Tested: 0800-0288 Report Number: 12553

1.0 SUMMARY OF TEST REPORT

It was found that the Help Alert Pendant, Model Number(s) 0800-0288, "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 Help Alert Pendant is powered from a D.C. power source. It does not have a line cord to plug into the A.C. power line.

This test report relates only to the items tested and contains the following number of pages.

Text: 77

2.0 INTRODUCTION

On August 14, 17 & 23, 2006, a series of radio frequency interference measurements was performed on Help Alert Pendant, Model Number(s) 0800-0288, Serial Number: NA. The tests were performed according to the procedures of the FCC as stated in the "Methods of Measurement of Radio-Noise Emissions for Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" found in the American National Standards Institute, ANSI C63.4-2003. Tests were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

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

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.



Model Tested: 0800-0288 Report Number: 12553

4.0 TEST SET-UP

All emission tests were performed at D.L.S. Electronic Systems, Inc. and set up according to the American National Standards Institute, ANSI C63.4-2003, Section 8, (Figures 11a and 11b).

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

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

All preliminary data below 1000 MHz was automatically plotted using the HP Spectrum Analyzer or 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 HP Spectrum Analyzer and/or 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 Analyzer or 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.



Model Tested: 0800-0288 Report Number: 12553

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 MP-5 or ANSI C63.4-2003, as appropriate.



Model Tested: 0800-0288 Report Number: 12553

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

7.1 Description:

This test sample is a hand held or necklace worn pendant transceiver that when an individual is in distress they press the button alerting the caregiver they need assistance. In addition the test sample within a mesh network or receivers can give relative position, presence at a location and low battery indication.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 55 mm x Width: 42 mm x Height: 15 mm

7.3 LINE FILTER USED:

NA

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

NA

Clock Frequencies:

32 MHz

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

1. ZigBee Pendant Transceiver PCB Assm. Chipcon

PN: 0830-0028 Rev. A



For:

Company: RF Technologies, Inc. Model Tested: 0800-0288

Model Tested: 0800-02 Report Number: 12553

8.0	ADDITIONAL DESCRIPTION OF TEST SAMPLE: (See also Paragraph 7.0)					
1: The	ere were no additional descriptions noted at the time of te	st.				
	1). The test was run with the transmit set at 22%2). Receive	duty cycle.				
I certify that the above, as described in paragraph 7.0, describes the equipment tested and will be manufactured as stated.						
By:	Signature	Title				
	Digilature	Title				

Date

Company



Model Tested: 0800-0288 Report Number: 12553

9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 Help Alert Pendant

Model Number: 0800-0288 Serial Number: NA



RF Technologies, Inc. 0800-0288

Company: Model Tested: Report Number: 12553

10.0 RADIATED PHOTOS TAKEN DURING TESTING





Model Tested: 0800-0288 Report Number: 12553

10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)





Model Tested: 0800-0288 Report Number: 12553

11.0 RESULTS OF TESTS

The radio interference emission charts results 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. Points on the emission charts shown with a yellow mark are background frequencies that were verified during testing.

12.0 CONCLUSION

It was found that the Help Alert Pendant, Model Number(s) 0800-0288 "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 Help Alert Pendant is powered from a D.C. power source. It does not have a line cord to plug into the A.C. power line.



Model Tested: 0800-0288 Report Number: 12553

TABLE 1 – EQUIPMENT LIST

Test		Model	Serial	Frequency	Cal Due
Equipment	Manufacturer	Number	Number	Range	Dates
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	11/06
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	12/06
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	12/06
Antenna	EMCO	3104C	00054891	20 MHz – 200 MHz	2/07
Antenna	Electrometrics	LPA-25	1114	200 MHz – 1 GHz	3/07
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	3/07
Antenna	Electrometrics	3146	1205	200 MHz – 1 GHz	3/07
Antenna	EMCO	3104C	97014785	20 MHz – 200 MHz	2/07
Antenna	EMCO	3146	97024895	200 MHz – 1 GHz	3/07
Antenna	EMCO	3115	2479	1 GHz – 18 GHz	8/07
Antenna	EMCO	3115	99035731	1 GHz – 18 GHz	4/07
Antenna	Rohde & Schwarz	HUF-Z1	829381001	20 MHz – 1 GHz	2/07
Antenna	Rohde & Schwarz	HUF-Z1	829381005	20 MHz – 1 GHz	8/07

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



Model Tested: 0800-0288 Report Number: 12553

TABLE 1 – EQUIPMENT LIST

Test		Model	Serial	Frequency	Cal Due
Equipment	Manufacturer	Number	Number	Range	Dates
LISN	Solar	8012-50-R-	8305116	10 MHz – 30 MHz	8/07
		24-BNC			
LISN	Solar	8012-50-R-	814548	10 MHz – 30 MHz	8/07
		24-BNC			
LISN	Solar	9252-50-R-	961019	10 MHz – 30 MHz	12/06
		24-BNC			
LISN	Solar	9252-50-R-	971612	10 MHz – 30 MHz	10/06
		24-BNC			
LISN	Solar	9252-50-R-	92710620	10 MHz – 30 MHz	7/07
		24-BNC			

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



Model Tested: 0800-0288 Report Number: 12553

APPENDIX A

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



Model Tested: 0800-0288 Report Number: 12553

APPENDIX A

1.0 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 250 uV (47.96 dBuV) at any frequency between 150 kHz and 30 MHz, as stated in Section 15.207a.

NOTE:

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



Model Tested: 0800-0288 Report Number: 12553

APPENDIX A

2.0 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – PART 15.247(c)

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.

The allowed emissions for transmitters operating in the bands for Help Alert Pendant equipment are found under Part 15, Section 15.247(c). 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:

The Help Alert Pull Cord uses a Meander Type Chip Antenna (Fractus).



Model Tested: 0800-0288 Report Number: 12553

APPENDIX A

CONDUCTED EMISSION DATA AND GRAPH(S)

TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

AT THE ANTENNA TERMINALS

PART 15.247(c)



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

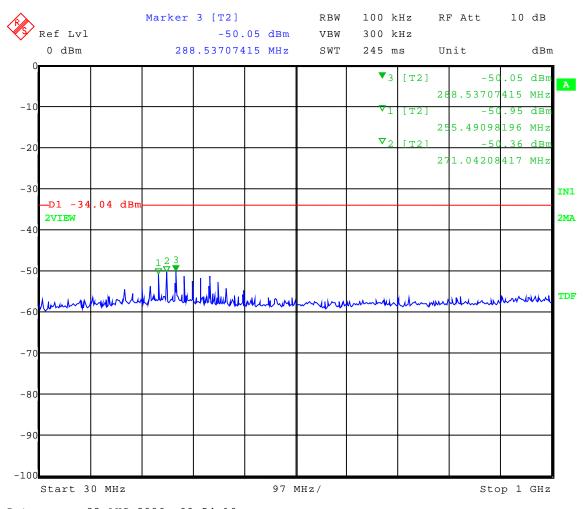
Operator: Craig Brandt

Comment: Low Channel Transmit = 2.405 GHz

Frequency Range: 30 to 1000 MHz

Limit = -34.04 dBm

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



Date: 23.AUG.2006 09:54:10



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

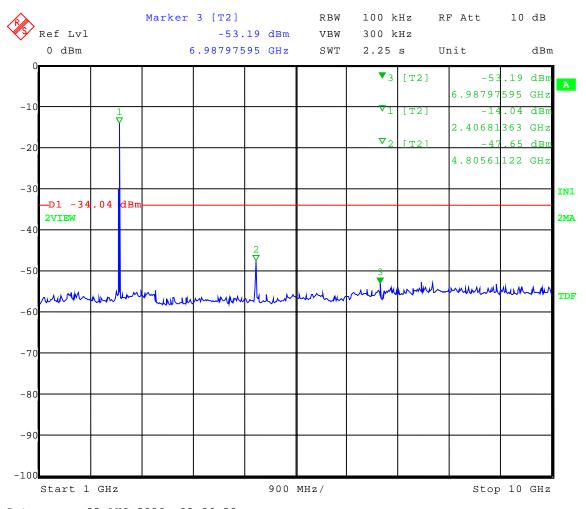
Operator: Craig Brandt

Comment: Low Channel Transmit = 2.405 GHz

Frequency Range: 1 to 10 GHz

Limit = -34.04 dBm

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



Date: 23.AUG.2006 09:26:33



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

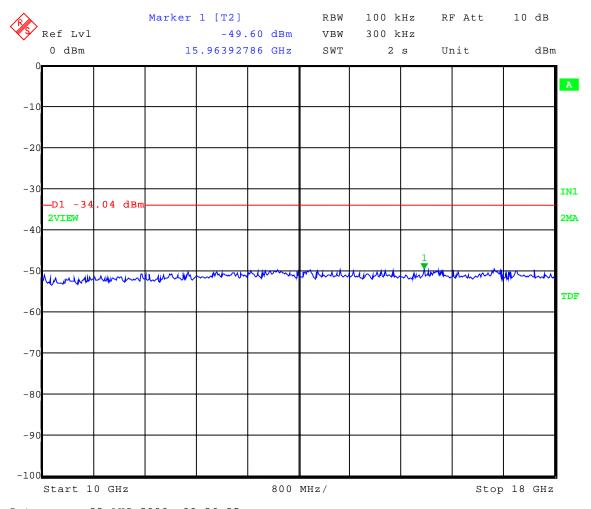
Operator: Craig Brandt

Comment: Low Channel Transmit = 2.405 GHz

Frequency Range: 10 to 18 GHz

Limit = -34.04 dBm

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



Date: 23.AUG.2006 09:36:35



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

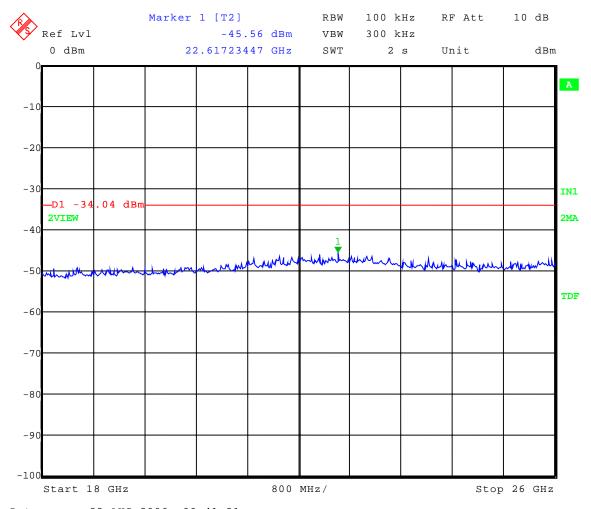
Operator: Craig Brandt

Comment: Low Channel Transmit = 2.405 GHz

Frequency Range: 18 to 26 GHz

Limit = -34.04 dBm

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



Date: 23.AUG.2006 09:41:31



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

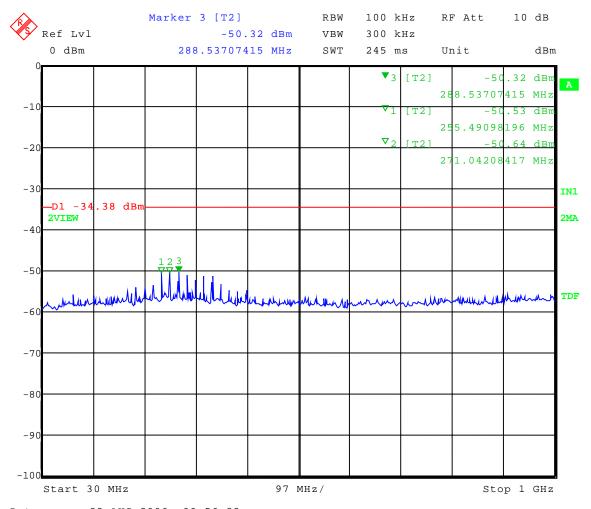
Operator: Craig Brandt

Comment: Middle Channel Transmit = 2.440 GHz

Frequency Range: 30 to 1000 MHz

Limit = -34.38 dBm

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



Date: 23.AUG.2006 09:56:23



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

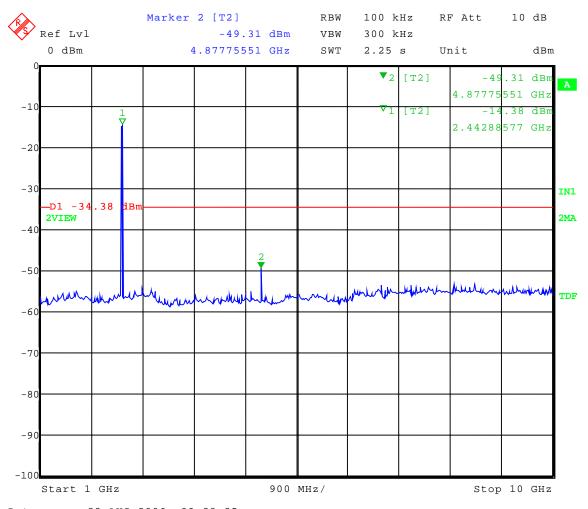
Operator: Craig Brandt

Comment: Middle Channel Transmit = 2.440 GHz

Frequency Range: 1 to 10 GHz

Limit = -34.38 dBm

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



Date: 23.AUG.2006 09:28:25



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

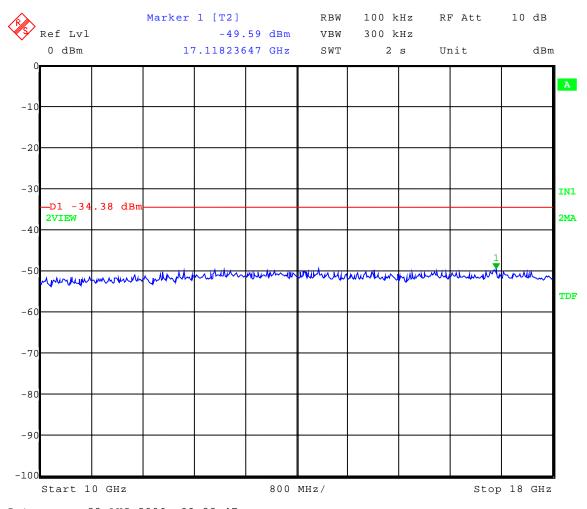
Operator: Craig Brandt

Comment: Middle Channel Transmit = 2.440 GHz

Frequency Range: 10 to 18 GHz

Limit = -34.38 dBm

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



Date: 23.AUG.2006 09:32:47



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

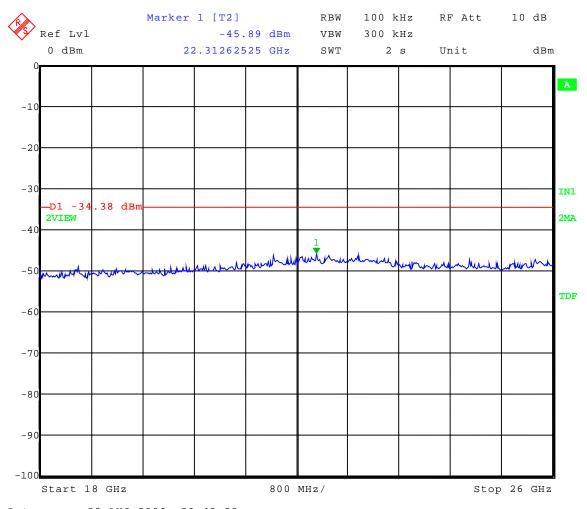
Operator: Craig Brandt

Comment: Middle Channel Transmit = 2.440 GHz

Frequency Range: 18 to 26 GHz

Limit = -34.38 dBm

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



Date: 23.AUG.2006 09:43:38



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

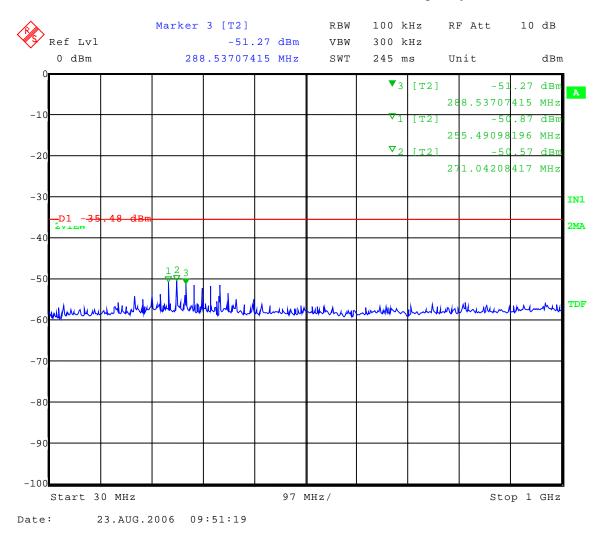
Operator: Craig Brandt

Comment: High Channel Transmit = 2.480 GHz

Frequency Range: 30 to 1000 MHz

Limit = -35.48 dBm

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





Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

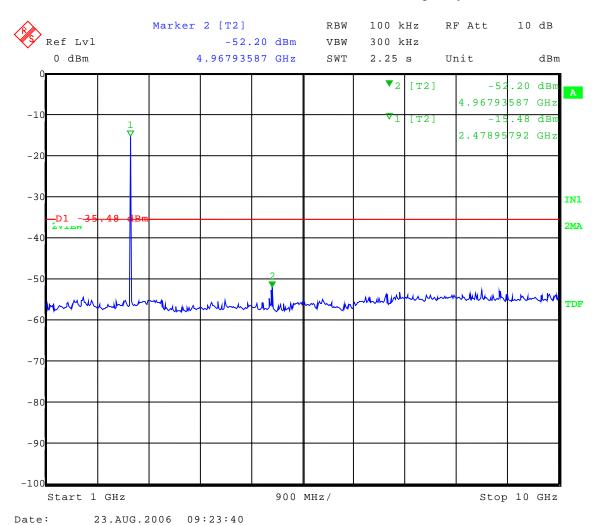
Operator: Craig Brandt

Comment: High Channel Transmit = 2.480 GHz

Frequency Range: 1 to 10 GHz

Limit = -35.48 dBm

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





Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

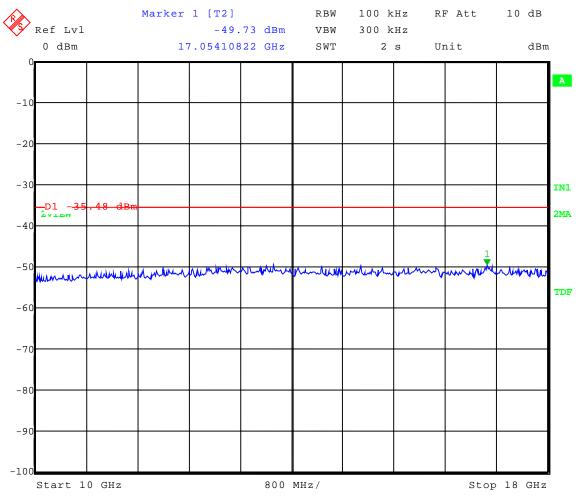
Operator: Craig Brandt

Comment: High Channel Transmit = 2.480 GHz

Frequency Range: 10 to 18 GHz

Limit = -35.48 dBm

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



Date: 23.AUG.2006 09:34:03



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Spurious Emissions - Conducted

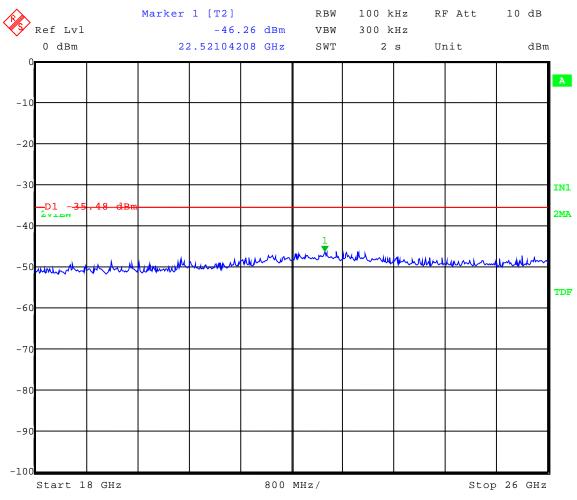
Operator: Craig Brandt

Comment: High Channel Transmit = 2.480 GHz

Frequency Range: 18 to 26 GHz

Limit = -35.48 dBm

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



Date: 23.AUG.2006 09:45:12



RF Technologies, Inc. 0800-0288 Company:

Model Tested: Report Number: 12553

APPENDIX A

3.0 CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING





Model Tested: 0800-0288 Report Number: 12553

APPENDIX A

4.0 RESTRICTED BANDS

As stated in Section 15.205a, the fundamental emission from the Help Alert Pendant shall not fall within any of the bands listed below:

Frequency	Frequency	Frequency	Frequency
in MHz	in MHz	in MHz	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 and HP Spectrum Analyzer will typically lay 20 dB below the limit.

5.0 BAND EDGE AND RESTRICT BAND 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 Band Edge and Restrict Band:



Model Tested: 0800-0288 Report Number: 12553

DATA AND GRAPH(S) TAKEN SHOWING

THE BAND EDGE COMPLIANCE

PART 15.247(c)



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

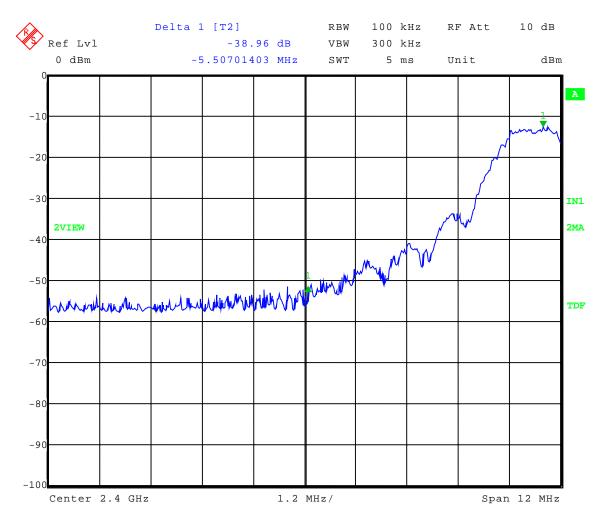
Test: Low Band-Edge Compliance - Conducted

Operator: Craig Brandt

Comment: Low Channel: Frequency – 2.405 GHz

Band-Edge Frequency = 2.4 GHz

Band-Edge > 20 dB Below Peak In-Band Emission



Date: 14.AUG.2006 15:36:01



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-23-2006 Company: RF Technologies

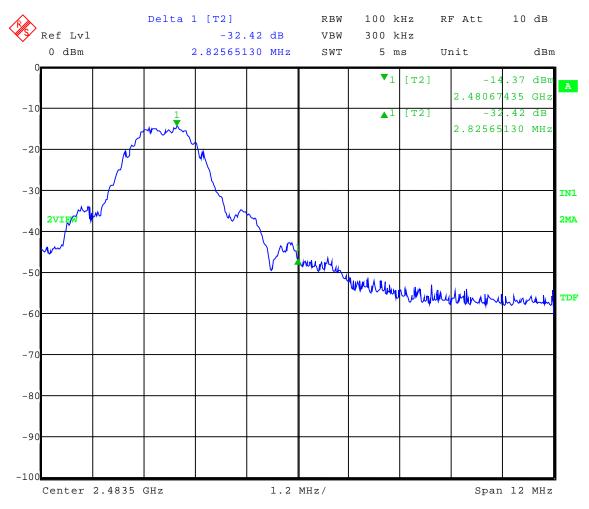
EUT: Pendant Transmitter Chipcon Model: 0800-0288
Test: Upper Band-Edge Compliance - Conducted

Operator: Craig Brandt

Comment: High Channel: Frequency – 2.480 GHz

Band-Edge Frequency = 2.4835 GHz

Band-Edge > 20 dB Below Peak In-Band Emission



Date: 23.AUG.2006 09:01:40



Model Tested: 0800-0288 Report Number: 12553

DATA AND GRAPH(S) TAKEN SHOWING

THE RESTRICT BAND COMPLIANCE

PART 15.247(c)



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Radiated Spurious Emissions in Restricted Bands

Tested at a 3 Meter Distance

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Manufacturer: RF Technologies **Operating Condition:** 72 deg F; 60% R.H.

Test Site: Site 3 **Operator:** Jason L

Test Specification: FCC Part 15.247(d) and FCC Part 15.205

Comment: Continuous Transmit

Date: 08/17/2006

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 restricted band emissions at least 20 dB under the limit.

Channel 11:

Frequency	Measurement	Ant.	Level	Antenna	System	Total	Duty Cycle	Final	Limit	Margin	Comment
	Type	Pol.		Factor	Loss	Level	Correction	Corrected			
(GHz)			(dBuV)	(dB/m)	(dB)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
4.81	Average	Vert	56.22	33.32	-34.4	55.14	28.2	26.94	54	27.06	Res. Band
4.81	Max Peak	Vert	56.22	33.32	-34.4	55.14	-	55.14	74	18.86	Res. Band
4.81	Average	Horz	55.59	33.32	-34.4	54.51	28.2	26.31	54	27.69	Res. Band
4.81	Max Peak	Horz	55.59	33.32	-34.4	54.51	-	54.51	74	19.49	Res. Band



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Radiated Spurious Emissions in Restricted Bands

Tested at a 3 Meter Distance

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Manufacturer: RF Technologies **Operating Condition:** 72 deg F; 60% R.H.

Test Site: Site 3 **Operator:** Jason L

Test Specification: FCC Part 15.247(d) and FCC Part 15.205

Comment: Continuous Transmit

Date: 08/17/2006

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 restricted band emissions at least 20 dB under the limit.

Channel 18:

Frequency	Measurement	Ant.	Level	Antenna	System	Total	Duty Cycle	Final	Limit	Margin	Comment
	Type	Pol.		Factor	Loss	Level	Correction	Corrected			
(GHz)			(dBuV)	(dB/m)	(dB)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
4.88	Average	Vert	58.68	33.46	-34.1	58.04	28.2	29.84	54	24.16	Res. Band
4.88	Max Peak	Vert	58.68	33.46	-34.1	58.04	Ī	58.04	74	15.96	Res. Band
4.88	Average	Horz	57.25	33.46	-34.1	56.61	28.2	28.41	54	25.59	Res. Band
4.88	Max Peak	Horz	57.25	33.46	-34.1	56.61	Ī	56.61	74	17.39	Res. Band



RF Technologies, Inc. Company:

Model Tested: 0800-0288 Report Number: 12553

Radiated Spurious Emissions in Restricted Bands

Tested at a 3 Meter Distance

1250 Peterson Dr., Wheeling, IL 60090

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Manufacturer: RF Technologies **Operating Condition:** 72 deg F; 60% R.H.

Test Site: Site 3 **Operator:** Jason L

Test Specification: FCC Part 15.247(d) and FCC Part 15.205

Comment: Continuous Transmit

Date: 08/17/2006

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 restricted band emissions at least 20 dB under the limit.

Channel 26:

Frequency	Measurement	Ant.	Level	Antenna	System	Total	Duty Cycle	Final	Limit	Margin	Comment
	Type	Pol.		Factor	Loss	Level	Correction	Corrected			
(GHz)			(dBuV)	(dB/m)	(dB)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
4.96	Average	Vert	58.31	33.62	-34.0	57.93	28.2	29.73	54	24.27	Res. Band
4.96	Max Peak	Vert	58.31	33.62	-34.0	57.93	-	57.93	74	16.07	Res. Band
4.96	Average	Horz	57.35	33.62	-34.0	56.97	28.2	28.77	54	25.23	Res. Band
4.96	Max Peak	Horz	57.35	33.62	-34.0	56.97	-	56.97	74	17.03	Res. Band



Model Tested: 0800-0288 Report Number: 12553

DATA AND GRAPH(S) TAKEN SHOWING

THE RADIATED UPPER BAND EDGE

PART 15.247(c)



Company: RF Technologies, Inc.

Model Tested: 0800-0288 Report Number: 12553

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

			Duty	Delta-	Band-Edge		
Frequency	Antenna Polarity	Fundamental Field	Cycle	Marker	Field	Limit	Margin
(MHz)	(H/V)	Strength (dBµV/m)	Correction	(dB)	Strength	$(dB\mu V/m)$	(dB)
	(11/1)		(dB)		$(dB\mu V/m)$		
2480 (Peak)	Н	88.22	N/A	34.48	53.74	74	20.26
2480 (Avg)	Н	88.22	28.2	34.48	25.54	54	28.46



Model Tested: 0800-0288 Report Number: 12553

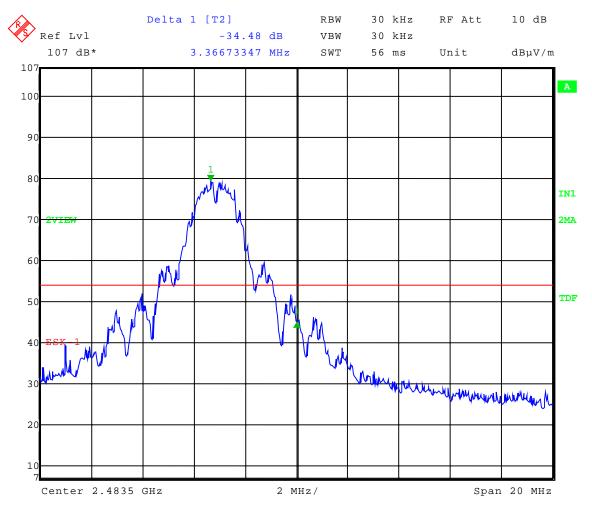
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-23-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288
Test: Upper Band-Edge Radiated – Marker Delta Method

Operator: Craig Brandt

Comment: High Channel: Frequency – 2.480 GHz



Date: 23.AUG.2006 11:59:25



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

6.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS

The radiated measurements made at D.L.S. Electronic Systems, Inc., for the Help Alert Pendant, Model Number: 0800-0288, 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 Help Alert Pendant were made up to 26000 MHz, in accordance with Section 15.33a for Intentional Radiators with a fundamental frequency of 2480 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, levels were extrapolated from 10 meters to 3 meters using a linear extrapolation.

All signals in the frequency range of 30 MHz to 2000 MHz were measured with a Biconical Antenna or tuned dipoles and from 200 MHz to 1000 MHz, a Log Periodic or Tuned Dipoles were used. From 1000 MHz to 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. 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.



Model Tested: 0800-0288 Report Number: 12553

6.0 FIELD STRENGTH OF 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 72°F at 60% relative humidity.



Model Tested: 0800-0288 Report Number: 12553

RADIATED DATA AND GRAPH(S) TAKEN FOR

FIELD STRENGTH FUNDAMENTAL AND

SPURIOUS EMISSION MEASUREMENTS

PART 15.247

FCC Class B

Electric Field Strength

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Manufacturer: RF Technologies
Operating Condition: 72 deg. F; 60% R.H.
Test Site: DLS O.F. Site 3

Operator: Jason L

Test Specification: Continuous Transmit and continuous Receive modes

Comment: Low, mid, and high channels

Date: 08-17-2006

TEXT: "Site 3 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz

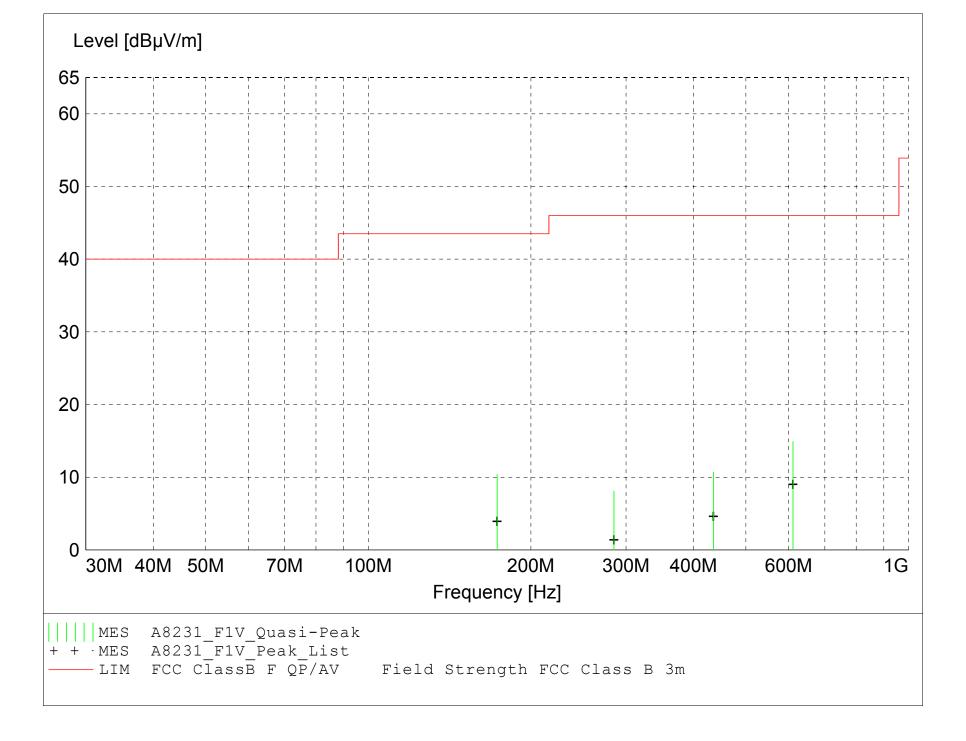
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/005

Antennas ---

Biconical -- EMCO 3104C SN: 9701-4785 Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EUT Measured at 3 Meters with VERTICAL Antenna Polarization



MEASUREMENT RESULT: "A8231_F1V_Final"

8/23/2006 12:	45PM									
Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
		Factor	Loss	Level			Ant.	Angle	Detector	
MHz	dΒμV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
611.300000	16.30	18.89	-20.3	14.9	46.0	31.1	1.00	0	OHACT DEAK	Noise Floor
								U	~	
173.200000	18.22	14.84	-22.7	10.4	43.5	33.1	1.00	0	QUASI-PEAK	Noise Floor
435.380000	15.89	15.89	-21.1	10.7	46.0	35.3	1.00	0	QUASI-PEAK	Noise Floor
285.020000	16.86	13.12	-21.9	8.1	46.0	37.9	1.00	0	QUASI-PEAK	Noise Floor

FCC Class B

Electric Field Strength

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Manufacturer: RF Technologies
Operating Condition: 72 deg. F; 60% R.H.
Test Site: DLS O.F. Site 3

Operator: Jason L

Test Specification: Continuous Transmit and continuous Receive modes

Comment: Low, mid, and high channels

Date: 08-17-2006

TEXT: "Site 3 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz

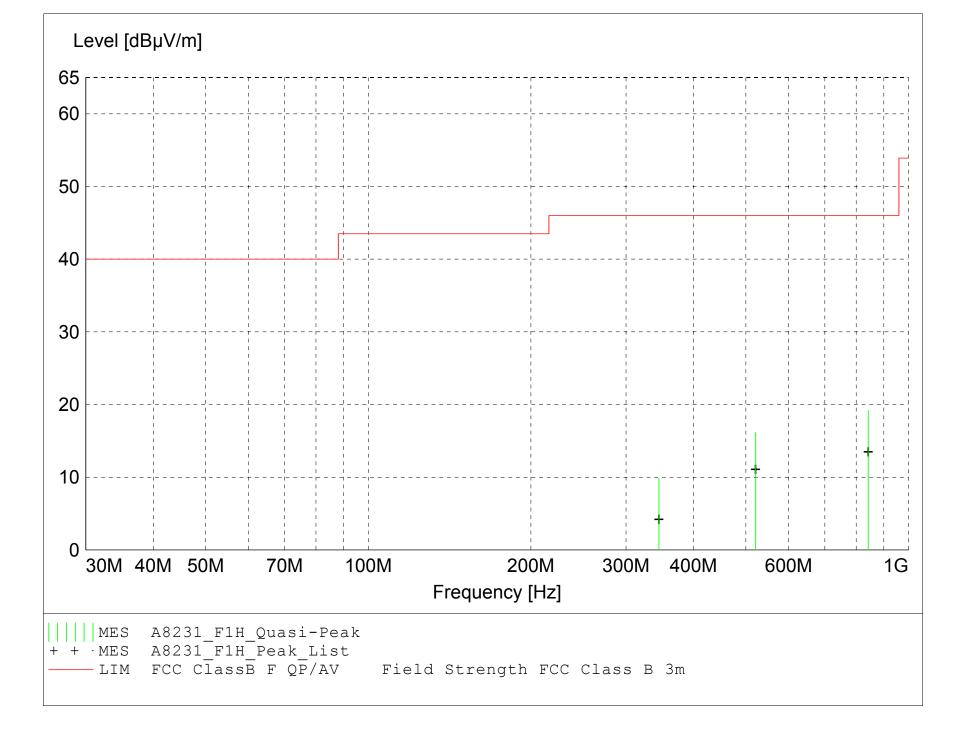
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/005

Antennas ---

Biconical -- EMCO 3104C SN: 9701-4785 Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization



${\tt MEASUREMENT~RESULT:~"A8231_F1H_Final"}$

8/23	/2006 12 : 4	49PM									
F	requency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
			Factor	Loss	Level			Ant.	Angle	Detector	
	MHz	dΒμV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
841	1.940000	16.12	22.03	-18.9	19.2	46.0	26.8	2.60	0	OUASI-PEAK	Noise Floor
52	1.180000	18.92	17.95	-20.7	16.1	46.0	29.9	2.60	0	QUASI-PEAK	Noise Floor
34.	5.080000	16.80	14.49	-21.4	9.8	46.0	36.2	3.00	0	QUASI-PEAK	Noise Floor



Company: RF Technologies, Inc.

Model Tested: 0800-0288 Report Number: 12553

DLS Electronic Systems, Inc.

Company: RF Technologies

Operator: Jason L

Date of test: 08-17-2006 Temperature: 72 deg. F Humidity: 60% R.H.

EIRP - Substitution Method

Model: Pend	lant Transr	nitter Chip	con Mode	el: 0800-028	38			
Channel: 11								
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)	Signal Gen.	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2405 vertical	93.33	-10.91	2.91	9.54	-4.28	30.00	34.28	0.37
2405 horizontal	98.82	-7.93	2.91	9.54	-1.30	30.00	31.30	0.74

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])



Company: RF Technologies, Inc.

Model Tested: 0800-0288 Report Number: 12553

DLS Electronic Systems, Inc.

Company: RF Technologies

Operator: Jason L

Date of test: 08-17-2006 Temperature: 72 deg. F Humidity: 60% R.H.

EIRP - Substitution Method

T			LIM	- Substitutio	ii iviculou			
Model: Pend	lant Transı	nitter Chip	con Mod	el: 0800-028	88			
Channel: 18								
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)	Signal Gen.	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2440 vertical	92.32	-12.13	2.93	9.60	-5.46	30.00	35.46	0.28
2440 horizontal	98.43	-8.13	2.93	9.60	-1.46	30.00	31.46	0.71

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])



Company: RF Technologies, Inc.

Model Tested: 0800-0288 Report Number: 12553

DLS Electronic Systems, Inc.

Company: RF Technologies

Operator: Jason L

Date of test: 08-17-2006 Temperature: 72 deg. F Humidity: 60% R.H.

EIRP - Substitution Method

Model: Pend	lant Transr	nitter Chip	con Mode	el: 0800-028	38			
Channel: 26								
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)	Signal Gen.	Gain of subst. antenna (dBi)	Strength of emission [EIRP] (dBm)	Limit (dBm)	Margin (dB)	Strength of emission [EIRP] (mW)
2480 vertical	93.42	-11.21	2.96	9.68	-4.49	30.00	34.49	0.36
2480 horizontal	94.93	-10.03	2.96	9.68	-3.31	30.00	33.31	0.47

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])



Model Tested: 0800-0288 Report Number: 12553

6 dB BANDWIDTH GRAPHS

PART 15.247



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

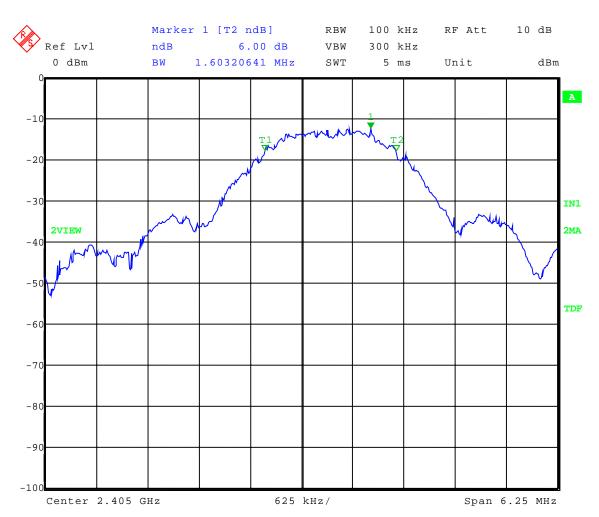
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: 6 dB Bandwidth - Conducted

Operator: Craig Brandt

Comment: Low Channel: Frequency – 2.405 GHz

6 dB Bandwidth = 1.60 MHz



Date: 14.AUG.2006 15:27:34



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

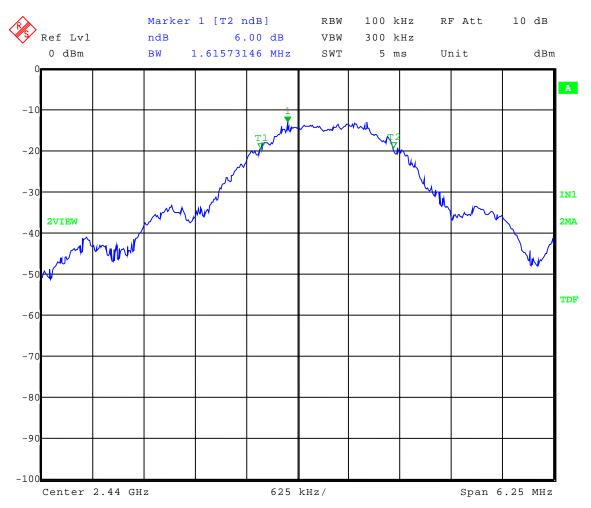
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: 6 dB Bandwidth - Conducted

Operator: Craig Brandt

Comment: Middle Channel: Frequency – 2.440 GHz

6 dB Bandwidth = 1.62 MHz



Date: 14.AUG.2006 16:06:43



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-23-2006 Company: RF Technologies

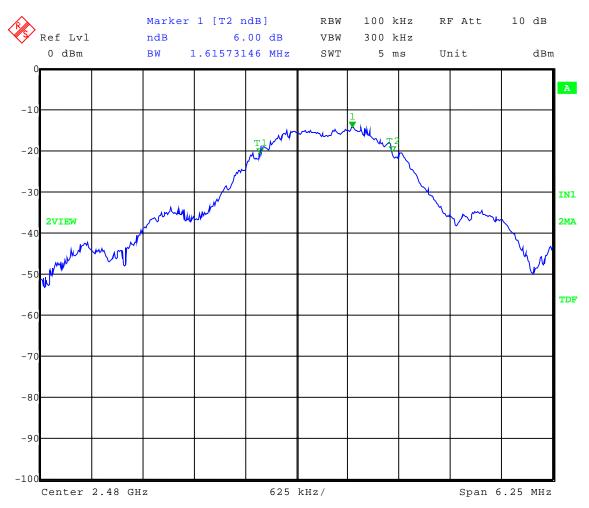
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: 6 dB Bandwidth - Conducted

Operator: Craig Brandt

Comment: High Channel: Frequency – 2.480 GHz

6 dB Bandwidth = 1.62 MHz



Date: 23.AUG.2006 08:56:48



Model Tested: 0800-0288 Report Number: 12553

PEAK POWER SPECTRAL DENSITY GRAPH(S)

PART 15.247



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

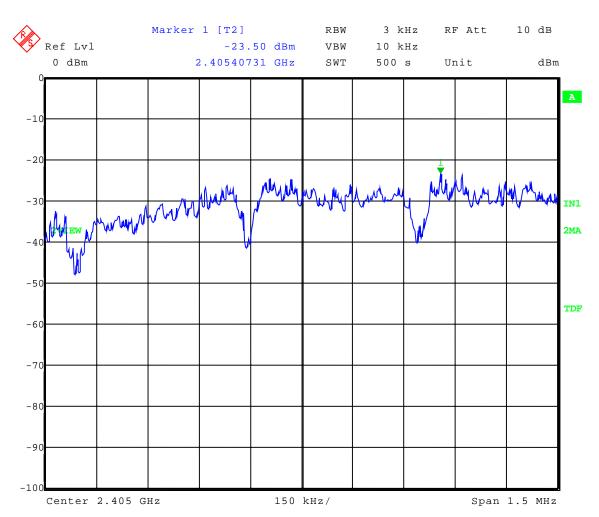
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Peak Power Spectral Density - Conducted

Operator: Craig Brandt

Comment: Low Channel: Frequency – 2.405 GHz

3 kHz Bandwidth = -23.50 dBm



Date: 14.AUG.2006 15:46:14



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

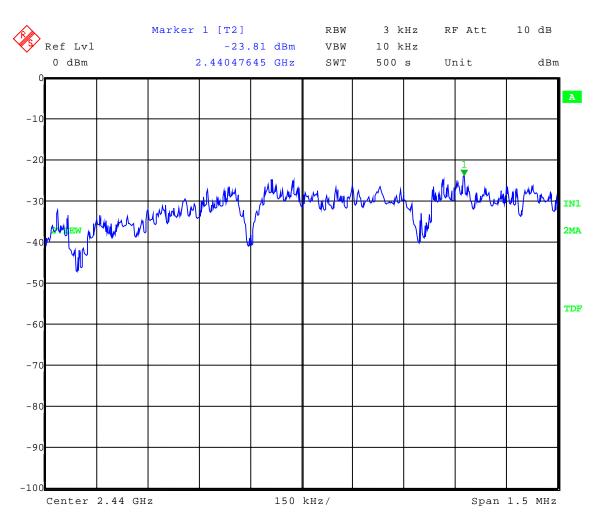
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Peak Power Spectral Density - Conducted

Operator: Craig Brandt

Comment: Middle Channel: Frequency – 2.440 GHz

3 kHz Bandwidth = -23.81 dBm



Date: 14.AUG.2006 16:01:49



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-23-2006 Company: RF Technologies

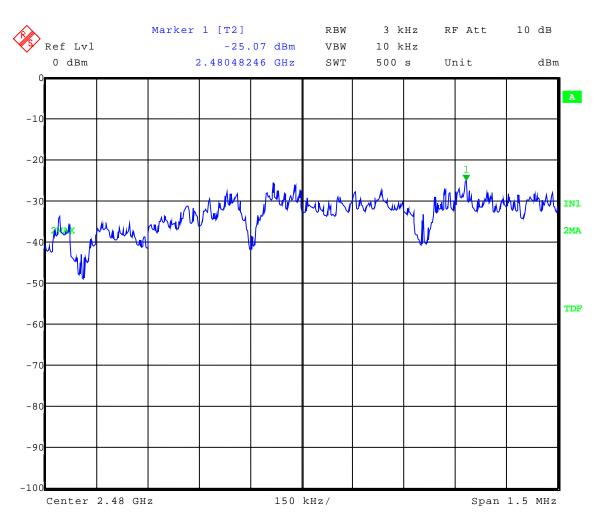
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Peak Power Spectral Density - Conducted

Operator: Craig Brandt

Comment: High Channel: Frequency – 2.480 GHz

3 kHz Bandwidth = -25.07 dBm



Date: 23.AUG.2006 09:18:09



Model Tested: 0800-0288 Report Number: 12553

NUMBER OF IEEE 802.15.4 ZIGBEE FREQUENCIES

PART 15.247



Company: RF Technologies, Inc.

Model Tested: 0800-0288 Report Number: 12553

RFTECHNOLOGIESTM

3125 N. 126th St. Brookfield, WI 53005 1-800-669-9946 Ph: 262-790-1771

Fx: 262-790-1784 info@rft.com www.rft.com

Product Name: Reset Required Universal Transmitter

Owner: RF Technologies, Inc.

Owner Model Number: 0800-0304

FCC ID Number: KXU-UNVFSZ24 Canadian ID Number: 2719A-UNVFSZ24

List of 16 frequencies (channels) used by the RF Technologies Universal Transmitter.

All Zigbee radios use IEEE 802.15.4, which specifies the 16 channels to use. They start at 2405 MHz and are separated by 5 MHz. Therefore the channels are as follows:

2480

2405



Model Tested: 0800-0288 Report Number: 12553

TIME OF OCCUPANCY GRAPHS

PART 15.247



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Duty Cycle – maximum duty cycle during normal operation

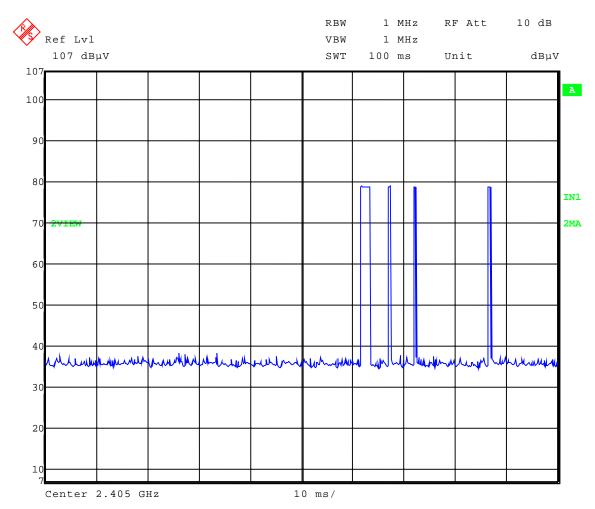
Operator: Craig Brandt

Comment: Small Pulse $-1 \times 440.882 \mu s = 0.440882 ms$

Medium Pulse $-2 \times 681.363 \mu s = 1.362726 ms$ Large Pulse $-1 \times 2.084168 ms = 2.084168 ms$ Total on Time = 3.89 ms during 100 ms Sweep

 $20 \log (3.89/100) = 28.2$

Duty Cycle Correction Factor = 28.2 dB



Date: 14.AUG.2006 14:50:38



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

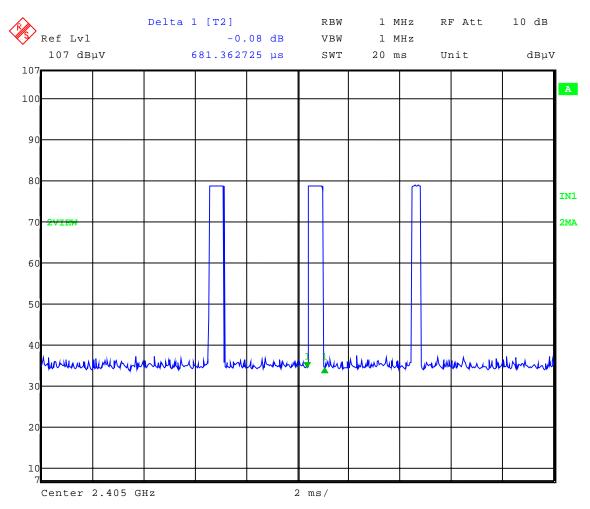
Test Date: 08-14-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Duty Cycle – maximum duty cycle during normal operation

Operator: Craig Brandt

Comment: Medium Pulse On Time



Date: 14.AUG.2006 14:52:47



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

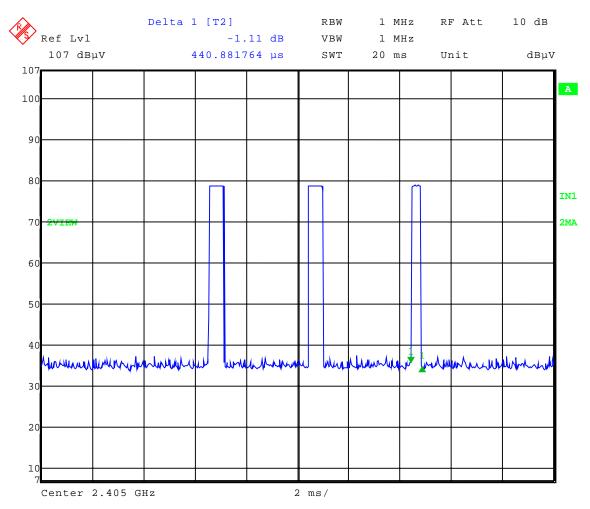
Test Date: 08-14-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Duty Cycle – maximum duty cycle during normal operation

Operator: Craig Brandt

Comment: Small Pulse On Time



Date: 14.AUG.2006 14:53:33



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

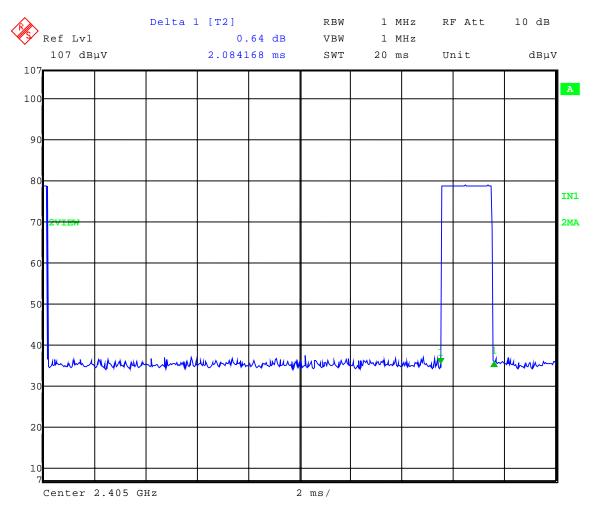
Test Date: 08-14-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Duty Cycle – maximum duty cycle during normal operation

Operator: Craig Brandt

Comment: Large Pulse On Time



Date: 14.AUG.2006 14:54:28



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

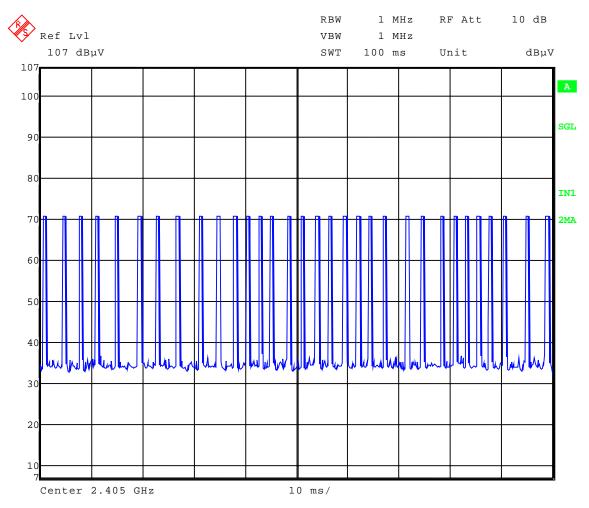
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Duty Cycle – duty cycle of TEST UNIT

Operator: Craig Brandt

Comment: Pulse: $32 \times 691.383 \, \mu s = 22.124 \, ms$

Duty cycle during testing = 22%



Date: 14.AUG.2006 13:48:08



Model Tested: 0800-0288 Report Number: 12553

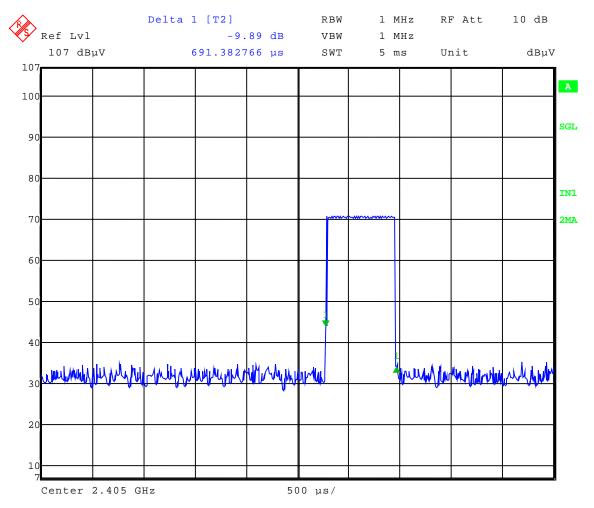
1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Duty Cycle – duty cycle of TEST UNIT

Operator: Craig Brandt
Comment: Pulse On Time



Date: 14.AUG.2006 13:49:56



Model Tested: 0800-0288 Report Number: 12553

CONDUCTED PEAK OUTPUT POWER GRAPHS

PART 15.247



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

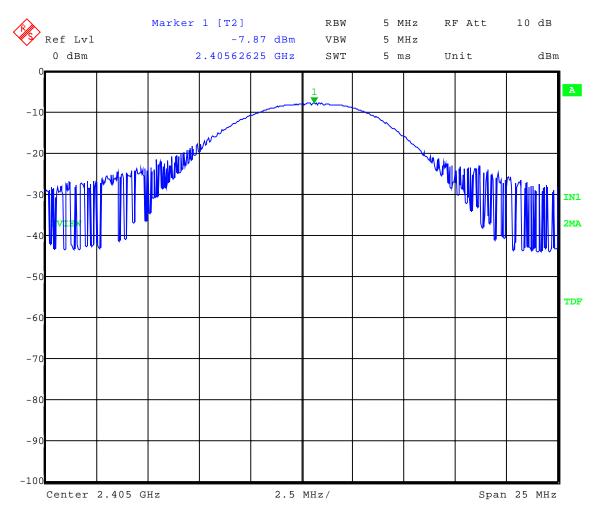
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Peak Power Output - Conducted

Operator: Craig Brandt

Comment: Low Channel: Frequency – 2.405 GHz

Peak Output Power = -7.87 dBm = 0.16 mW



Date: 14.AUG.2006 15:25:22



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-14-2006 Company: RF Technologies

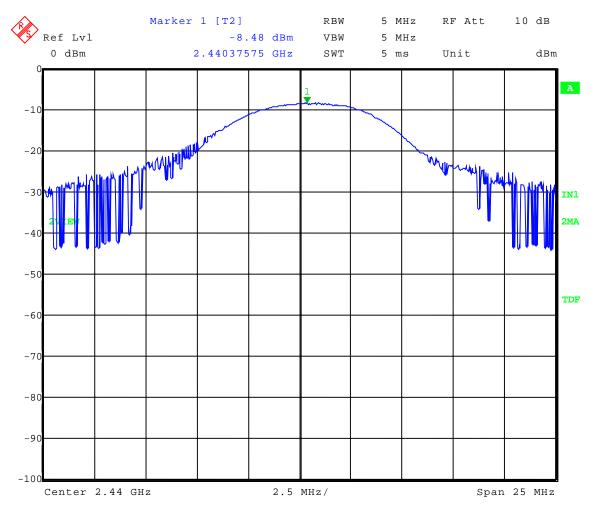
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Peak Power Output - Conducted

Operator: Craig Brandt

Comment: Middle Channel: Frequency – 2.440 GHz

Peak Output Power = -8.48 dBm = 0.14 mW



Date: 14.AUG.2006 16:04:05



Model Tested: 0800-0288 Report Number: 12553

1250 Peterson Dr., Wheeling, IL 60090

Test Date: 08-23-2006 Company: RF Technologies

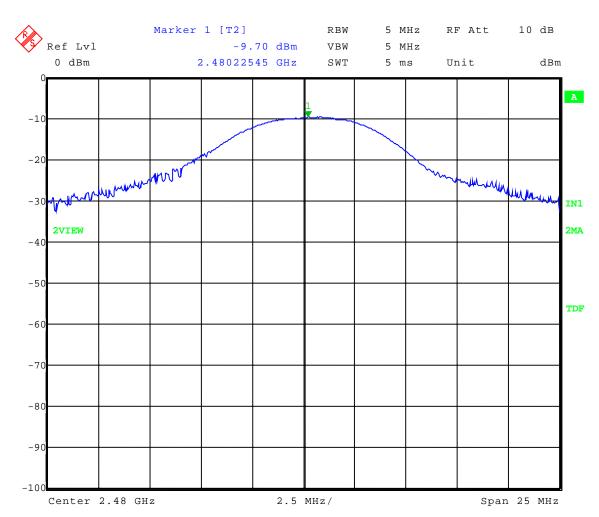
EUT: Pendant Transmitter Chipcon Model: 0800-0288

Test: Peak Power Output - Conducted

Operator: Craig Brandt

Comment: High Channel: Frequency – 2.480 GHz

Peak Output Power = -9.70 dBm = 0.11 mW



Date: 23.AUG.2006 09:06:10