



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Code of Federal Regulations 47 Part 15 – Radio Frequency Devices

Subpart C – Intentional Radiators

Section 15.247

Operation within the bands 902 - 928 MHz,
2400 - 2483.5 MHz, 5725 - 5875 MHz,
and 24.0 - 24.25 GHz.

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name: Code Alert CA630

Kind of Equipment: 802.15.4 Transceiver

Frequency Range: 2405-2475 MHz

Test Configuration: Table Top, with sensor pad and nurse call

Model Number(s): 0800-0491

Model(s) Tested: 0800-0491, project name "Sensatec CA630" during testing

Serial Number(s): RF Conducted: Prototype device #2
Radiated: Prototype device #1
Duty cycle correction: Prototype device #3

Date of Tests: April 8th through 10th, 2013

Test Conducted For: RF Technologies, Incorporated
3125 N 126th Street
Brookfield, WI 53005, USA

NOTICE: "This test report relates only to the items tested and must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government". Please see the "Description of Test Sample" page listed inside of this report.

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Company:
Model Tested:
Report Number:
DLS Project:

RF Technologies, Inc.
0800-0491
18925
5788

SIGNATURE PAGE

Tested By:

A handwritten signature in black ink that reads "Craig Brandt". The signature is written in a cursive style with a long horizontal stroke at the end.

Craig Brandt
Test Engineer

Reviewed By:

A handwritten signature in black ink that reads "William Stumpf". The signature is written in a cursive style with a long horizontal stroke at the end.

William Stumpf
OATS Manager

Approved By:

A handwritten signature in black ink that reads "Brian J. Mattson". The signature is written in a cursive style with a long horizontal stroke at the end.

Brian Mattson
General Manager



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Report Number: 18925
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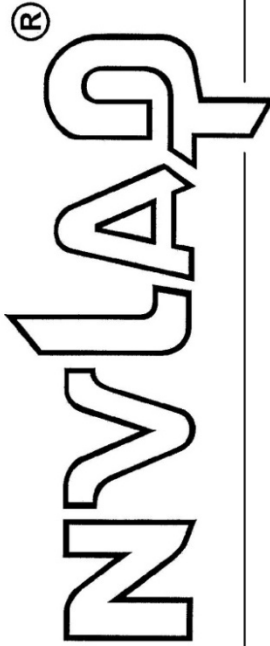
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United States Department of Commerce
National Institute of Standards and Technology



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-IAC-IAF Communiqué dated January 2009).*



For the National Institute of Standards and Technology

2012-10-01 through 2013-09-30

Effective dates

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



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1.0 Summary of Test Report

It was determined that the RF Technologies, Inc. Code Alert CA630 model 0800-0491, complies with the requirements of CFR 47 Part 15 Subpart C Section 15.247.

Subpart C Section 15.247 Applicable Technical Requirements Tested:

Section	Description	Procedure	Note	Compliant?
15.247(a)(2)	6 dB DTS Channel Bandwidth	558074 D01 DTS Meas Guidance v02	1	Yes
15.247(b)(3)	Fundamental Emission Output Power	558074 D01 DTS Meas Guidance v02	1	Yes
15.247(e)	Maximum Power Spectral Density	558074 D01 DTS Meas Guidance v02	1	Yes
15.247(d)	Maximum Unwanted Emission Levels	558074 D01 DTS Meas Guidance v02	1	Yes
15.247(d) 15.35(b) 15.35(c)	Duty Cycle Correction for Pulsed Emissions	558074 D01 DTS Meas Guidance v02 ANSI C63.10-2009	1,4	N/A
15.247(d) 15.205(a) 15.209(a)	Unwanted Emissions into Restricted Frequency Bands – Radiated	558074 D01 DTS Meas Guidance v02	2	Yes
15.247(d)	Band-Edge Measurements – Conducted	558074 D01 DTS Meas Guidance v02	1	Yes
15.247(d) 15.205(a) 15.209(a)	Band-Edge Measurements - Radiated	558074 D01 DTS Meas Guidance v02 & ANSI C63.10-2009	2	Yes
15.207	AC Power-Line Conducted Emissions	ANSI C63.10-2009	3	Yes

Note 1: RF conducted measurement.

Note 2: Radiated emission measurement.

Note 3: AC power line conducted measurement.

Note 4: Informative



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2.0 Introduction

In April 2013, the Code Alert CA630 model 0800-0491, as provided from RF Technologies, Inc. was tested to the requirements of CFR 47 Part 15 Subpart C Section 15.247. To meet these requirements, the procedures contained within this report were performed by personnel of D.L.S Electronic Systems, Inc.

3.0 Test Facilities

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.

Wisconsin Test Facility:

D.L.S. Electronic Systems, Inc.
166 S. Carter Street
Genoa City, Wisconsin 53128

Wheeling Test Facility:

D.L.S. Electronic Systems, Inc.
1250 Peterson Drive
Wheeling, IL 60090

4.0 Description of Test Sample

Description:

The Code Alert CA630 is a device used in hospitals and long-term care facilities to alert staff members when a patient begins to get out of a bed or chair. The device provides a local alarm and also a means of communicating to the alarm remotely.

Type of Equipment / Frequency Range:

Portable / 2405-2475 MHz

Physical Dimensions of Equipment Under Test:

Length: 5 in x Width: 3 in x Height: 1.5 in



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4.0 Description of Test Sample (continued)

Power Source:

120 Volt 60 Hz power adapter, or 9 Volt battery

Internal Frequencies:

450kHz, 16MHz, 2.405GHz, 2.410GHz, 2.415GHz, 2.420GHz, 2.425GHz, 2.430GHz, 2.435GHz, 2.440GHz, 2.445GHz, 2.450GHz, 2.455GHz, 2.460GHz, 2.465GHz, 2.470GHz, 2.475GHz

Transmit / Receive Frequencies Used For Test Purpose:

Low channel: 2405 MHz, Middle channel: 2440 MHz, High channel: 2475 MHz

Type of Modulation(s) / Antenna Type:

O-QPSK / surface mount antenna with 2.1 dBi max gain.

Description of Circuit Board(s) / Part Number:

PCB, CA630 control unit	0200-0169, rev A
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5.0 Test Equipment

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

D.L.S. Wisconsin - G1

Description	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Dates	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	7-23-12	7-23-13
Preamp	Planar	PTB-60-120-5R0-10-115V AC-S	PL13291	1GHz-20GHz	8-13-12	8-13-13
Horn Antenna	EMCO	3115	9502-4451	1-18GHz	3-18-13	3-18-15
Filter- High-Pass	Q-Microwave	100462	1	4.2GHz-18GHz	5-18-12	5-18-13
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18GHz-26GHz	8-13-12	8-13-13
Horn Antenna	EMCO	3116	2549	18 – 40GHz	9-6-12	9-6-14
High Pass Filter	Planar	CL22500-9000-CD-SS	PF1230/0728	15-40 GHz	8-13-12	8-13-13
20 dB attenuator	MCE/Weinschel	5955A-20	0256	DC – 40 GHz	8-13-12	8-13-13

D.L.S. Wisconsin – OATS 2

Description	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Dates	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	1-3-13	1-3-14
Preamplifier	Rohde & Schwarz	TS-PR10	032001/004	9 kHz – 1 GHz	1-10-13	1-10-14
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	9-13-12	9-13-14
Antenna	EMCO	3146	1205	200 MHz – 1 GHz	9-19-12	9-19-14



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5.0 Test Equipment - continued

D.L.S. Wisconsin – Screen Room

Description	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Dates	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	7-23-12	7-23-13
LISN	Solar	9252-50-R-24-BNC	961019	9 kHz – 30 MHz	5-24-12	5-24-13
Filter- High-Pass	SOLAR	7930-10	921541	9 kHz – 30 MHz	1-7-13	1-7-14
Filter- High-Pass	SOLAR	7930-120	090702	120 kHz – 30 MHz	1-7-13	1-7-14
Limiter	Electro-Metrics	EM-7600	706	9 kHz – 30 MHz	1-7-13	1-7-14

6.0 Test Arrangements

Radiated Emissions Measurement Arrangement:

All radiated emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to FCC KDB 558074 D01 DTS Meas Guidance v02, ANSI C63.4-2009 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for additional photos of the test set up.

Unless otherwise noted, the bandwidth of the measuring receiver / analyzer used during testing is shown below.

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

RF Conducted Emissions Measurement Arrangement:

All RF conducted emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to FCC KDB 558074 D01 DTS Meas Guidance v02, ANSI C63.4-2009 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for additional photos of the test set up.



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7.0 Test Conditions

Normal Test Conditions:

Temperature and Humidity:

70°F at 27% RH

Supply Voltage:

120 Volts 60 Hz

8.0 Modifications Made To EUT For Compliance

No modifications made at time of test.

9.0 Additional Descriptions

The EUT is always mounted in the vertical position (hanging from a bed or wheelchair railing).

The EUT was tested with a 120 Volt power adapter and re-checked with 9 Volt battery power.

The EUT was programmed to transmit continuously at Low, Mid, and High channels.

10.0 Results

Measurements were performed in accordance with FCC KDB 558074 D01 DTS Meas Guidance v02, ANSI C63.4-2009 and ANSI C63.10-2009. Graphical and tabular data can be found in Appendix B at the end of this report.

11.0 Conclusion

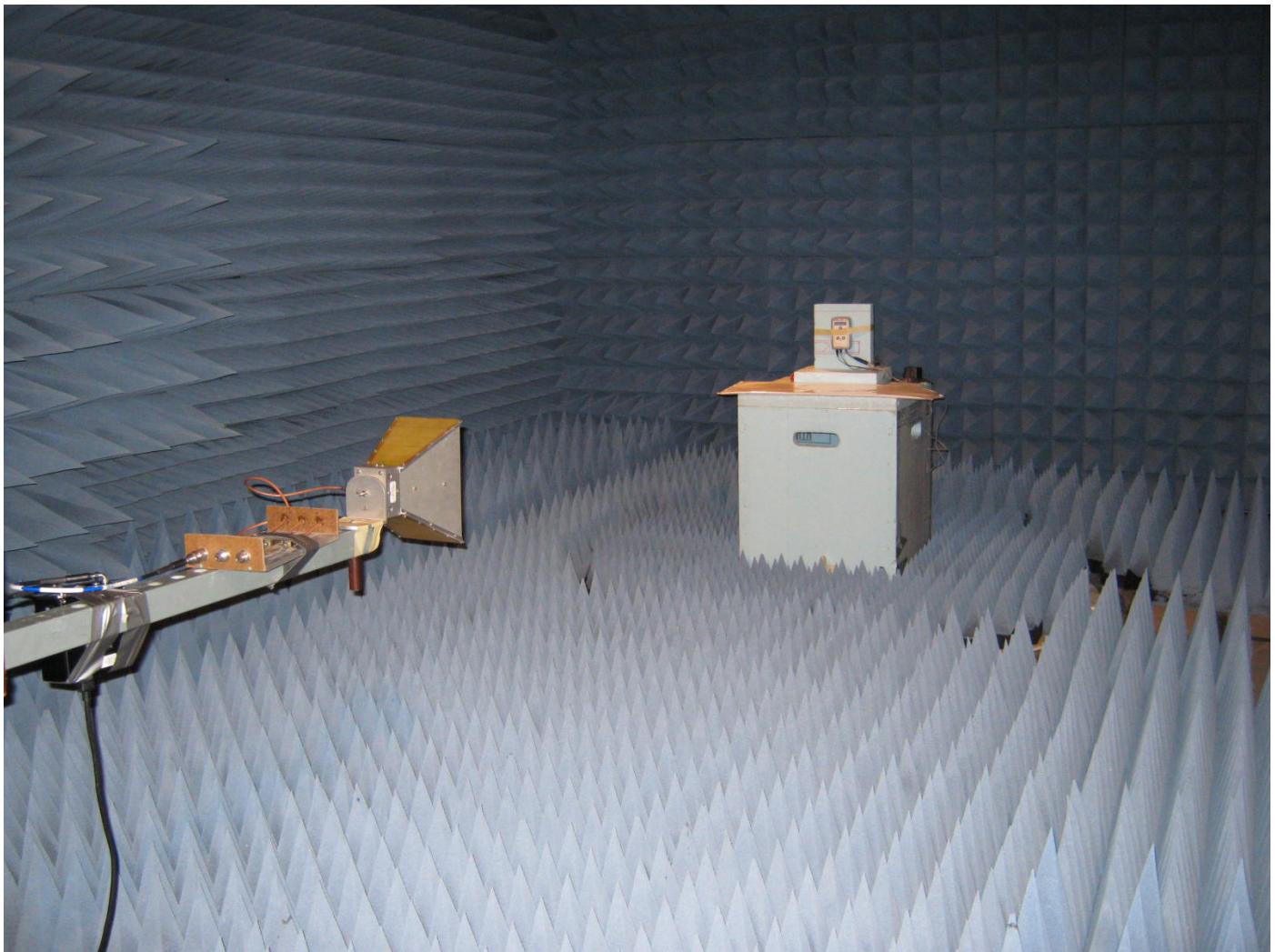
The Code Alert CA630 model 0800-0491, as provided from RF Technologies, Inc., tested in April 2013 **meets** the requirements of CFR 47 Part 15 Subpart C Section 15.247.

Appendix A – Test Photos

Photo Information and Test Setup:

- Item 0: RF Technologies, Inc. Code Alert CA630 model 0800-0491
- Item 1: Sensatec disposable bed sensor pad, part number 1000-1840, serial number 07130000004.
- Item 2: OEM Power Adaptor, model AD-091AG.
- Item 3: UNICALL pneumatic call cord unit, 10 foot, model number 14250.
- Item 4: Non-shielded, 1.5 meter AC power cord.

Radiated Emissions - above 1 GHz



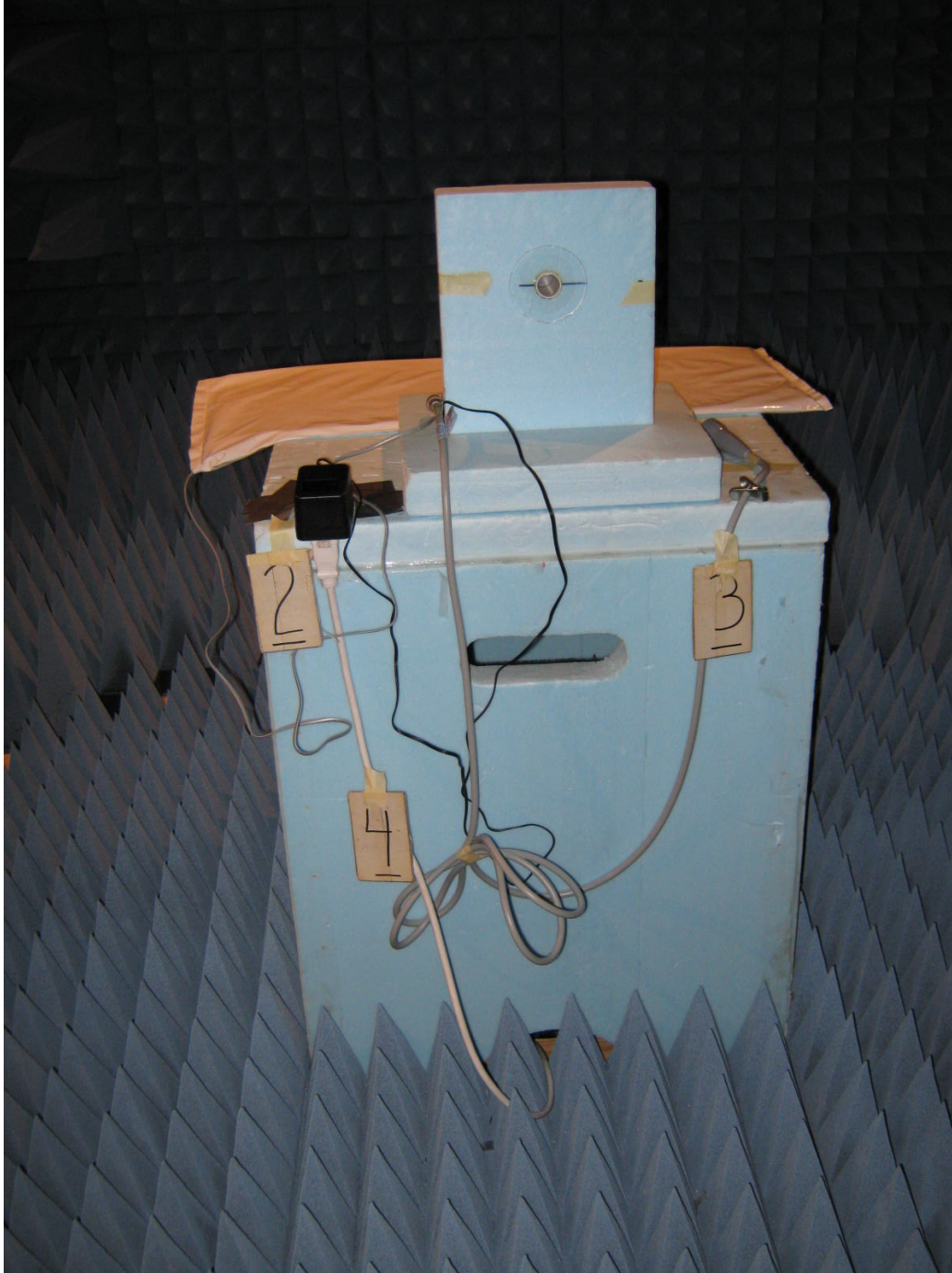
Appendix A – Test Photos

Radiated Emissions - above 1 GHz - front



Appendix A – Test Photos

Radiated Emissions - above 1 GHz - back



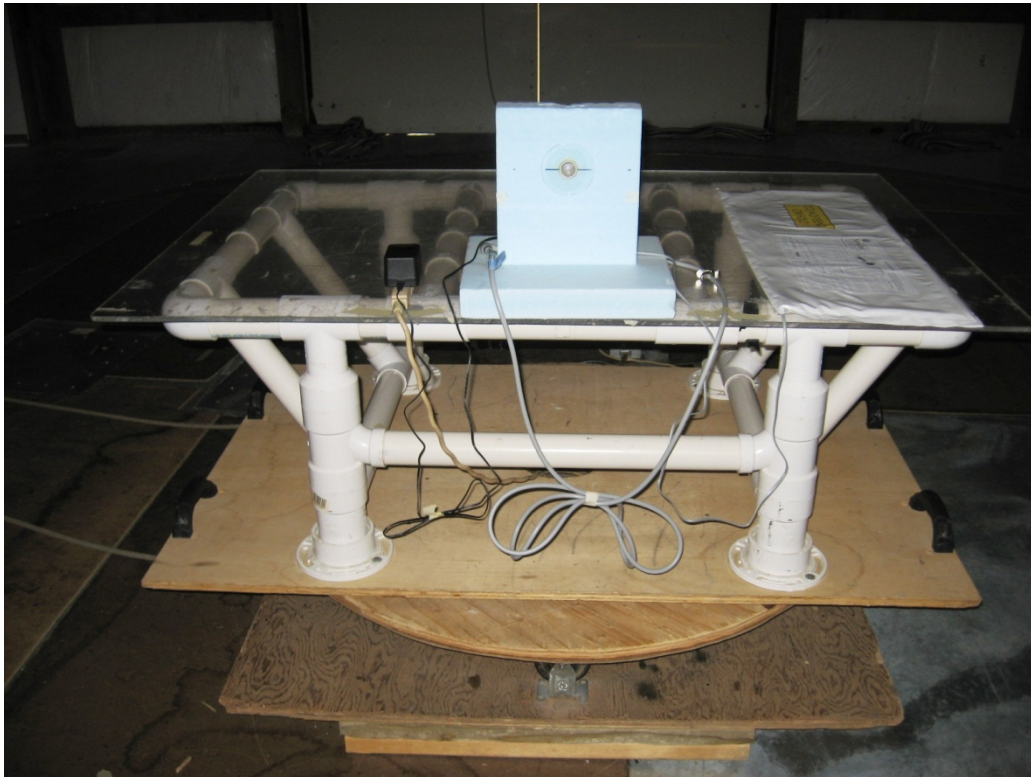
Appendix A – Test Photos

Radiated Emissions - below 1 GHz - front



Appendix A – Test Photos

Radiated Emissions - below 1 GHz - back



Appendix A – Test Photos

RF conducted



Appendix A – Test Photos

AC Line Conducted Emissions





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Appendix B – Measurement Data

1.0 DTS (6 dB) Channel Bandwidth

Rule Part:

Section 15.247 (a) (2)

Test Procedure:

558074 D01 DTS Meas Guidance v02
DTS (6 dB) Channel Bandwidth, Section 7.0
Section 7.1, Option 1

Limit:

6 dB bandwidth shall be at least 500 kHz

Results:

Compliant
Minimum 6 dB bandwidth: **1.55 MHz**
Maximum 6 dB bandwidth: **1.57 MHz**

Notes:

This was an RF conducted measurement. The EUT was connected to the measuring equipment through an SMA connector allowing RF conducted measurements. Cable loss and attenuation was accounted for in the transducer factors set in the analyzer.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.



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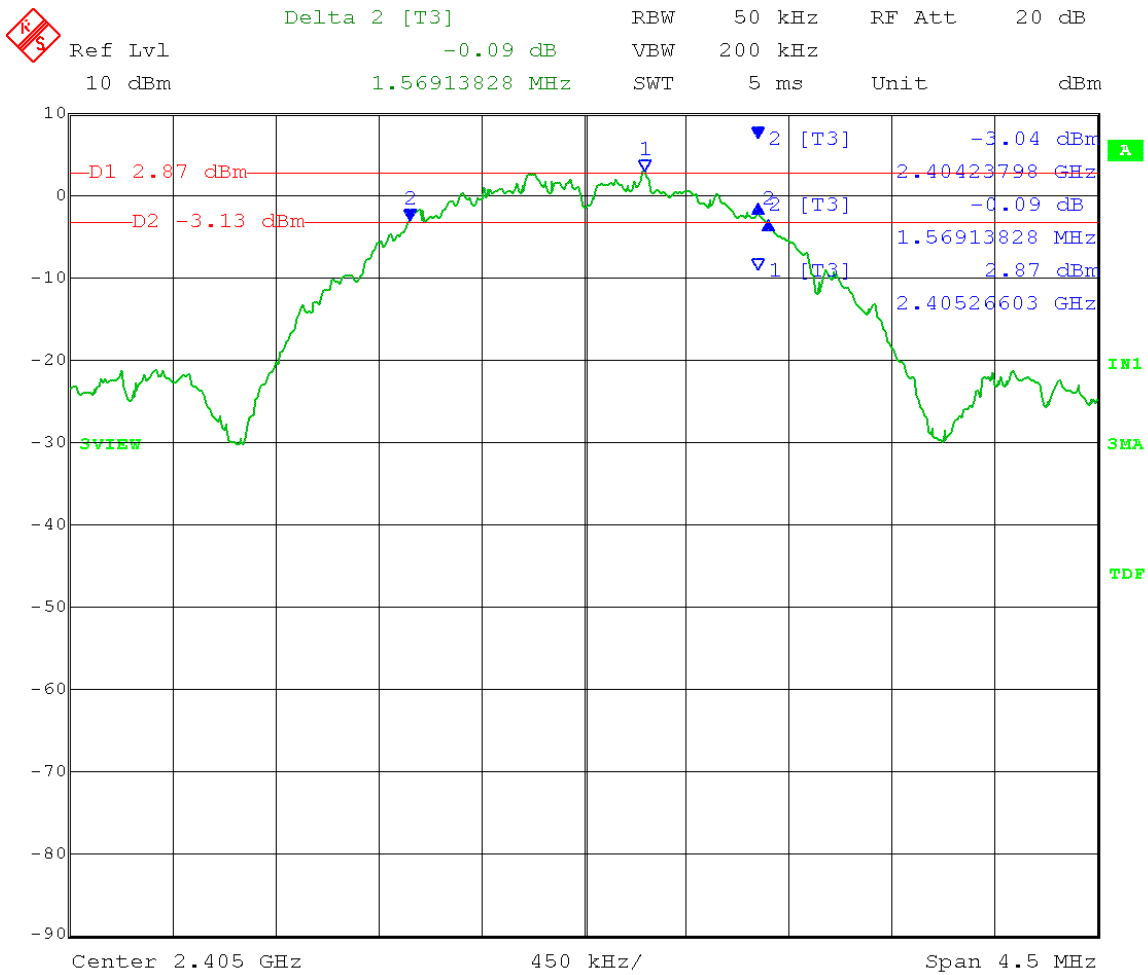
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: DTS (6 dB) Channel Bandwidth - Conducted
Operator: Craig B

Comment: RBW = 1-5% of DTS bandwidth
VBW ≥ 3 x RBW
Detector = Peak
Sweep = auto couple

Comment: **Low Channel: Frequency – 2.405 GHz**

6 dB DTS Bandwidth = 1.57 MHz



Date: 9.APR.2013 10:37:52



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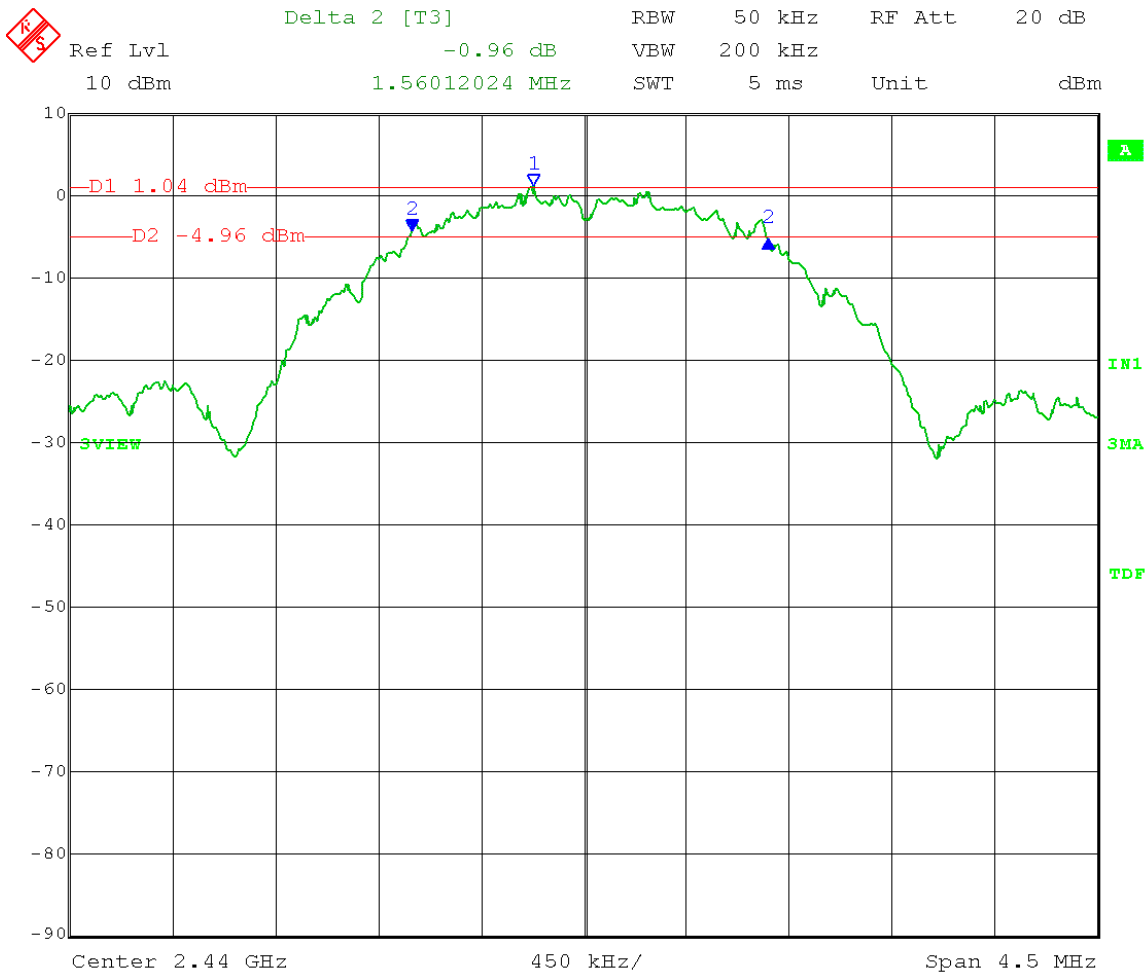
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Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: DTS (6 dB) Channel Bandwidth - Conducted
Operator: Craig B

Comment: RBW = 1-5% of DTS bandwidth
VBW ≥ 3 x RBW
Detector = Peak
Sweep = auto couple

Comment: **Mid Channel: Frequency – 2.440 GHz**

6 dB DTS Bandwidth = 1.56 MHz



Date: 9.APR.2013 10:50:39



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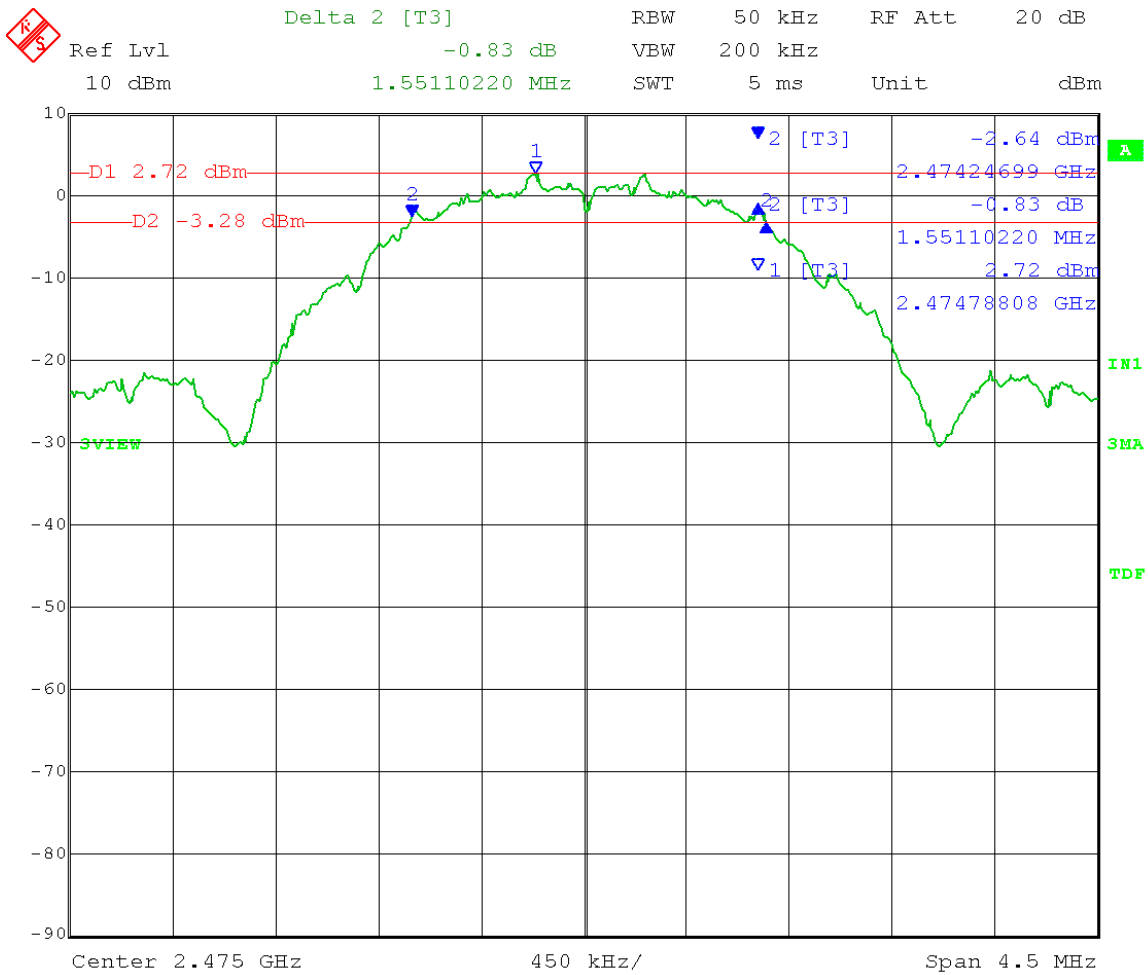
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 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

Test Date: 04-09-2013
 Company: RF Technologies
 EUT: Sensatec CA630
 Test: DTS (6 dB) Channel Bandwidth - Conducted
 Operator: Craig B

Comment: RBW = 1-5% of DTS bandwidth
 VBW ≥ 3 x RBW
 Detector = Peak
 Sweep = auto couple

Comment: High Channel: Frequency – 2.475 GHz

6 dB DTS Bandwidth = 1.55 MHz



Date: 9.APR.2013 10:59:41



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Company: RF Technologies, Inc.
Model Tested: 0800-0491
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Appendix B

2.0 Fundamental Emission Output Power

Rule Part:

15.247 (b) (3)

Test Procedure:

558074 D01 DTS Meas Guidance v02
8.1 Maximum Peak Conducted Output Power
8.1.1 Option 1 (RBW \geq DTS BW)

Limit:

The maximum peak conducted output power is 1 watt (30 dBm).

Results:

Compliant
Maximum peak conducted output power: **7.20 dBm = 5.25 mW**

Notes:

This was an RF conducted measurement. The EUT was connected to the measuring equipment through an SMA connector allowing RF conducted measurements. Cable loss and attenuation was accounted for in the transducer factors set in the analyzer.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.



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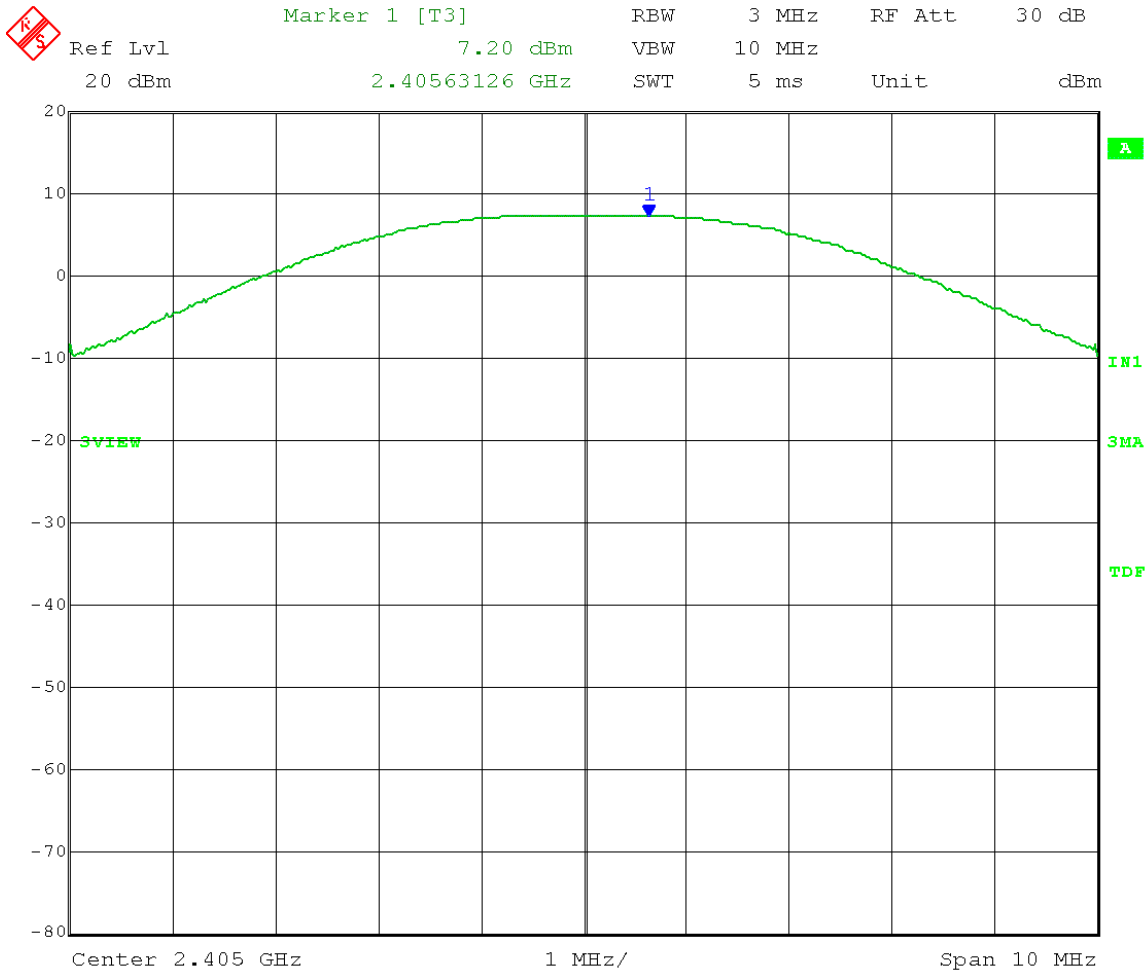
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Fundamental Emission Output Power - Conducted
Operator: Craig B

Comment: RBW ≥ DTS bandwidth
VBW ≥ 3 x RBW
Span ≥ RBW
Sweep = auto couple
Detector = peak
Trace = max hold

Comment: Low Channel: Frequency – 2.405 GHz

Fundamental Emission Output Power = 7.20 dBm = 5.25 mW



Date: 9.APR.2013 12:58:33



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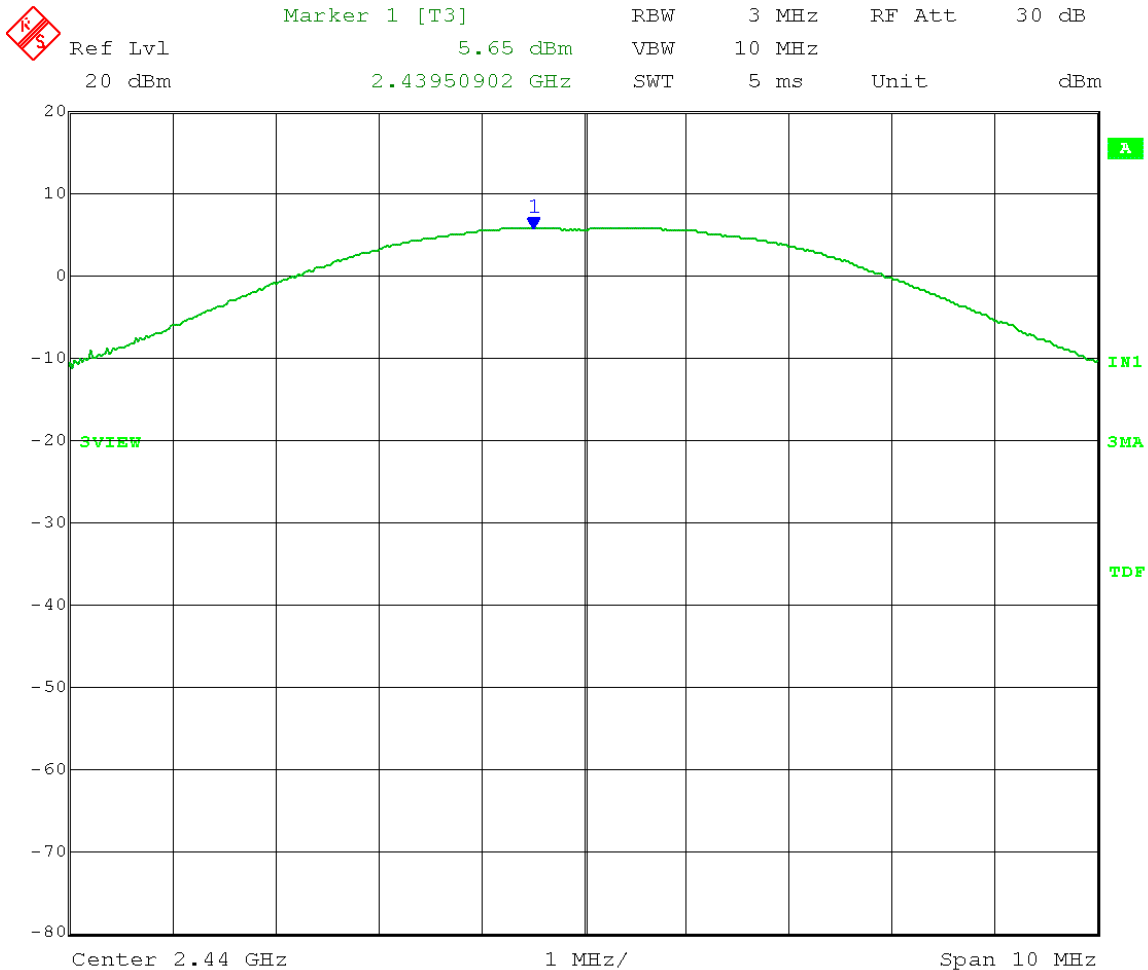
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Fundamental Emission Output Power - Conducted
Operator: Craig B

Comment: RBW ≥ DTS bandwidth
VBW ≥ 3 x RBW
Span ≥ RBW
Sweep = auto couple
Detector = peak
Trace = max hold

Comment: Mid Channel: Frequency – 2.440 GHz

Fundamental Emission Output Power = 5.65 dBm = 3.67 mW



Date: 9.APR.2013 13:01:18



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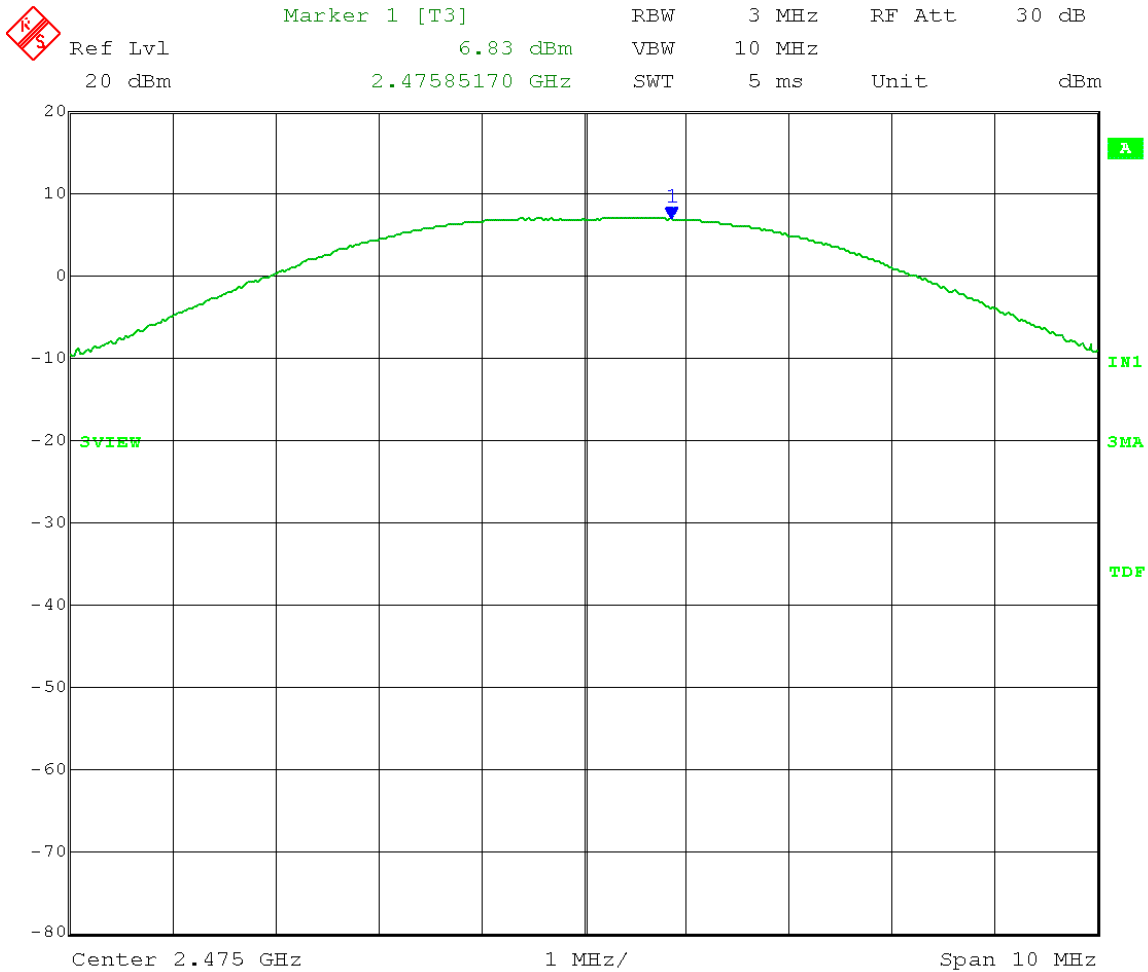
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Fundamental Emission Output Power - Conducted
Operator: Craig B

Comment: RBW ≥ DTS bandwidth
VBW ≥ 3 x RBW
Span ≥ RBW
Sweep = auto couple
Detector = peak
Trace = max hold

Comment: High Channel: Frequency – 2.475 GHz

Fundamental Emission Output Power = 6.83 dBm = **4.82 mW**



Date: 9.APR.2013 13:03:52



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Appendix B

3.0 Maximum Power Spectral Density (PSD)

Rule Part:

15.247 (e)

Test Procedure:

558074 D01 DTS Meas Guidance v02
9.0 Maximum Power Spectral Density Level in the Fundamental Emission
9.1 Option 1 (Peak)

Limit:

+8 dBm in any 3 kHz band segment within the DTS bandwidth during any time interval of continuous transmission.

Results:

Compliant
Maximum conducted power spectral density (PSD): **-7.44 dBm/3kHz**

Notes:

This was an RF conducted measurement. The EUT was connected to the measuring equipment through an SMA connector allowing RF conducted measurements. Cable loss and attenuation was accounted for in the transducer factors set in the analyzer.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.



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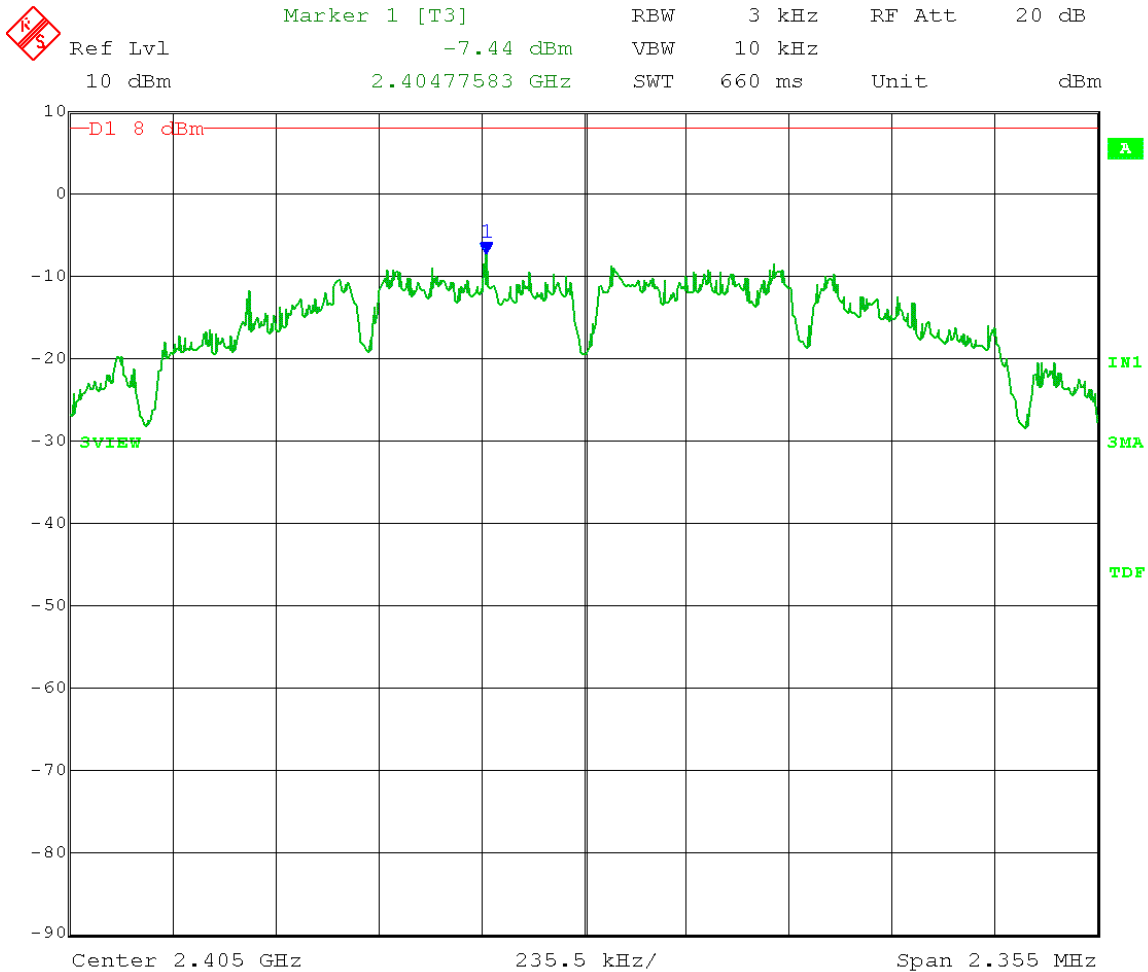
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Power Spectral Density - Conducted
Operator: Craig B

Comment: RBW ≥ 3 kHz
VBW ≥ 3 x RBW
Span = 1.5 times the DTS channel bandwidth
Detector = peak
Sweep = auto couple
Trace = max hold

Limit: **Low Channel: Frequency – 2.405 GHz**
8 dBm

Power Level in 3 kHz bandwidth = **-7.44 dBm**



Date: 9.APR.2013 12:29:26



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Company: RF Technologies, Inc.
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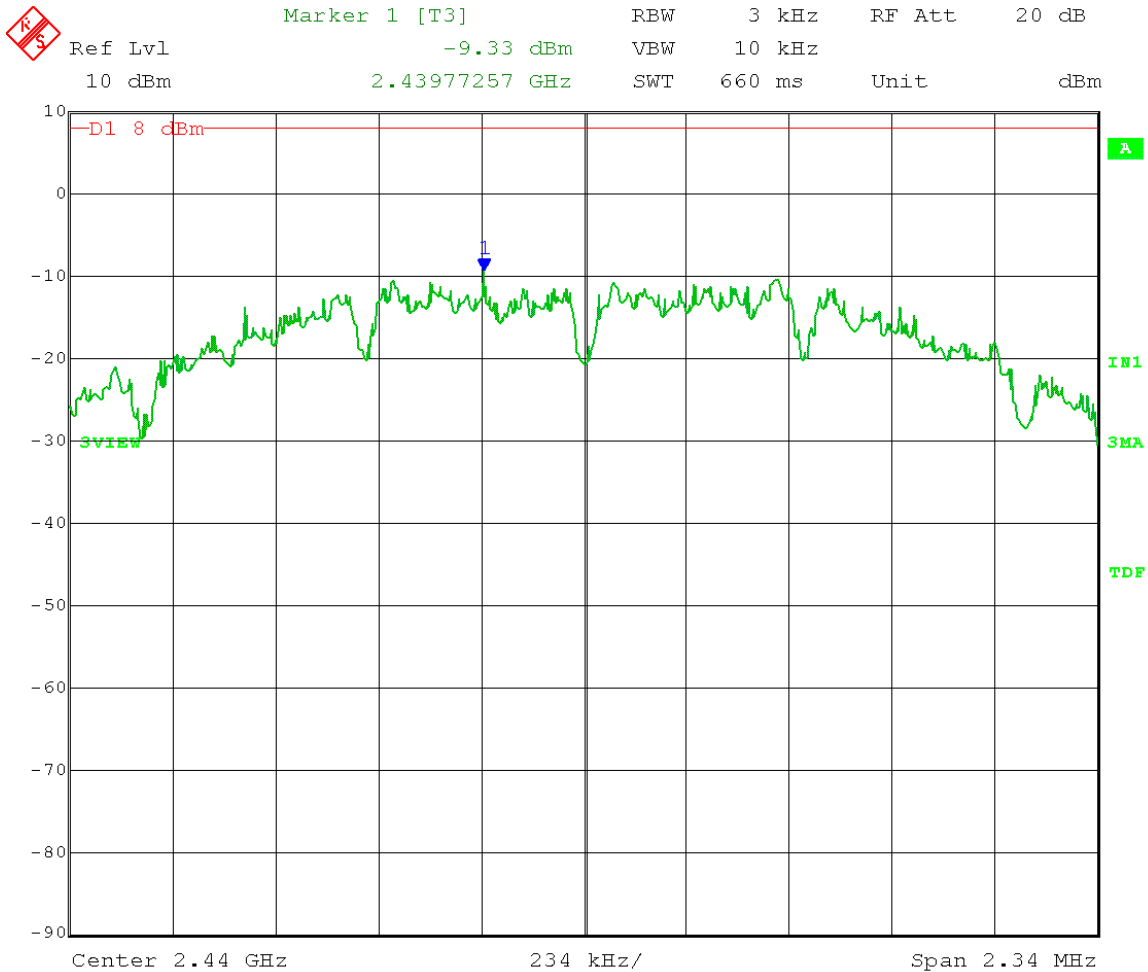
Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Power Spectral Density - Conducted
Operator: Craig B

Comment: RBW ≥ 3 kHz
VBW ≥ 3 x RBW
Span = 1.5 times the DTS channel bandwidth
Detector = peak
Sweep = auto couple
Trace = max hold

Mid Channel: Frequency – 2.440 GHz

Limit: 8 dBm

Power Level in 3 kHz bandwidth = -9.33 dBm



Date: 9.APR.2013 12:33:26



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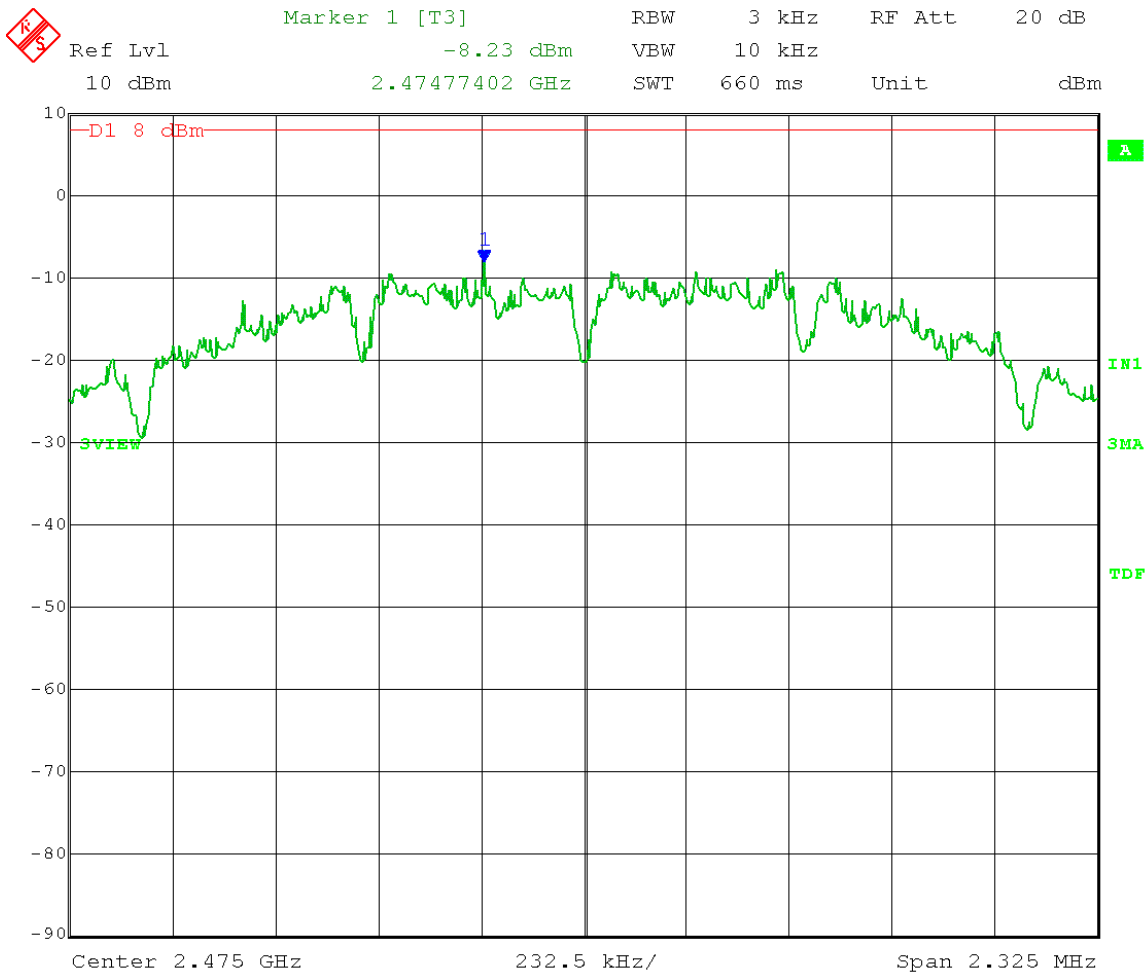
Company: RF Technologies
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Power Spectral Density - Conducted
Operator: Craig B

Comment: RBW \geq 3 kHz
VBW \geq 3 x RBW
Span = 1.5 times the DTS channel bandwidth
Detector = peak
Sweep = auto couple
Trace = max hold

Limit: High Channel: Frequency - 2.475 GHz
8 dBm

Power Level in 3 kHz bandwidth = -8.23 dBm



Date: 9.APR.2013 12:37:36



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Company: RF Technologies, Inc.
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Report Number: 18925
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Appendix B

4.0 Maximum Unwanted Emission Levels - RF Conducted

Rule Part:

15.247 (d)

Test Procedure:

558074 D01 DTS Meas Guidance v02
10.0 Maximum Unwanted Emission Levels
10.1 Unwanted Emissions into Non-Restricted Frequency Bands
10.1.1 Reference Level Measurement
10.1.2 Unwanted Emissions Level Measurement

Limit:

The peak conducted output power measured within any 100 kHz outside the authorized frequency band (excluding restricted frequency bands) shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Results:

Compliant

Notes:

This was an RF conducted measurement. The EUT was connected to the measuring equipment through an SMA connector allowing RF conducted measurements. Cable loss and attenuation was accounted for in the transducer factors set in the analyzer.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.



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Company: RF Technologies, Inc.
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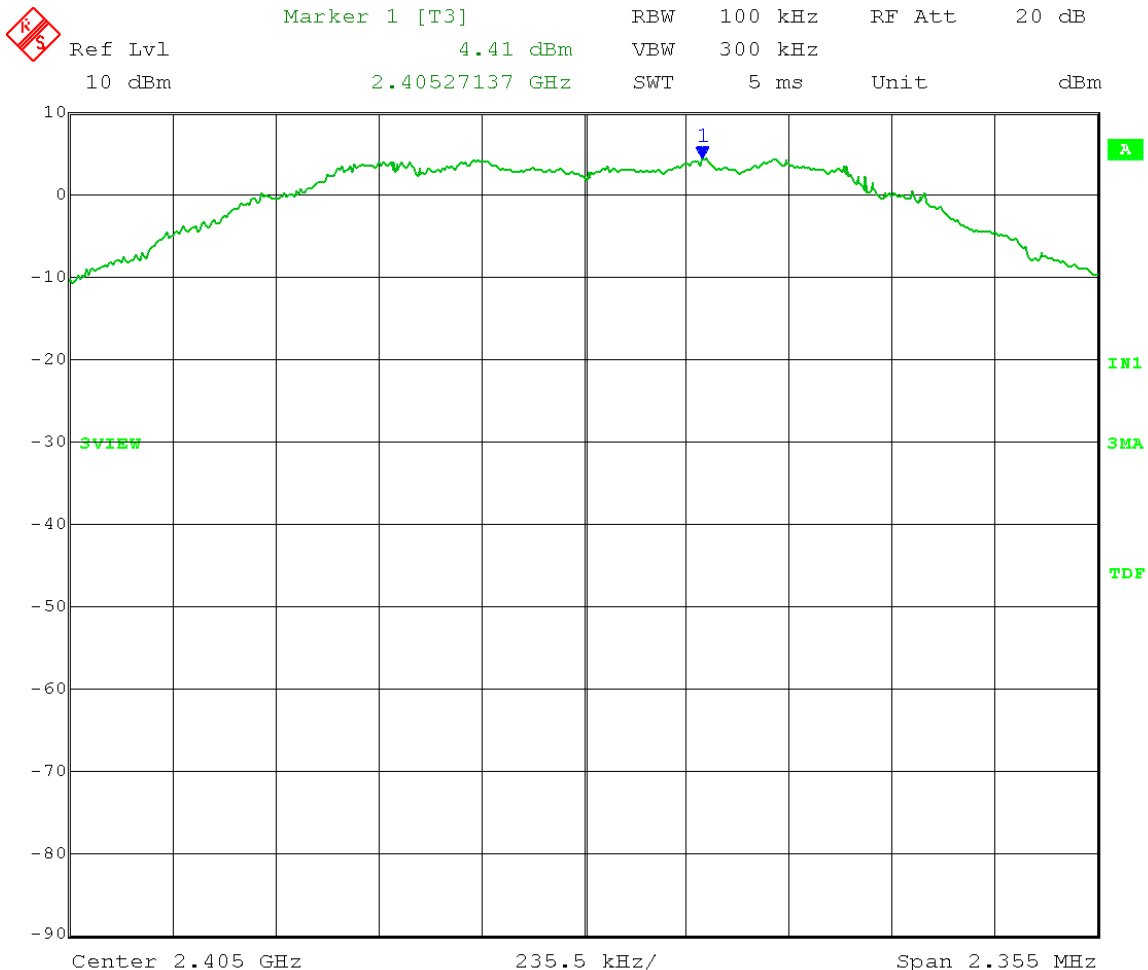
Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Span = 1.5 times the DTS bandwidth
Detector = Peak
Sweep = auto couple
Trace = max hold

Low Channel Transmit = 2.405 GHz

Reference Level measurement

Limit = 4.41 dBm – 20 dB = -15.59 dBm



Date: 9.APR.2013 10:40:42



166 South Carter, Genoa City, WI 53128

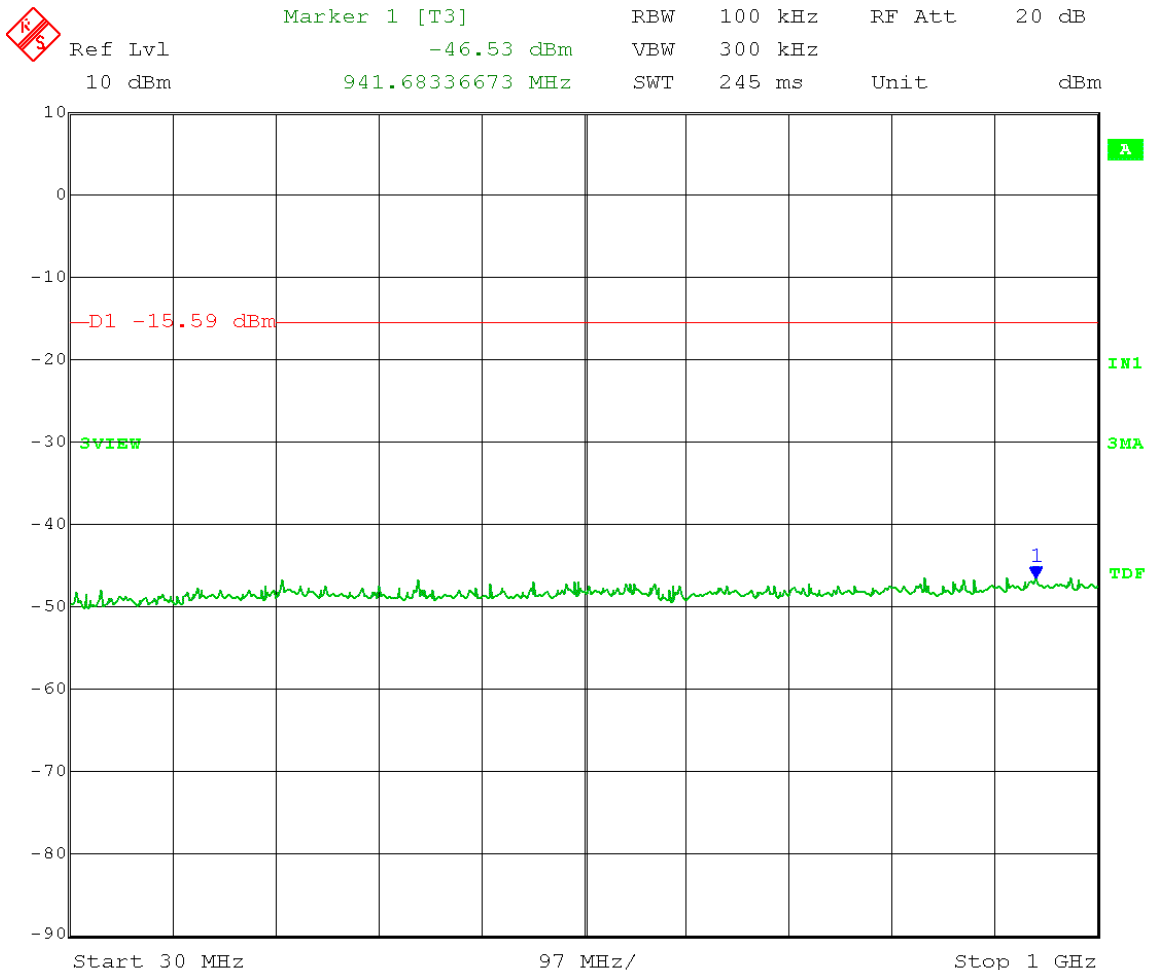
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Low Channel Transmit = 2.405 GHz

Frequency Range: 30 – 1000 MHz
Limit = 4.41 dBm – 20 dB = -15.59 dBm



Date: 9.APR.2013 11:15:36



166 South Carter, Genoa City, WI 53128

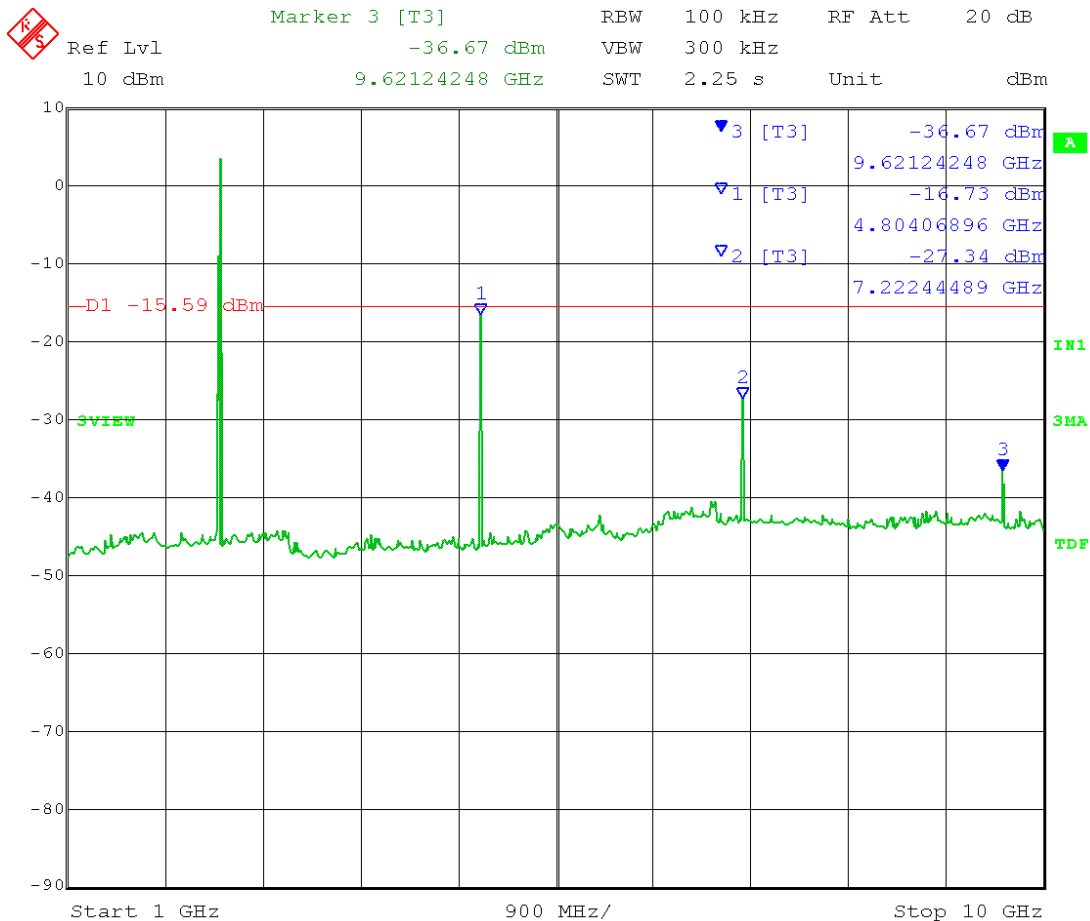
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Low Channel Transmit = 2.405 GHz

Frequency Range: 1 – 10 GHz
Limit = 4.41 dBm – 20 dB = -15.59 dBm



Date: 9.APR.2013 10:45:35

NOTE: Marker 1: 4.804 GHz is in a restricted band. -20 dBc limit not applicable per 558074 D01 DTS Meas Guidance v02. See Radiated emission measurement.



166 South Carter, Genoa City, WI 53128

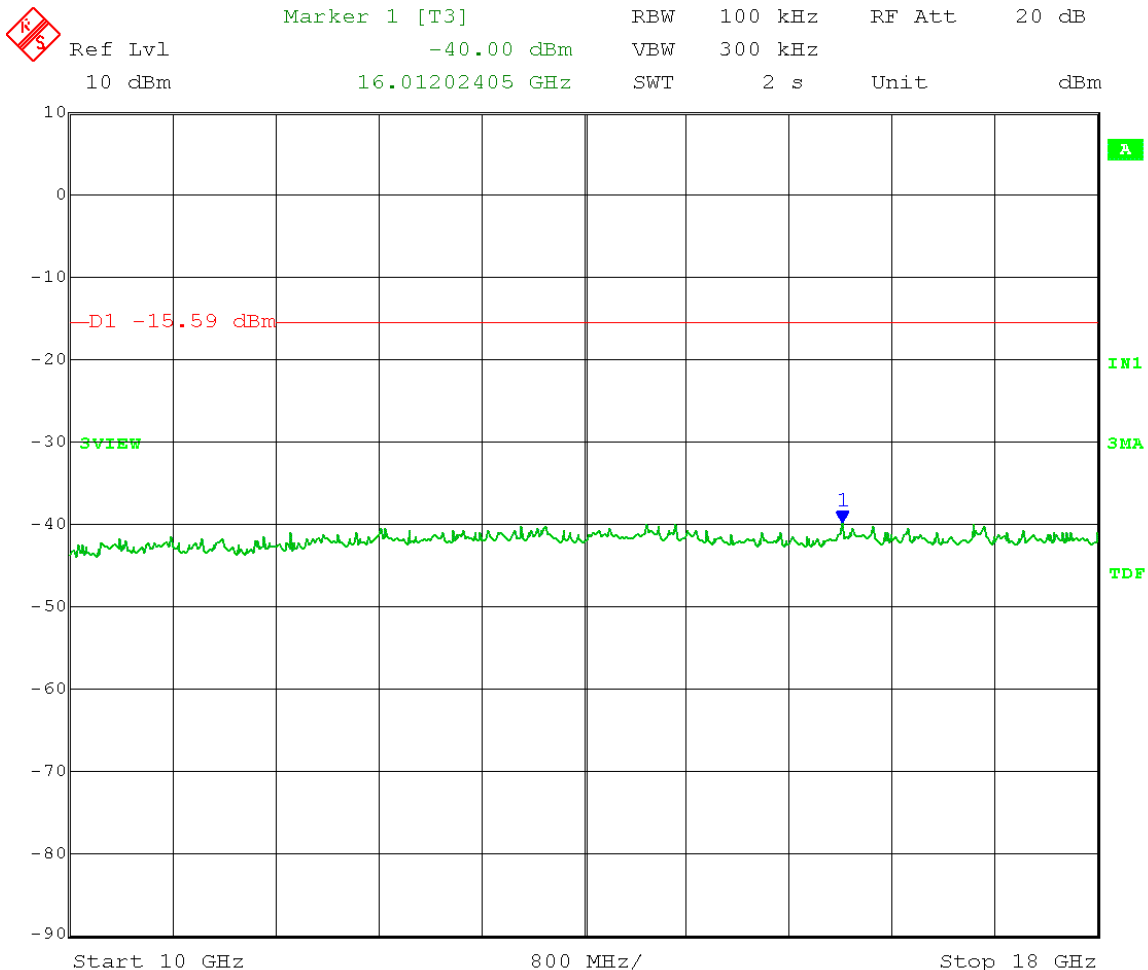
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Low Channel Transmit = 2.405 GHz

Frequency Range: 10 – 18 GHz
Limit = 4.41 dBm – 20 dB = -15.59 dBm



Date: 9.APR.2013 11:10:13



166 South Carter, Genoa City, WI 53128

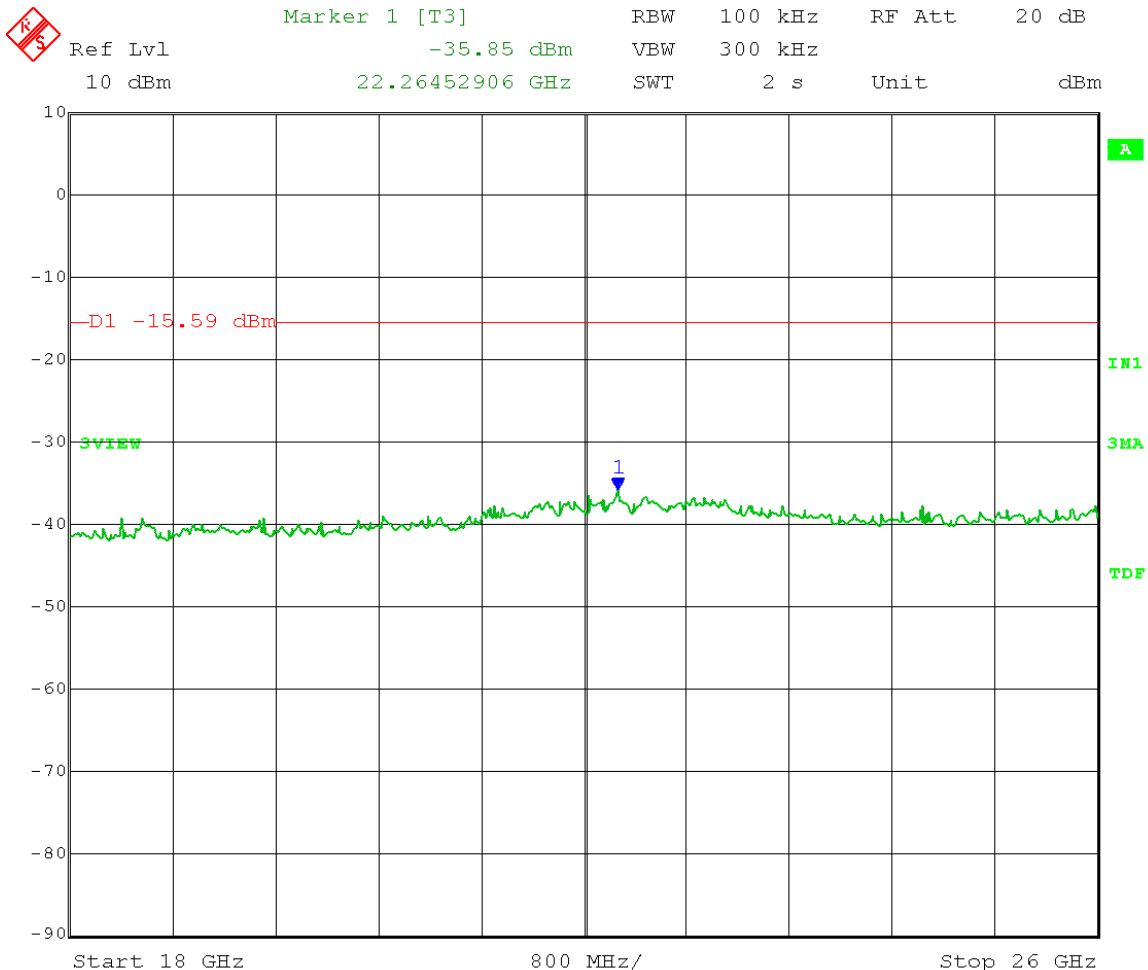
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Low Channel Transmit = 2.405 GHz

Frequency Range: 18 – 26 GHz
Limit = 4.41 dBm – 20 dB = -15.59 dBm



Date: 9.APR.2013 11:13:08



166 South Carter, Genoa City, WI 53128

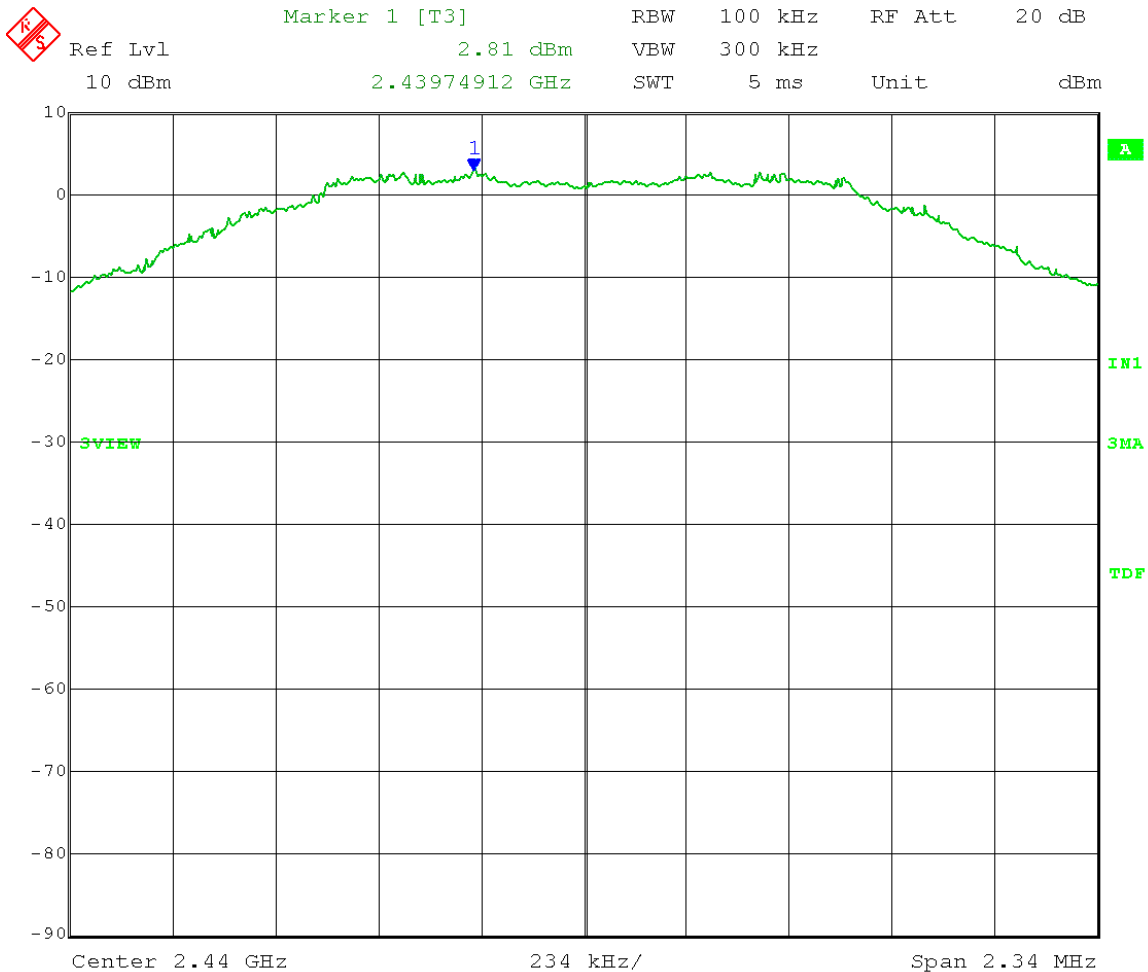
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Span = 1.5 times the DTS bandwidth
Detector = Peak
Sweep = auto couple
Trace = max hold

Middle Channel Transmit = 2.440 GHz

Reference Level measurement
Limit = 2.81 dBm – 20 dB = -17.19 dBm



Date: 9.APR.2013 10:52:55



166 South Carter, Genoa City, WI 53128

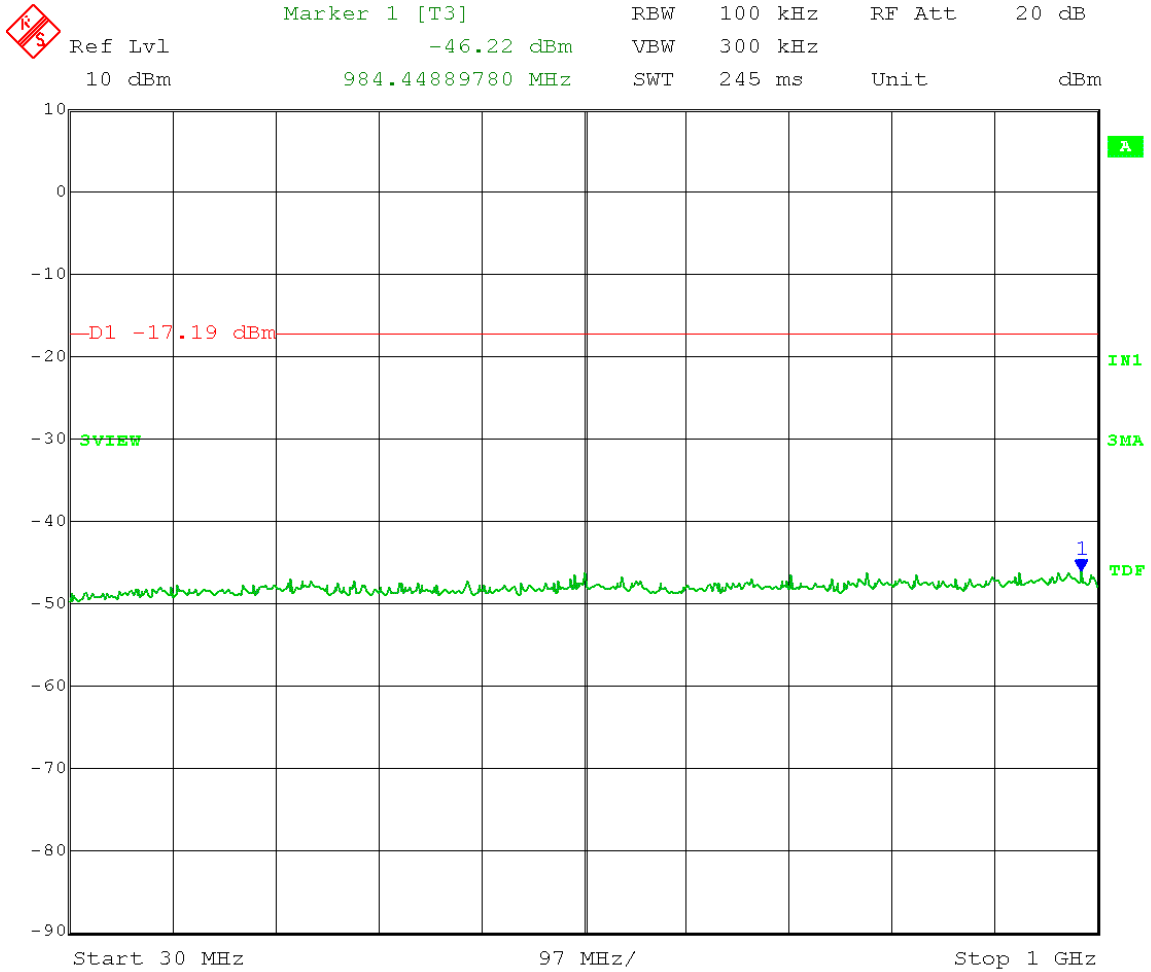
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Middle Channel Transmit = 2.440 GHz

Frequency Range: 30 – 1000 MHz
Limit = 2.81 dBm – 20 dB = -17.19 dBm



Date: 9.APR.2013 11:26:52



166 South Carter, Genoa City, WI 53128

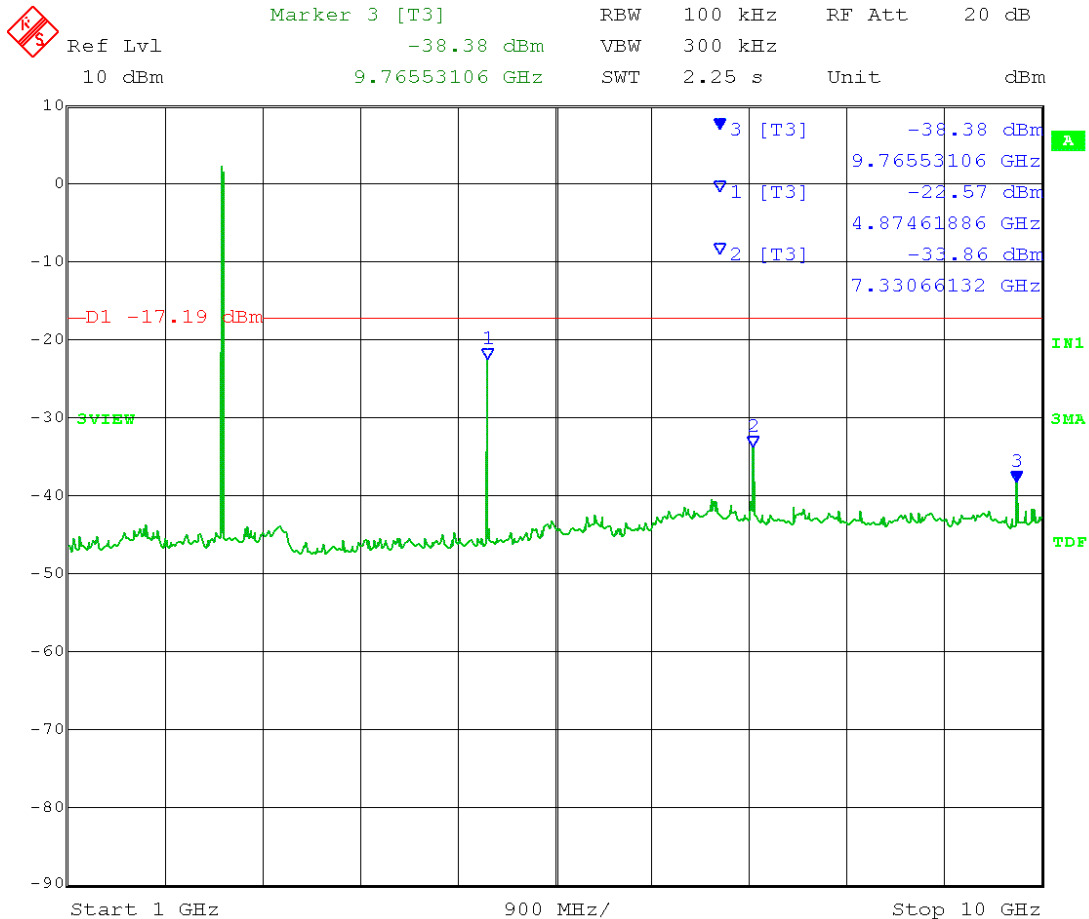
Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

Test Date: 04-09-2013
 Company: RF Technologies
 EUT: Sensatec CA630
 Test: Maximum Unwanted Emission Levels - Conducted
 Operator: Craig B

Comment: RBW = 100 kHz
 VBW ≥ 300 kHz
 Detector = Peak
 Sweep = auto couple
 Trace = max hold

Middle Channel Transmit = 2.440 GHz

Frequency Range: 1 – 10 GHz
 Limit = 2.81 dBm – 20 dB = -17.19 dBm



Date: 9.APR.2013 10:55:59

NOTE: Marker 1: 4.875 GHz is in a restricted band. -20 dBc limit not applicable per 558074 D01 DTS Meas Guidance v02. See Radiated emission measurement.



166 South Carter, Genoa City, WI 53128

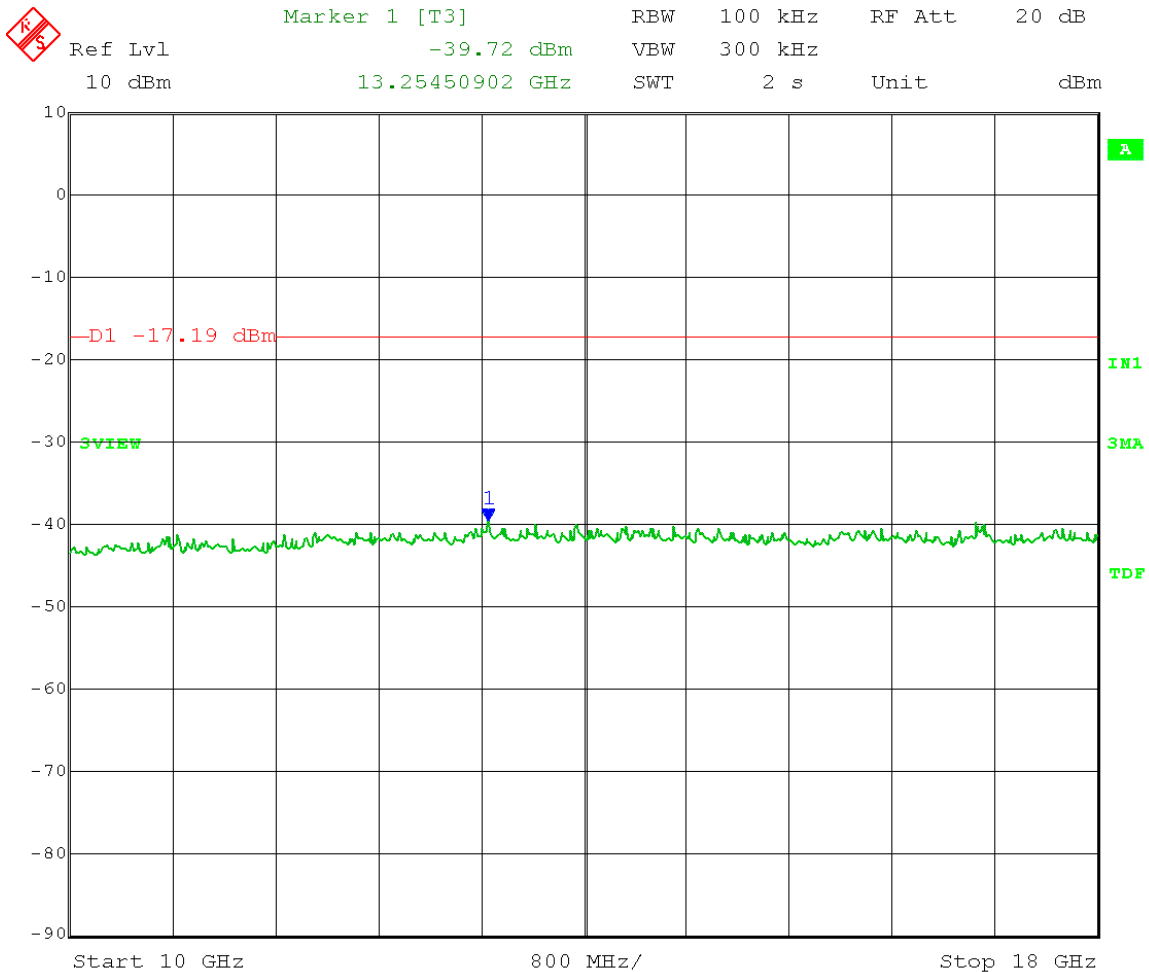
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Middle Channel Transmit = 2.440 GHz

Frequency Range: 10 – 18 GHz
Limit = 2.81 dBm – 20 dB = -17.19 dBm



Date: 9.APR.2013 11:22:37



166 South Carter, Genoa City, WI 53128

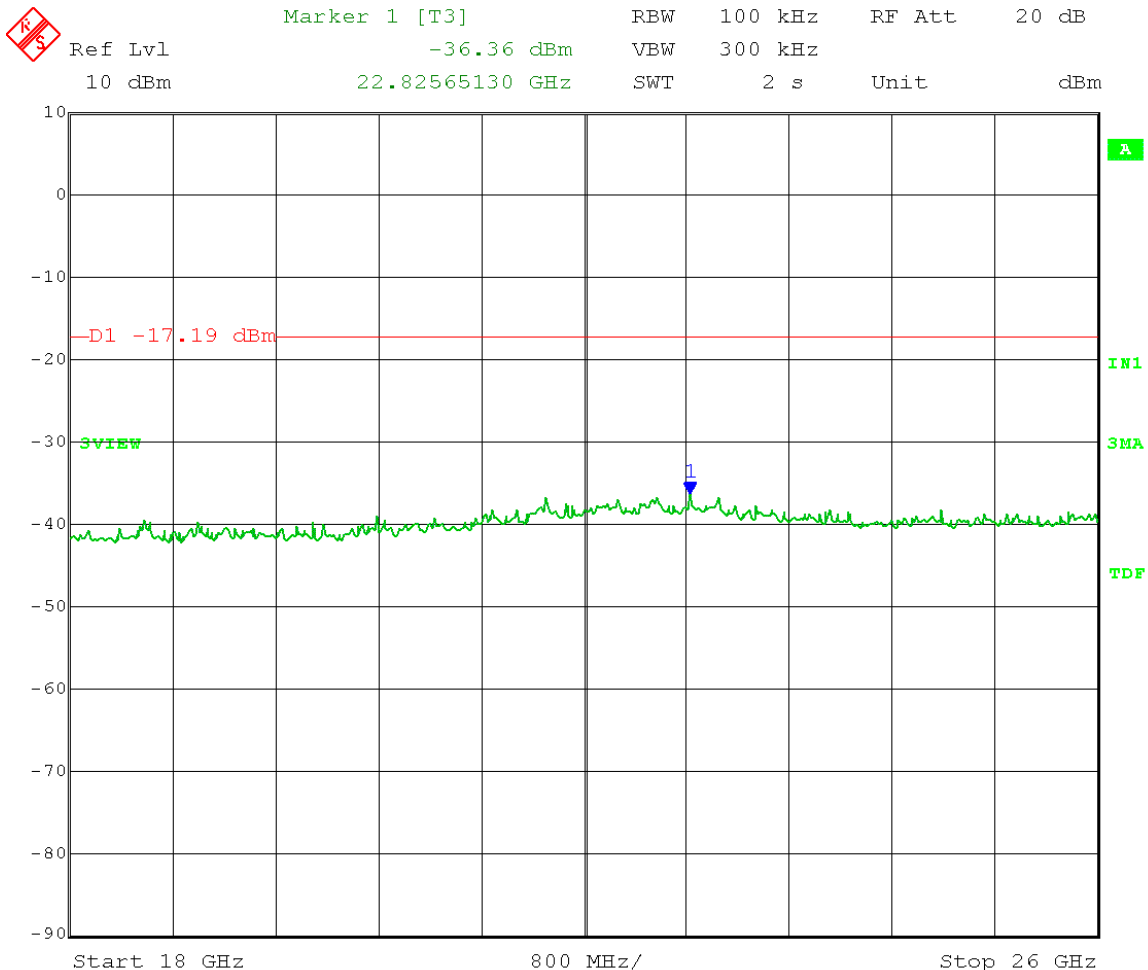
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

Middle Channel Transmit = 2.440 GHz

Frequency Range: 18 – 26 GHz
Limit = 2.81 dBm – 20 dB = -17.19 dBm



Date: 9.APR.2013 11:24:02



166 South Carter, Genoa City, WI 53128

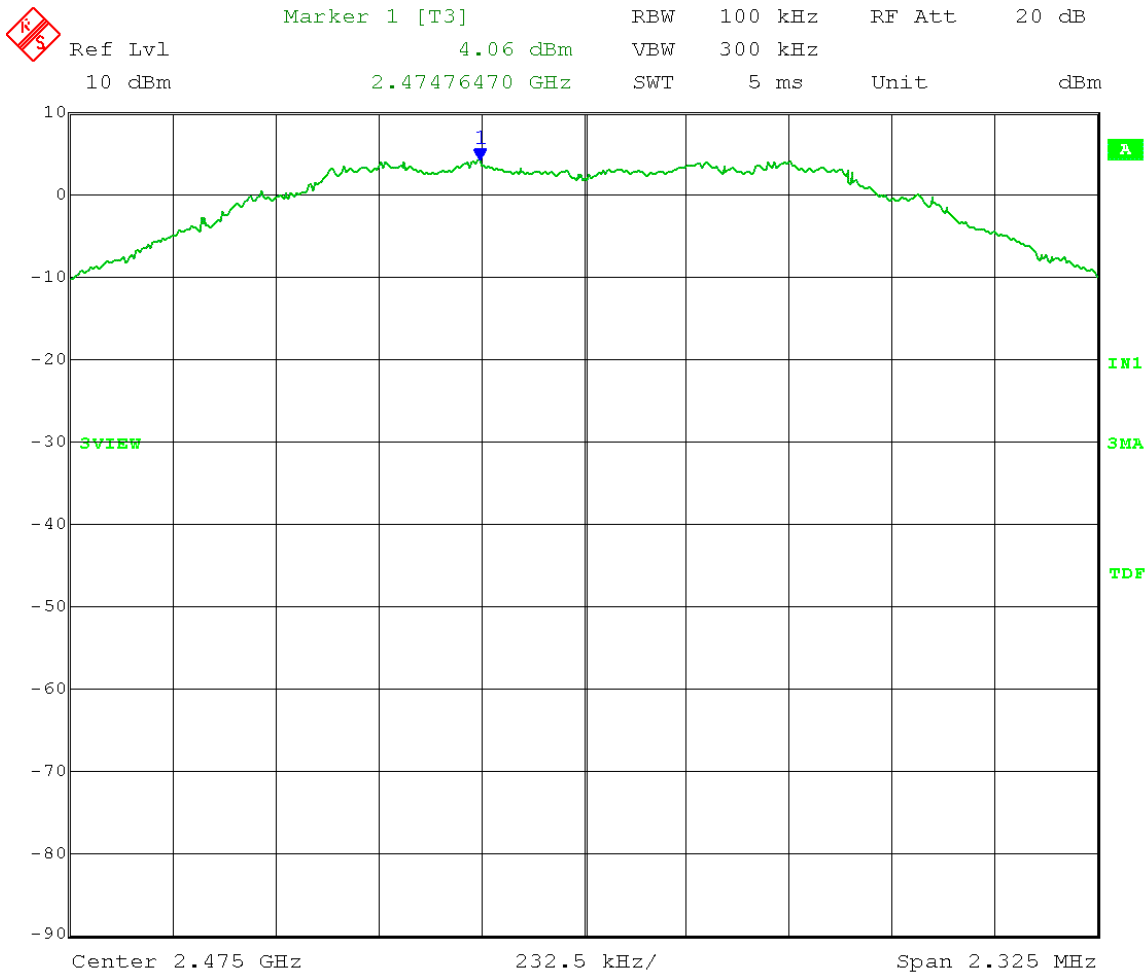
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Span = 1.5 times the DTS bandwidth
Detector = Peak
Sweep = auto couple
Trace = max hold

High Channel Transmit = 2.475 GHz

Reference Level measurement
Limit = 4.06 dBm – 20 dB = -15.94 dBm



Date: 9.APR.2013 11:01:24



166 South Carter, Genoa City, WI 53128

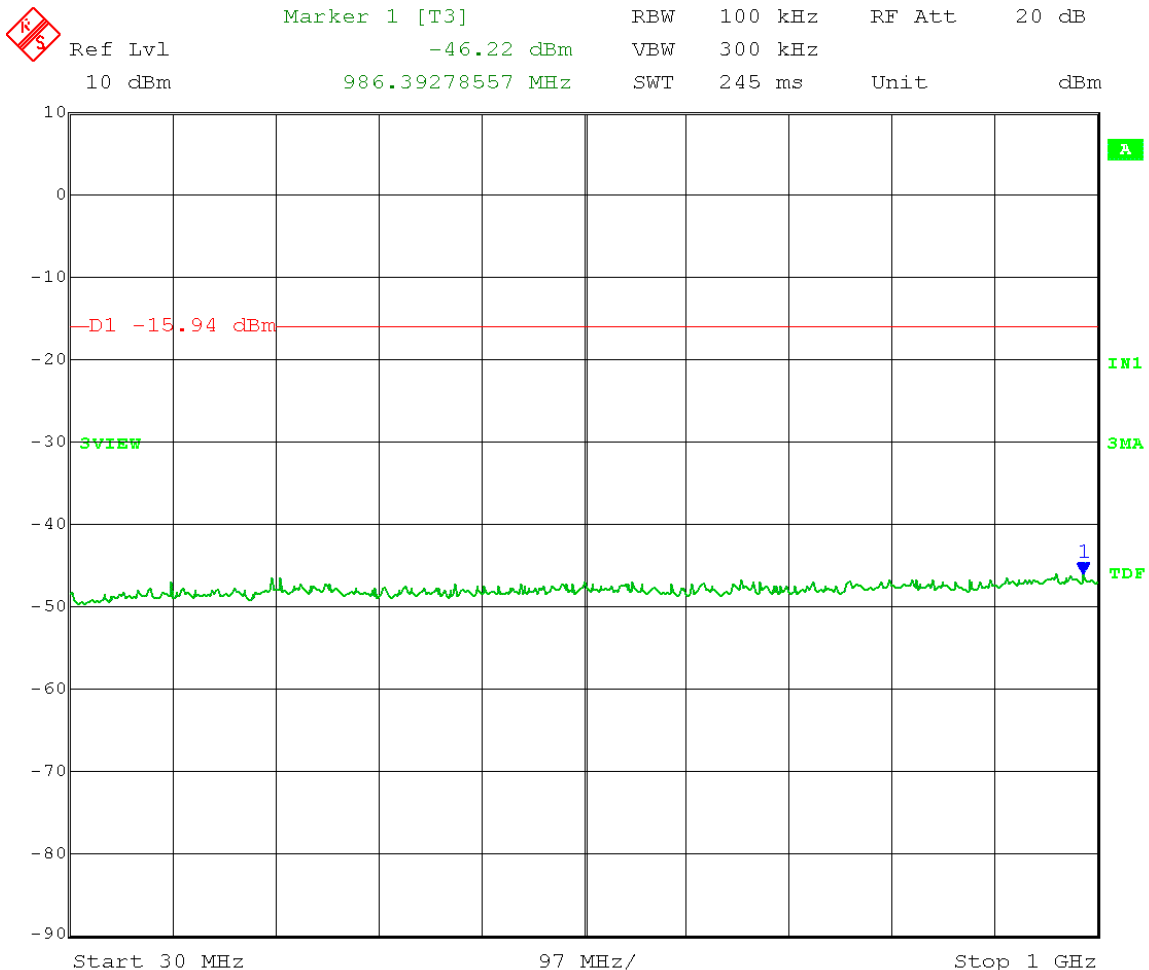
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

High Channel Transmit = 2.475 GHz

Frequency Range: 30 – 1000 MHz
Limit = 4.06 dBm – 20 dB = -15.94 dBm



Date: 9.APR.2013 11:35:41



166 South Carter, Genoa City, WI 53128

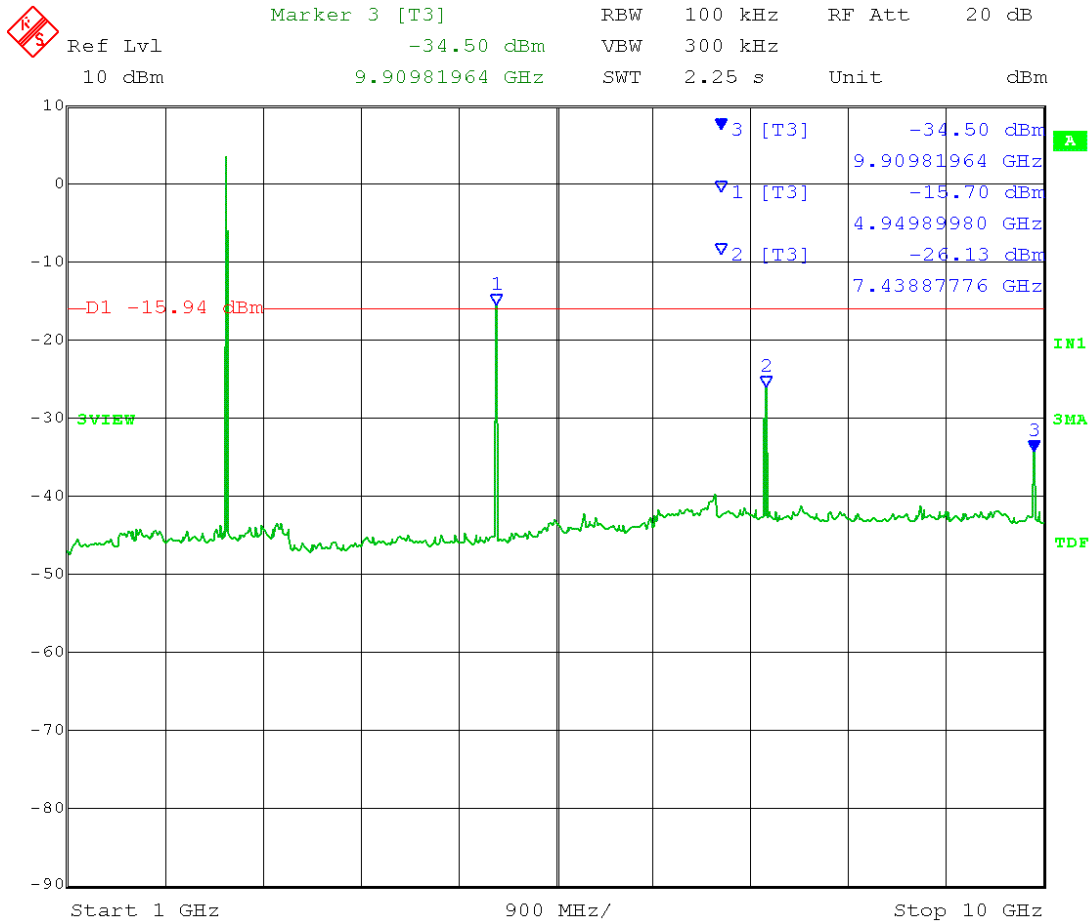
Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

Test Date: 04-09-2013
 Company: RF Technologies
 EUT: Sensatec CA630
 Test: Maximum Unwanted Emission Levels - Conducted
 Operator: Craig B

Comment: RBW = 100 kHz
 VBW ≥ 300 kHz
 Detector = Peak
 Sweep = auto couple
 Trace = max hold

High Channel Transmit = 2.475 GHz

Frequency Range: 1 – 10 GHz
 Limit = 4.06 dBm – 20 dB = -15.94 dBm



Date: 9.APR.2013 11:08:53

NOTE: Marker 1: 4.950 GHz is in a restricted band. -20 dBc limit not applicable per 558074 D01 DTS Meas Guidance v02. See Radiated emission measurement.



166 South Carter, Genoa City, WI 53128

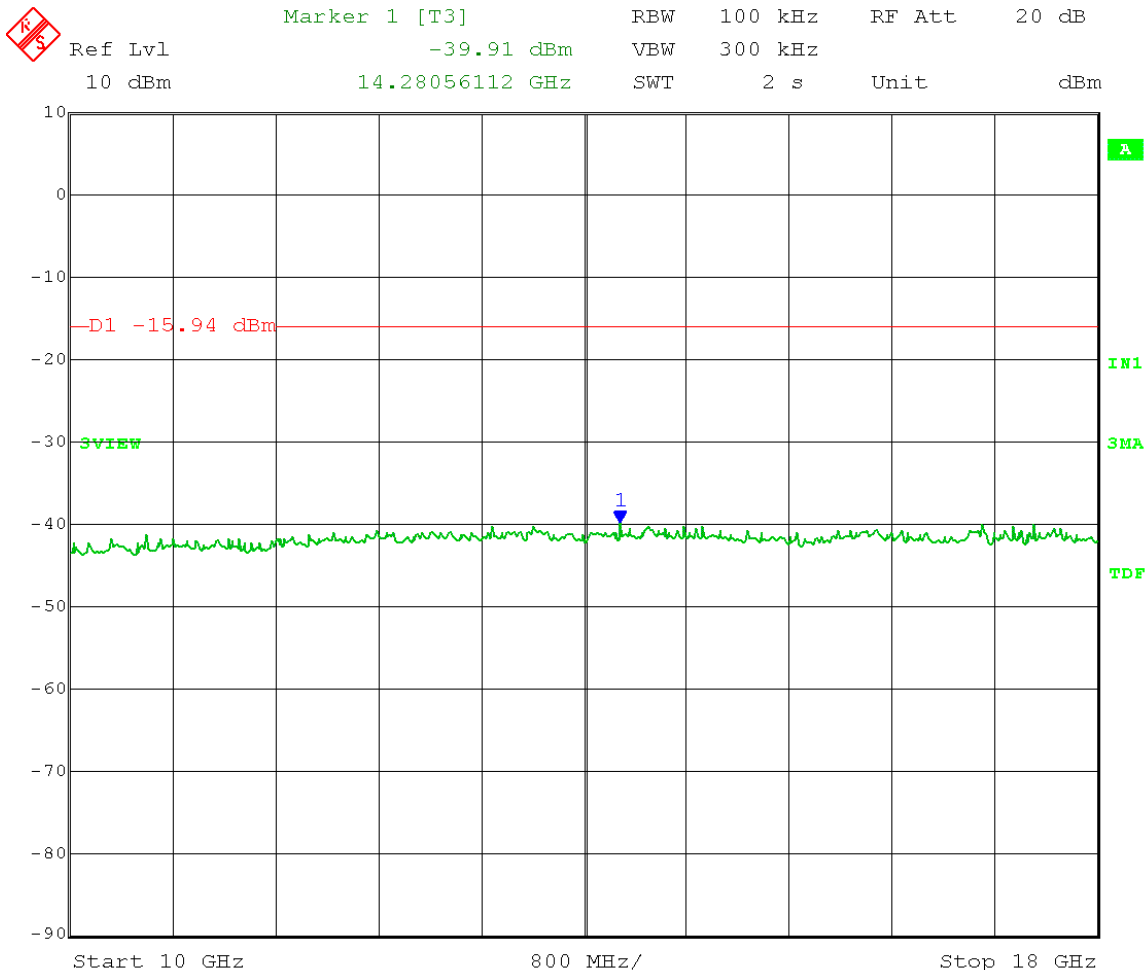
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

High Channel Transmit = 2.475 GHz

Frequency Range: 10 – 18 GHz
Limit = 4.06 dBm – 20 dB = -15.94 dBm



Date: 9.APR.2013 11:29:48



166 South Carter, Genoa City, WI 53128

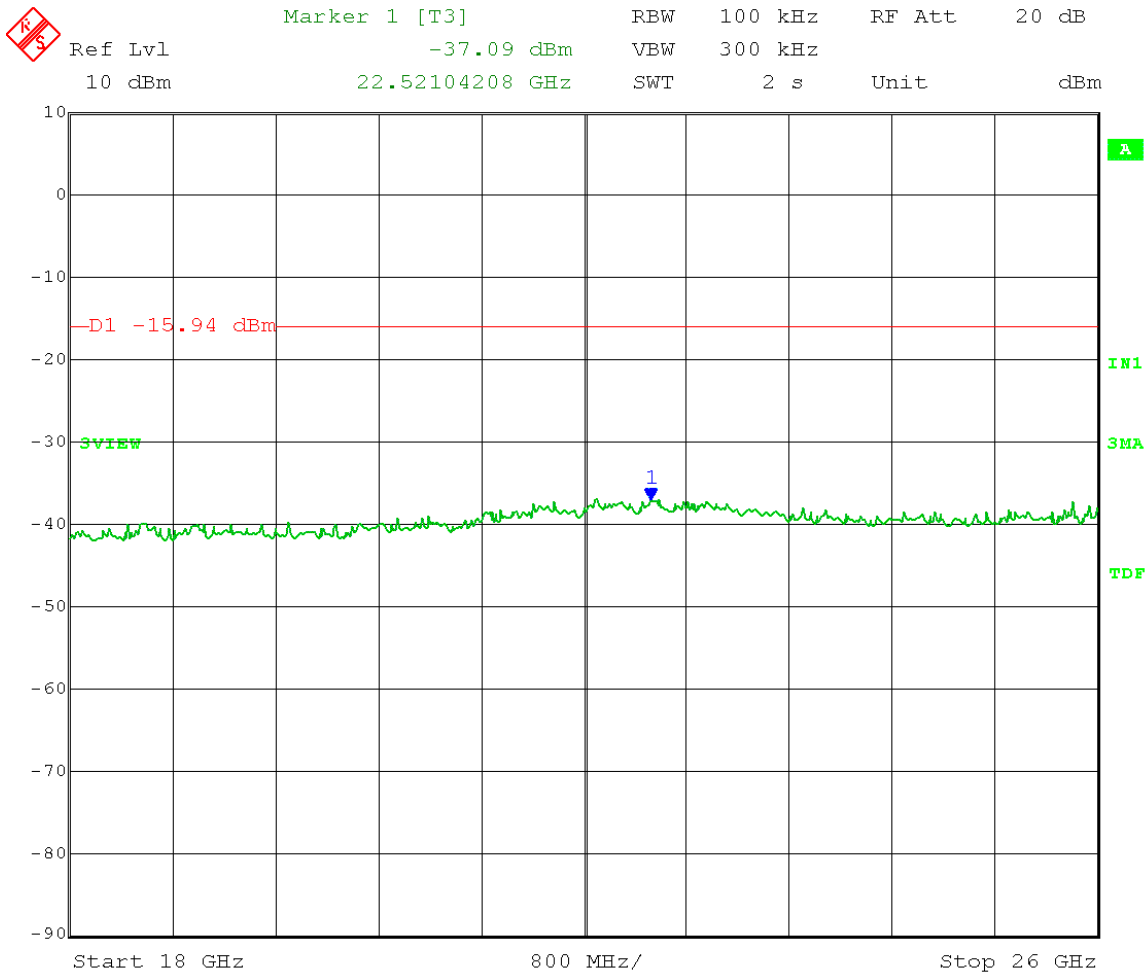
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Maximum Unwanted Emission Levels - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

High Channel Transmit = 2.475 GHz

Frequency Range: 18 – 26 GHz
Limit = 4.06 dBm – 20 dB = -15.94 dBm



Date: 9.APR.2013 11:31:55



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

5.0 Duty Cycle Correction for Pulsed Emissions

Rule Part:

15.247 (d); 15.35 (b); 15.35 (c)

Test Procedure:

558074 D01 DTS Meas Guidance v02
10.2.1 Radiated Emissions Measurements
10.2.3 Measurement Detectors
FCC 15.35 (b) and 15.35 (c)
ANSI C63.10

Limit:

Informative

Results:

Duty Cycle Correction Factor = 18.69 dB

Notes:

Testing was performed prior to the release of 558074 D01 DTS Meas Guidance v03r01. Operational duty cycle correction was performed on restricted band radiated emissions per 558074 D01 DTS Meas Guidance v02 and ANSI C63.10:2009.

This was an RF conducted measurement. The EUT was set to transmit at its maximum duty cycle that could occur in a real world application.



166 South Carter, Genoa City, WI 53128

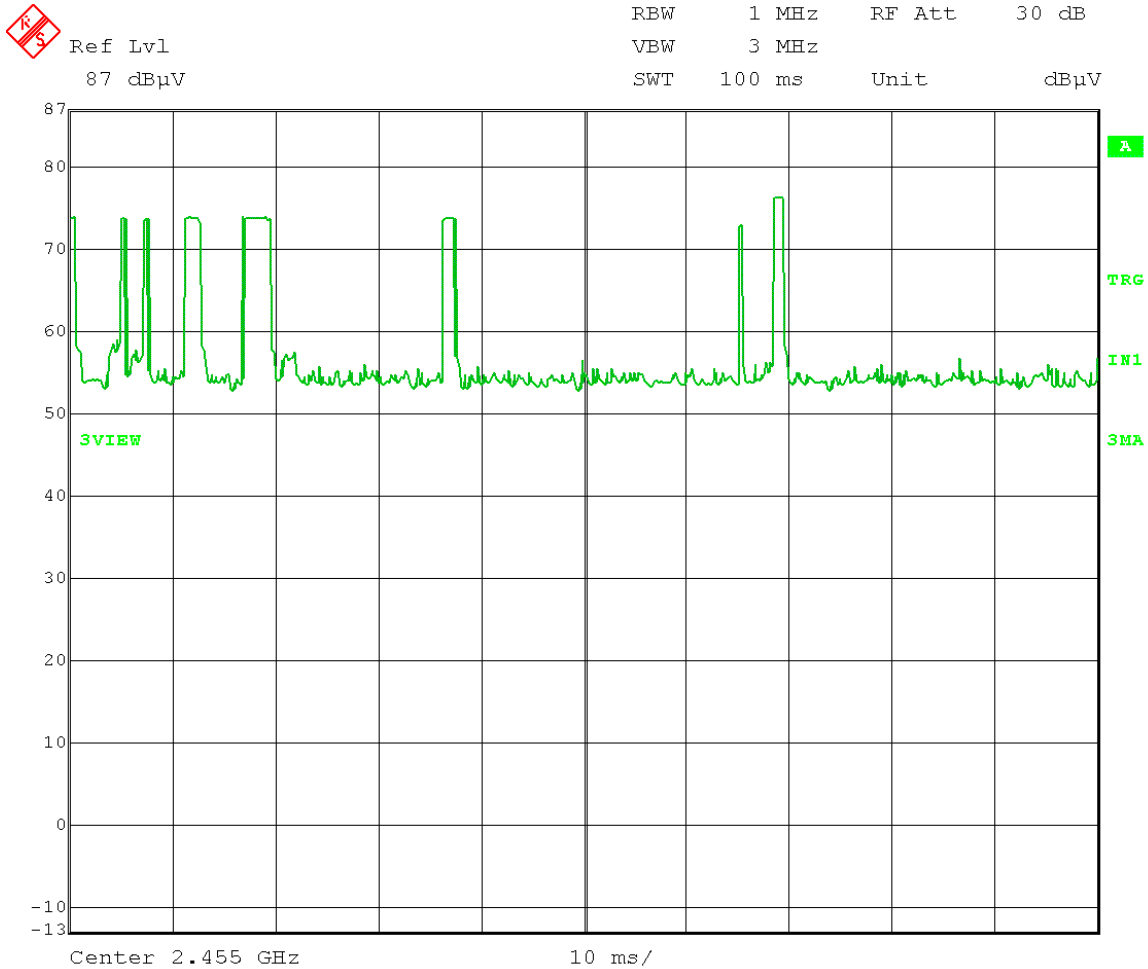
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-08-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Duty Cycle – worst case during normal operation
Operator: Craig B

Comment: One pulse of 3.2064 ms
One pulse of 2.0040 ms
Two pulses of 1.6032 ms each
Four pulses of 0.8016 ms each

Total on Time = 11.6232 ms during 100 ms Sweep
 $20 \log(11.6232 / 100) = -18.6935$
Duty Cycle Correction Factor = 18.69 dB

100 ms sweep: 8 pulses



Date: 8.APR.2013 11:19:45



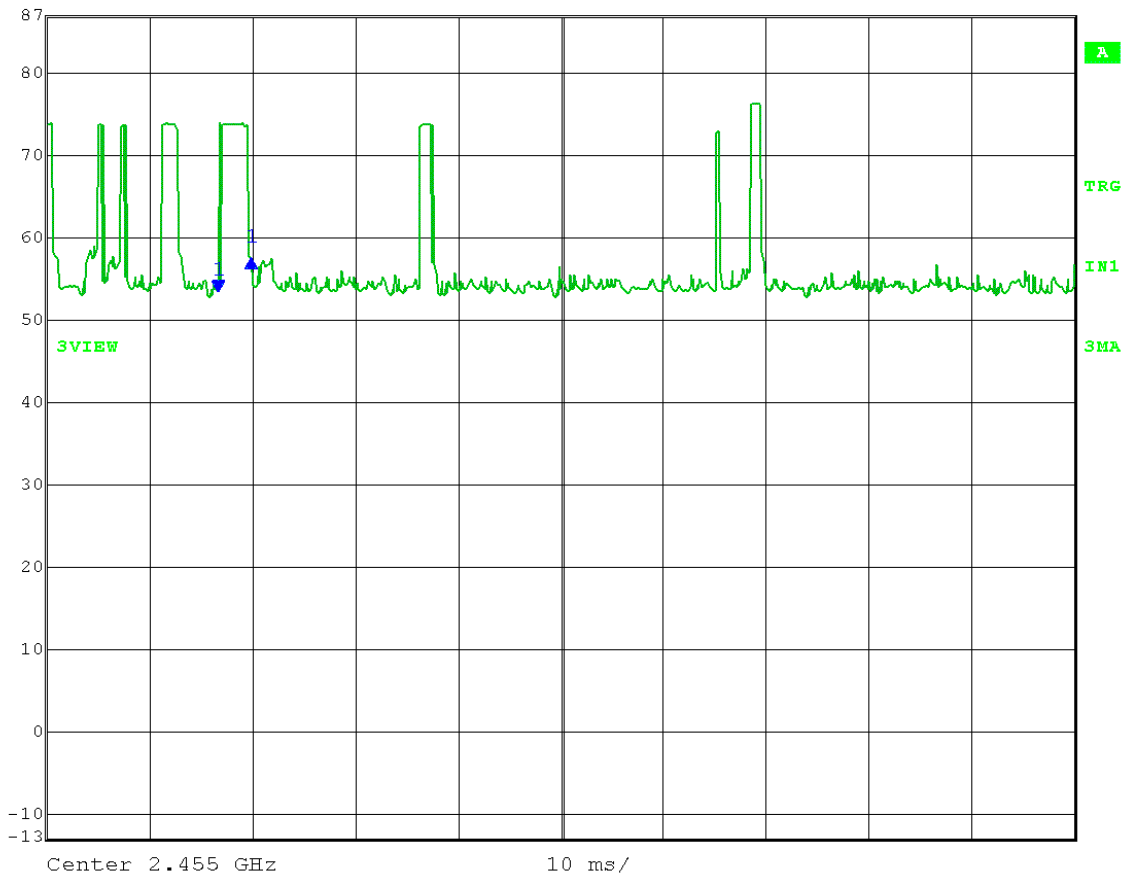
166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-08-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Duty Cycle – worst case during normal operation
Operator: Craig B

Duration of one pulse 5:

	Delta 1 [T3]	RBW	1 MHz	RF Att	30 dB
	Ref Lvl	3.87 dB	VBW	3 MHz	
	87 dB μ V	3.206413 ms	SWT	100 ms	Unit dB μ V



Date: 8.APR.2013 11:21:21



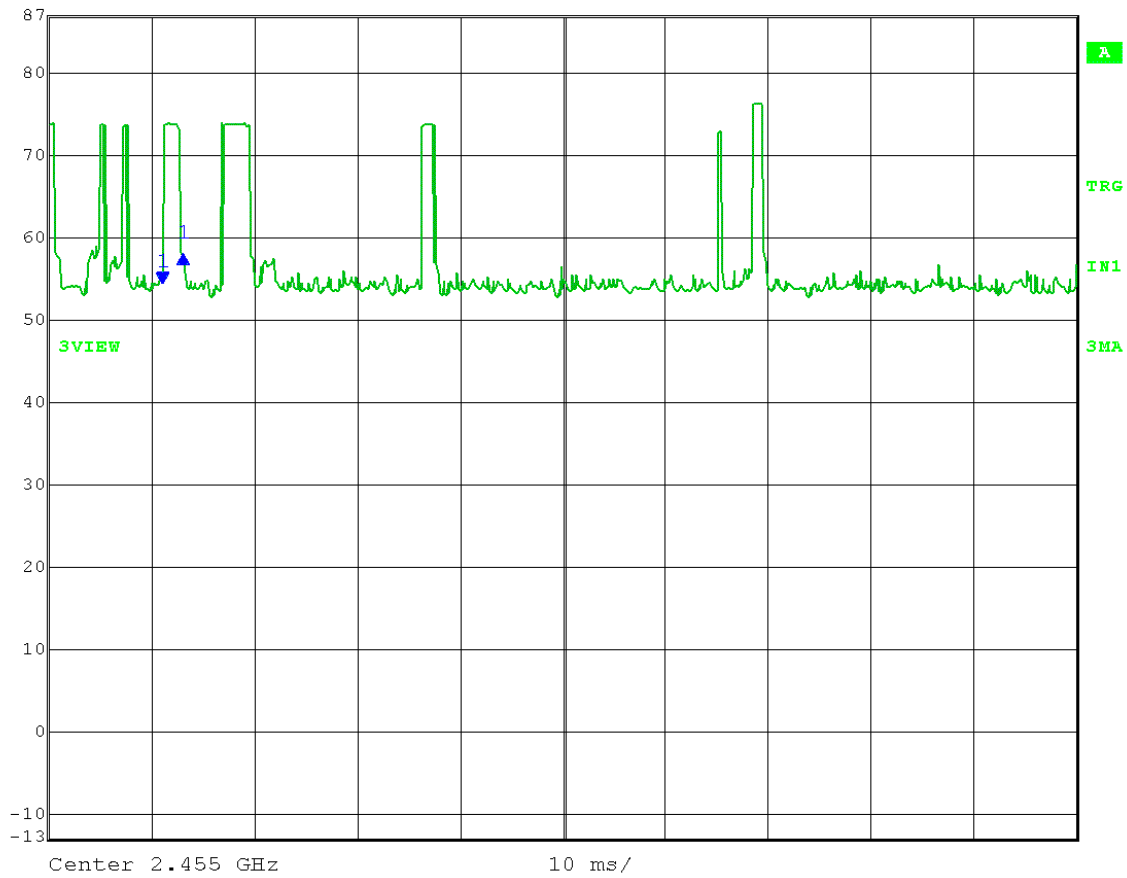
166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-08-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Duty Cycle – worst case during normal operation
Operator: Craig B

Duration of one pulse 4:

	Delta 1 [T3]	RBW	1 MHz	RF Att	30 dB
	Ref Lvl	3.55 dB	VBW	3 MHz	
	87 dB μ V	2.004008 ms	SWT	100 ms	Unit dB μ V



Date: 8.APR.2013 11:23:12



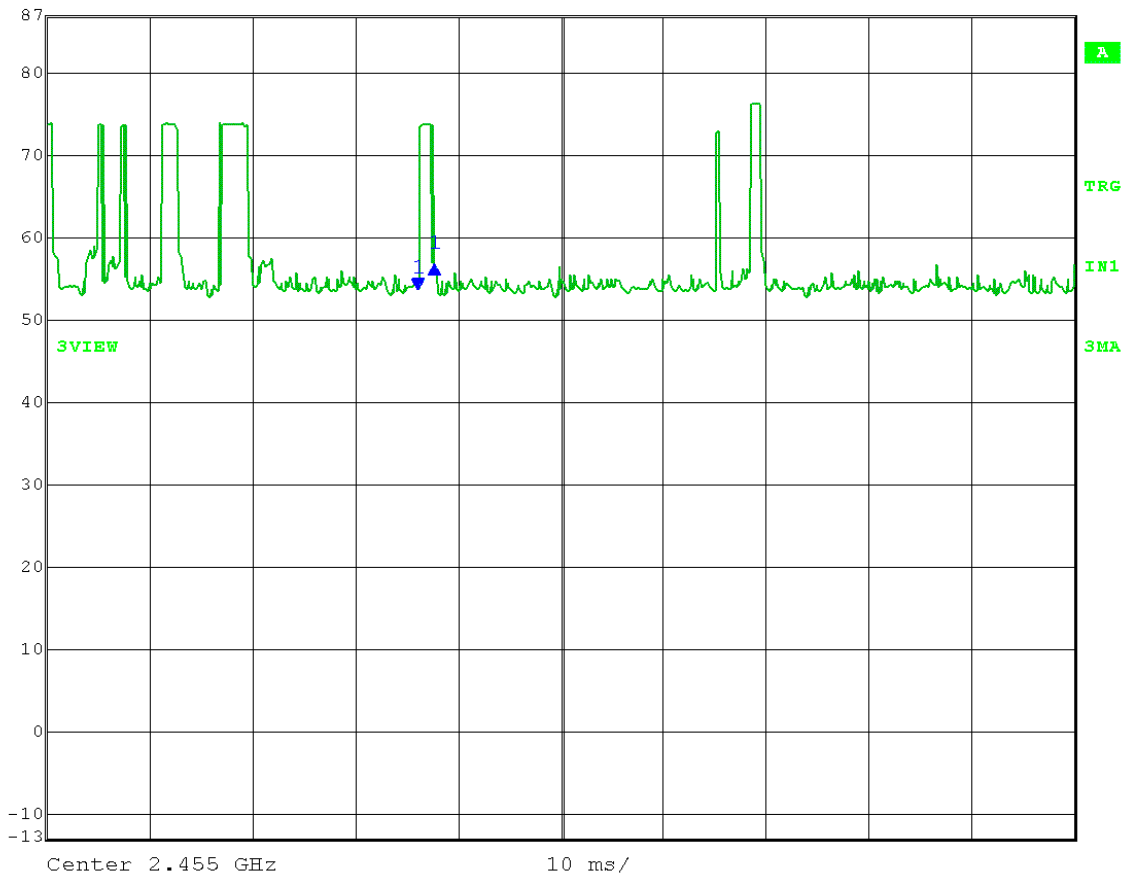
166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-08-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Duty Cycle – worst case during normal operation
Operator: Craig B

Duration of one pulses 6 and 8:

	Delta 1 [T3]	RBW	1 MHz	RF Att	30 dB
	Ref Lvl	3.07 dB	VBW	3 MHz	
	87 dB μ V	1.603206 ms	SWT	100 ms	Unit dB μ V



Date: 8.APR.2013 11:24:14



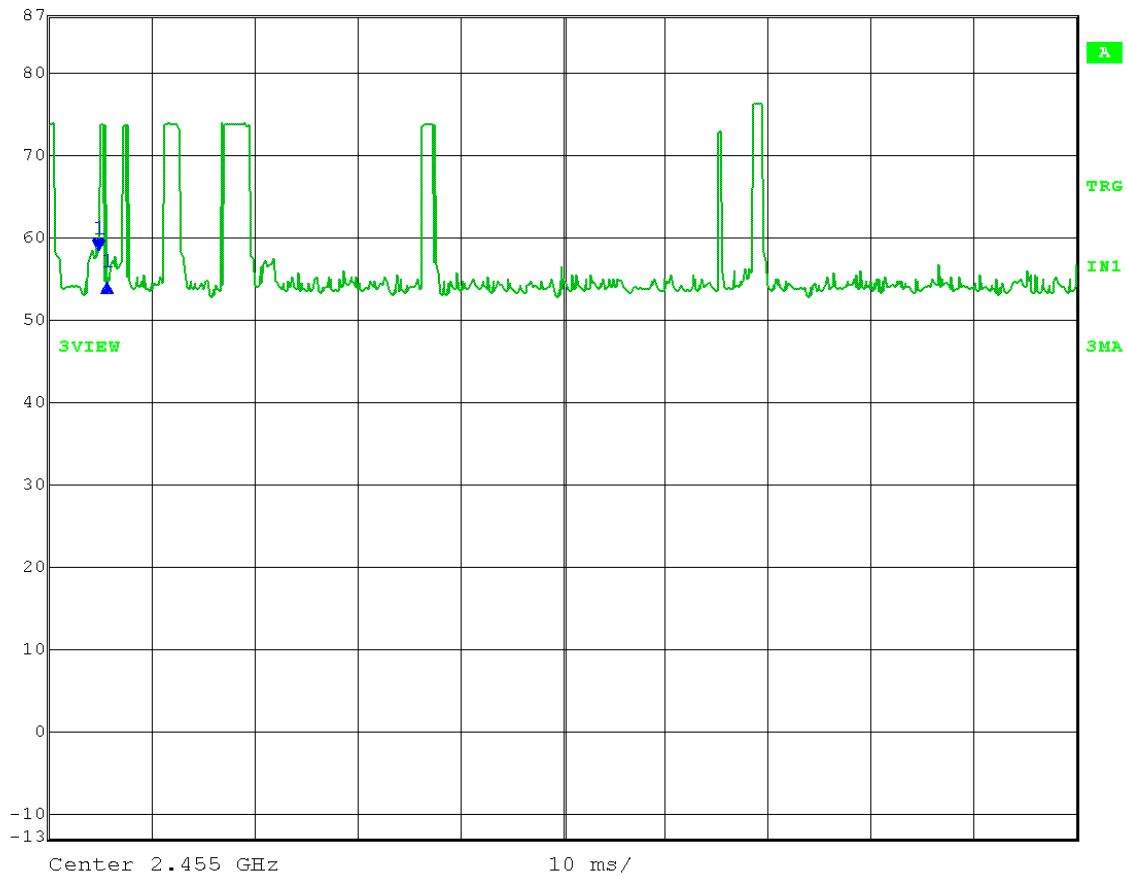
166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-08-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Duty Cycle – worst case during normal operation
Operator: Craig B

Duration of one pulses 1, 2, 3, and 7:

	Delta 1 [T3]	RBW	1 MHz	RF Att	30 dB
	Ref Lvl	-3.94 dB	VBW	3 MHz	
	87 dB μ V	801.603206 μ s	SWT	100 ms	Unit dB μ V



Date: 8.APR.2013 11:25:38



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Appendix B

6.0 Unwanted Emissions into Restricted Frequency Bands – Radiated

Rule Part:

15.247 (d), 15.205 (5), 15.209 (a)

Test Procedure:

558074 D01 DTS Meas Guidance v02
10.2 Unwanted Emissions into Restricted Frequency Bands
10.2.1 Radiated Emissions Measurements
Measurement Procedure – ANSI C63.10-2009

Limits:

15.209 (a)

Results:

Compliant

Notes:

This was radiated measurement.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.

Testing was performed prior to the release of 558074 D01 DTS Meas Guidance v03r01. Operational duty cycle correction was performed on restricted band radiated emissions per 558074 D01 DTS Meas Guidance v02 and ANSI C63.10:2009.



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

Radiated Spurious Emissions in Restricted Bands

Tested at a 3 Meter Distance 30 MHz to 18 GHz

Tested at a 1 Meter Distance 18 GHz to 26 GHz

EUT: Sensatec CA630
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 27% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit; duty cycle 100%
Date: 04-08-2013

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 3 MHz, Detector = CISPR Average.
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel 11 (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
4.810	Average	Vert	89.46	32.89	-55.6	66.8	-18.69	48.1	54	5.9	Res. Band
4.810	Max Peak	Vert	95.61	32.89	-55.6	73.0	N/A	73.0	74	1.0	Res. Band
4.810	Average	Horz	83.71	32.89	-55.6	61.0	-18.69	42.3	54	11.7	Res. Band
4.810	Max Peak	Horz	90.11	32.89	-55.6	67.5	N/A	67.5	74	6.5	Res. Band



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

Radiated Spurious Emissions in Restricted Bands

Tested at a 3 Meter Distance 30 MHz to 18 GHz

Tested at a 1 Meter Distance 18 GHz to 26 GHz

EUT: Sensatec CA630
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 27% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit; duty cycle 100%
Date: 04-08-2013

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 3 MHz, Detector = CISPR Average.
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel 18 (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
4.880	Average	Vert	82.20	32.95	-55.6	59.5	-18.69	40.8	54	13.2	Res. Band
4.880	Max Peak	Vert	88.78	32.95	-55.6	66.1	N/A	66.1	74	7.9	Res. Band
4.880	Average	Horz	77.98	32.95	-55.6	55.3	-18.69	36.6	54	17.4	Res. Band
4.880	Max Peak	Horz	84.60	32.95	-55.6	61.9	N/A	61.9	74	12.1	Res. Band
7.320	Average	Vert	73.17	36.52	-54.7	55.0	-18.69	36.3	54	17.7	Res. Band
7.320	Max Peak	Vert	81.06	36.52	-54.7	62.9	N/A	62.9	74	11.1	Res. Band
7.320	Average	Horz	74.58	36.52	-54.7	56.4	-18.69	37.7	54	16.3	Res. Band
7.320	Max Peak	Horz	82.16	36.52	-54.7	64.0	N/A	64.0	74	10.0	Res. Band



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

Radiated Spurious Emissions in Restricted Bands

Tested at a 3 Meter Distance 30 MHz to 18 GHz

Tested at a 1 Meter Distance 18 GHz to 26 GHz

EUT: Sensatec CA630
Manufacturer: RF Technologies
Operating Condition: 70 deg F; 27% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit; duty cycle 100%
Date: 04-08-2013

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz, Detector = Peak.
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 3 MHz, Detector = CISPR Average.
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel 25 (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
4.950	Average	Vert	89.26	33.04	-55.6	66.7	-18.69	48.0	54	6.0	Res. Band
4.950	Max Peak	Vert	95.38	33.04	-55.6	72.8	N/A	72.8	74	1.2	Res. Band
4.950	Average	Horz	84.52	33.04	-55.6	62.0	-18.69	43.3	54	10.7	Res. Band
4.950	Max Peak	Horz	90.63	33.04	-55.6	68.1	N/A	68.1	74	5.9	Res. Band
7.425	Average	Vert	79.73	36.65	-54.1	62.3	-18.69	43.6	54	10.4	Res. Band
7.425	Max Peak	Vert	87.05	36.65	-54.1	69.6	N/A	69.6	74	4.4	Res. Band
7.425	Average	Horz	82.20	36.65	-54.1	64.7	-18.69	46.0	54	8.0	Res. Band
7.425	Max Peak	Horz	89.25	36.65	-54.1	71.8	N/A	71.8	74	2.2	Res. Band



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Appendix B

7.0 Band-Edge Measurements – RF Conducted

Rule Part:

15.247 (d)

Test Procedure:

558074 D01 DTS Meas Guidance v02
10.0 Maximum Unwanted Emission Levels
10.1 Unwanted Emissions into Non-Restricted Frequency Bands
10.1.1 Reference Level Measurement
10.1.2 Unwanted Emissions Level

Limit:

The peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Results:

Compliant

Notes:

This was an RF conducted measurement. The EUT was connected to the measuring equipment through an SMA connector allowing RF conducted measurements. Cable loss and attenuation was accounted for in the transducer factors set in the analyzer.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.



Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

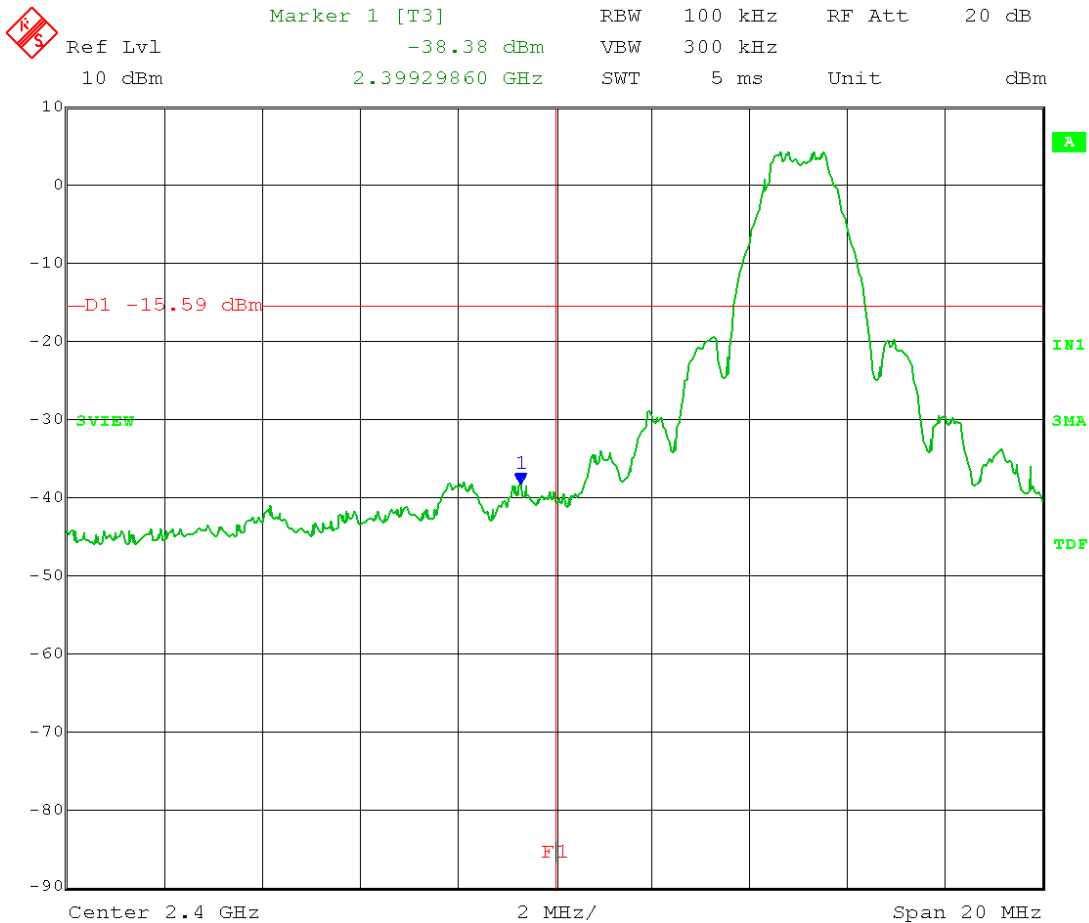
166 South Carter, Genoa City, WI 53128

Test Date: 04-09-2013
 Company: RF Technologies
 EUT: Sensatec CA630
 Test: Band-Edge Measurements - Conducted
 Operator: Craig B

Comment: RBW = 100 kHz
 VBW ≥ 300 kHz
 Detector = Peak
 Sweep = auto couple
 Trace = max hold

Low Channel Transmit = 2.405 GHz

Limit: Band-Edge > 20 dB Below Peak In-Band Emission
 Limit = 4.41 dBm - 20 dB = -15.59 dBm
 Band-Edge Frequency = 2.4 GHz



Date: 9.APR.2013 12:51:07



166 South Carter, Genoa City, WI 53128

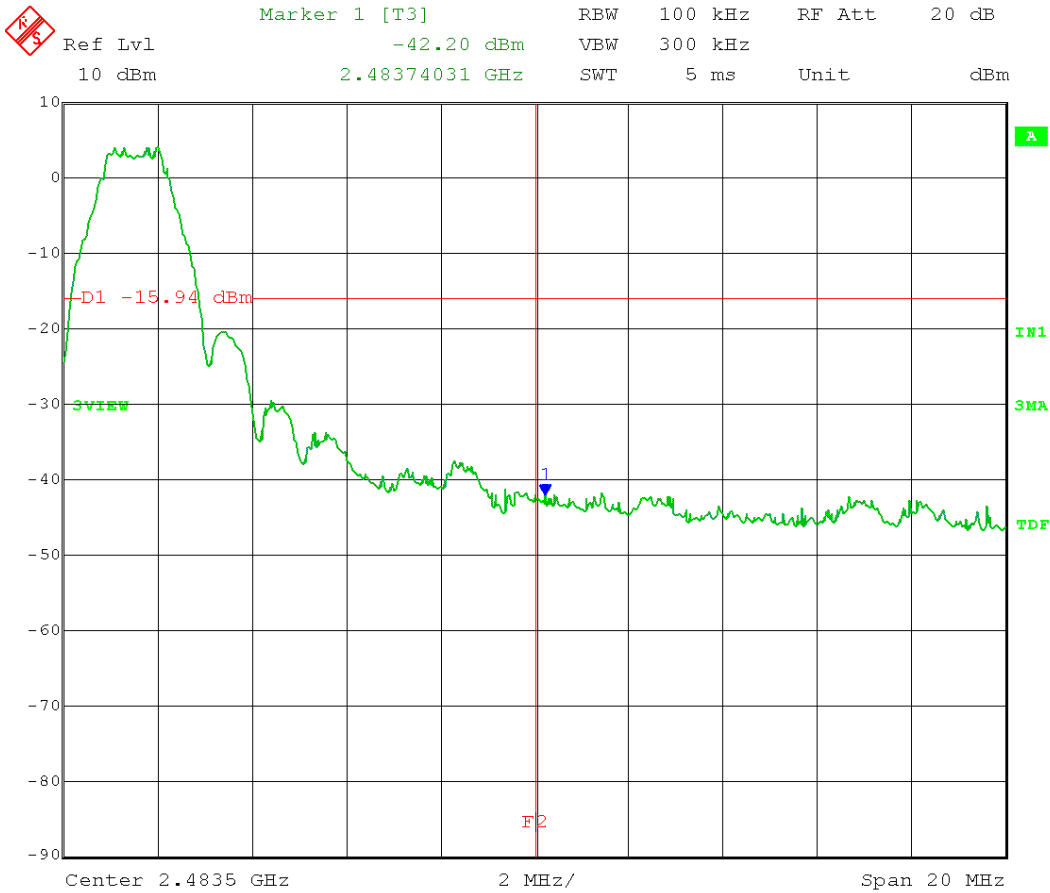
Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Test Date: 04-09-2013
Company: RF Technologies
EUT: Sensatec CA630
Test: Band-Edge Measurements - Conducted
Operator: Craig B

Comment: RBW = 100 kHz
VBW ≥ 300 kHz
Detector = Peak
Sweep = auto couple
Trace = max hold

High Channel Transmit = 2.475 GHz

Limit: Band-Edge > 20 dB Below Peak In-Band Emission
Limit = 4.06 dBm - 20 dB = -15.94 dBm
Band-Edge Frequency = 2.4835 GHz



Date: 9.APR.2013 12:46:14



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Appendix B

8.0 Band-Edge Measurements – Radiated

Upper band-edge coincides with a restricted band.

Rule Part:

15.247 (d), 15.205 (a), 15.209 (a)

Test Procedure:

558074 D01 DTS Meas Guidance v02
10.2 Unwanted Emissions into Restricted Frequency Bands
10.2.1 Radiated Emissions Measurements
ANSI C63.10:2009

Limit:

15.209 (a)

Results:

Compliant

Notes:

This was radiated measurement.

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low, middle, and high channels of the operating band.

Testing was performed prior to the release of 558074 D01 DTS Meas Guidance v03r01. Operational duty cycle correction was performed on restricted band radiated emissions per 558074 D01 DTS Meas Guidance v02 and ANSI C63.10:2009.



Company: RF Technologies, Inc.
 Model Tested: 0800-0491
 Report Number: 18925
 DLS Project: 5788

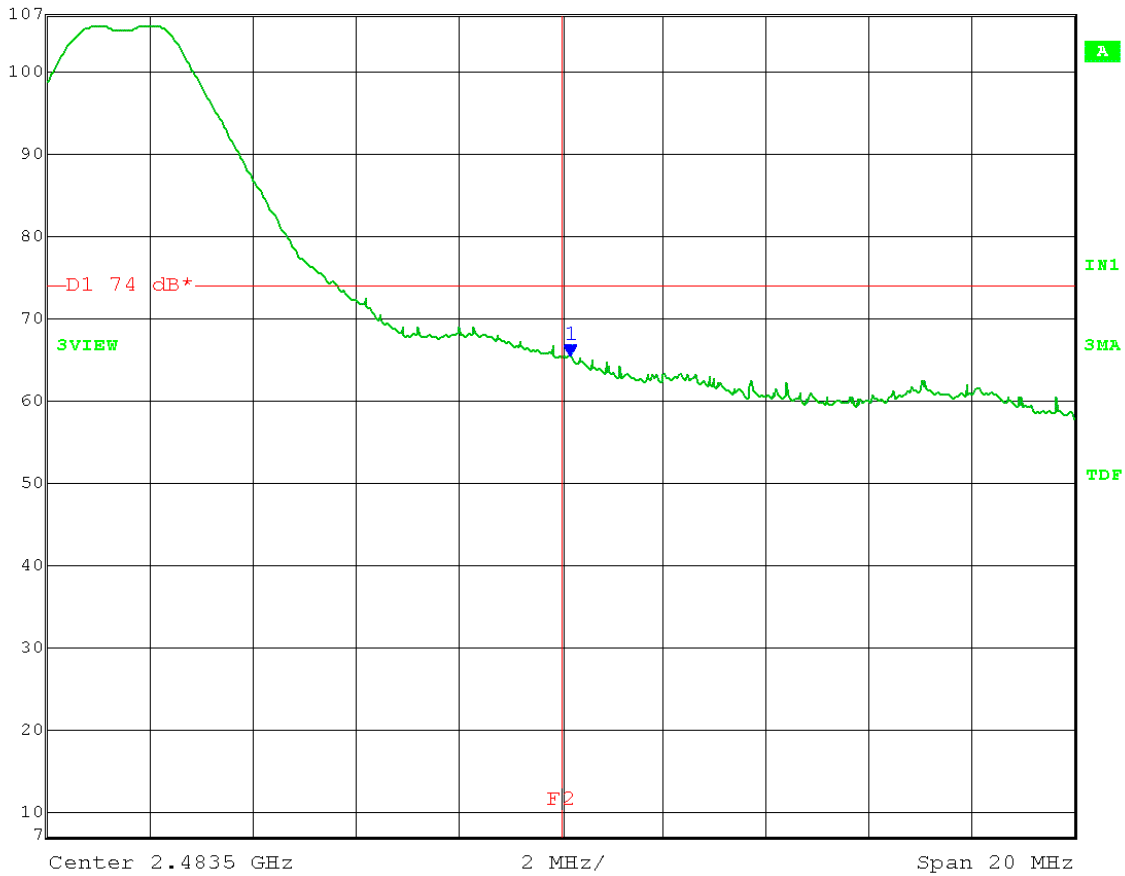
166 South Carter, Genoa City, WI 53128

Test Date: 04-08-2013
 Company: RF Technologies
 EUT: Sensatec CA630
 Test: Upper Band-Edge Radiated – 3 meter test distance
 Rule part: FCC Part 15.247(d) and FCC Part 15.205
 Operator: Craig B
 Comment: High Channel: Frequency - 2.475GHz; Vertical polarization (worst-case)
 Restricted Band Limit: 74 dBμV/m Peak, 54 dBμV/m Average

Peak level = 65.48 dBμV/m

Average level = 65.48 dBμV/m – 18.69 dB (duty cycle correction) = 46.79 dBμV/m

	Max/Ref Lvl	Marker 1 [T3]	RBW	1 MHz	RF Att	0 dB
	107 dB*	65.48 dBμV/m	VBW	3 MHz		
	97 dB*	2.48369339 GHz	SWT	2 s	Unit	dBμV/m



Date: 8.APR.2013 14:45:46



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

Appendix B

9.0 Measurement Data – AC Line Conducted Emissions

Rule Part:

15.207

Test Procedure:

ANSI C63.10-2009

Limit:

15.207 (a)

Results:

Compliant

Notes:

The EUT was set to continuously transmit (100% duty cycle) a modulated signal at its maximum power on the low channel of the operating band.

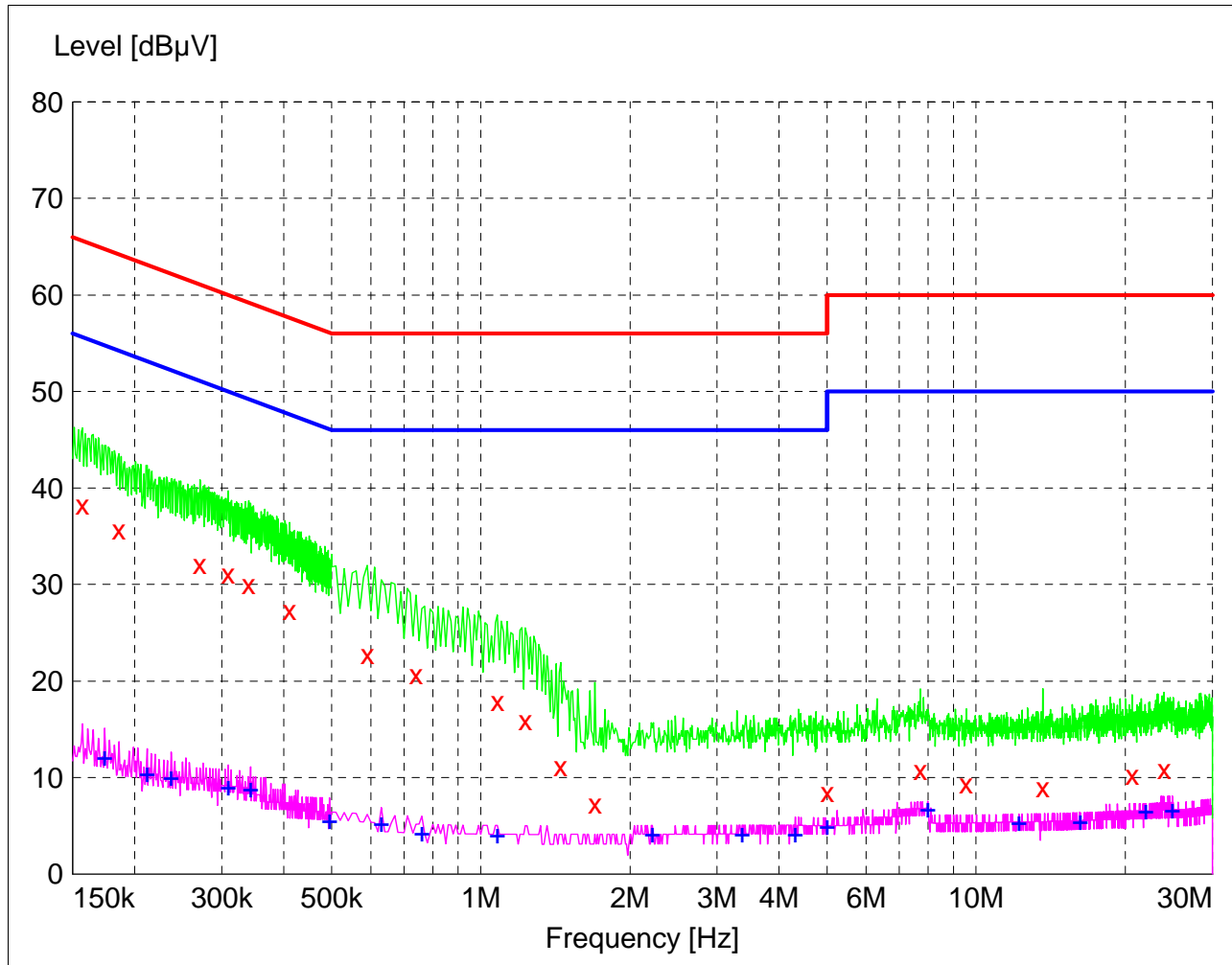
FCC Part 15.207

Voltage Mains Test

EUT: Sensatec CA630
 Manufacturer: RF Technologies
 Operating Condition: 70 deg. F, 32% R.H.
 Test Site: DLS O.F. Screen Room
 Operator: Craig B
 Test Specification: 120 V 60 Hz
 Comment: Line 1
 Date: 04-09-2013

SCAN TABLE: "Line Cond SR Final"

Short Description:		Line Conducted Emissions				
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	5.0 s	9 kHz	LISN DLS#128
CISPR AV						



x x	MES	CA630L1_fin		
+ +	MES	CA630L1_fin2		
—	MES	CA630L1_pre		
—	MES	CA630L1_pre2		
—	LIM	FCC 15.207 V QP	Voltage Amplitude QP Limit	
—	LIM	FCC 15.207 V AV	Voltage Amplitude AV Limit	

MEASUREMENT RESULT: "CA630L1_fin"

4/9/2013 2:59PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.157000	38.30	13.5	66	27.3	QP
0.186000	35.70	12.8	64	28.5	QP
0.271000	32.10	12.0	61	29.0	QP
0.309000	31.10	11.8	60	28.9	QP
0.340000	30.00	11.6	59	29.2	QP
0.411000	27.40	11.4	58	30.2	QP
0.590000	22.80	11.0	56	33.2	QP
0.740000	20.70	10.7	56	35.3	QP
1.080000	17.90	10.6	56	38.1	QP
1.230000	15.90	10.6	56	40.1	QP
1.450000	11.10	10.6	56	44.9	QP
1.700000	7.30	10.6	56	48.7	QP
5.000000	8.50	10.6	56	47.5	QP
7.715000	10.80	10.8	60	49.2	QP
9.560000	9.40	10.9	60	50.6	QP
13.625000	9.00	11.0	60	51.0	QP
20.630000	10.30	11.3	60	49.7	QP
23.945000	10.90	11.4	60	49.1	QP

MEASUREMENT RESULT: "CA630L1_fin2"

4/9/2013 2:59PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.174000	12.10	13.1	55	42.7	CAV
0.212000	10.50	12.5	53	42.6	CAV
0.237000	10.10	12.2	52	42.1	CAV
0.309000	9.10	11.8	50	40.9	CAV
0.343000	8.90	11.6	49	40.2	CAV
0.495000	5.60	11.2	46	40.5	CAV
0.630000	5.30	10.9	46	40.7	CAV
0.760000	4.30	10.7	46	41.7	CAV
1.080000	4.10	10.6	46	41.9	CAV
2.220000	4.20	10.6	46	41.8	CAV
3.370000	4.20	10.7	46	41.8	CAV
4.310000	4.20	10.6	46	41.8	CAV
5.000000	5.00	10.6	46	41.0	CAV
7.985000	6.80	10.8	50	43.2	CAV
12.200000	5.40	11.0	50	44.6	CAV
16.205000	5.50	11.1	50	44.5	CAV
21.995000	6.60	11.3	50	43.4	CAV
24.890000	6.70	11.4	50	43.3	CAV

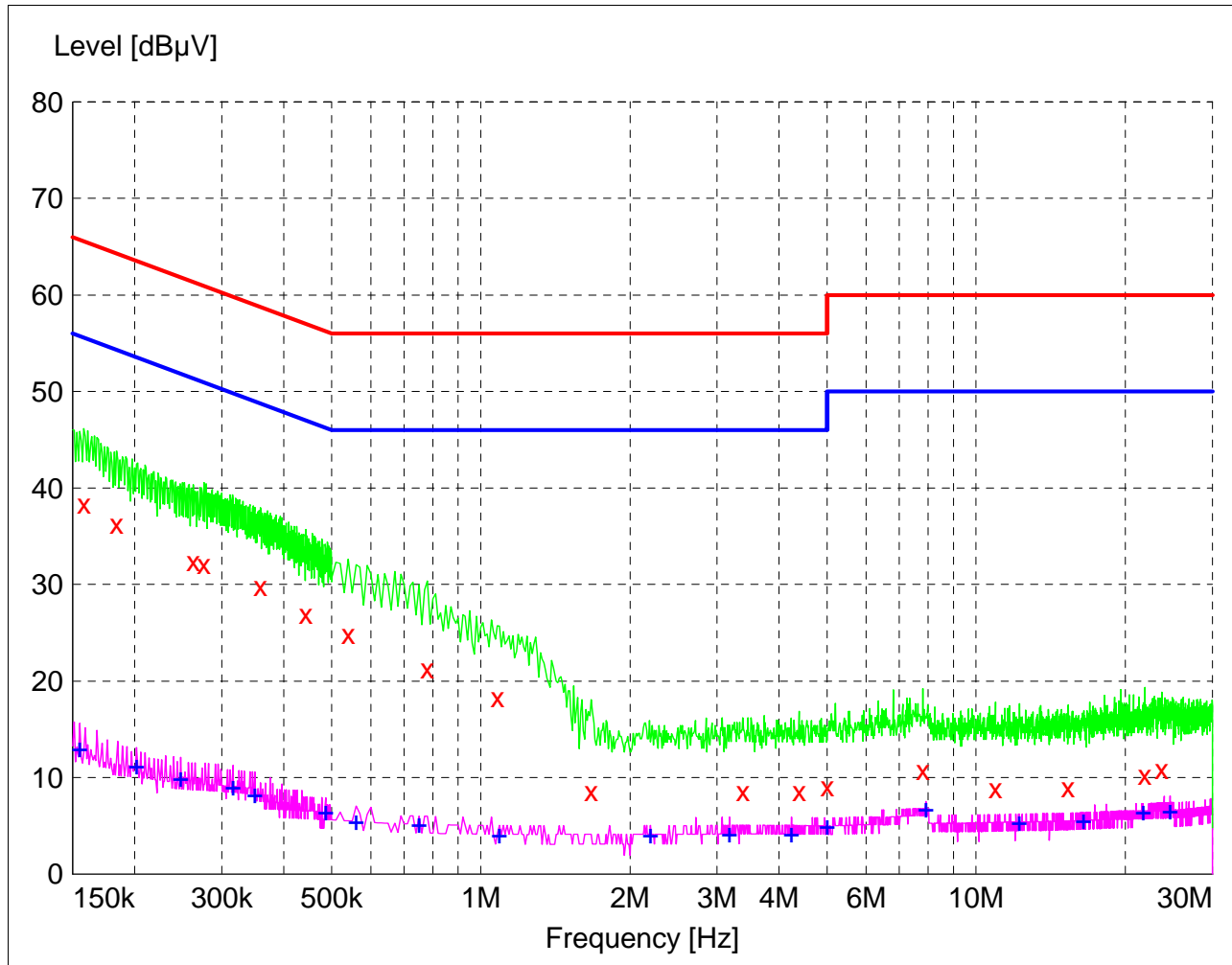
FCC Part 15.207

Voltage Mains Test

EUT: Sensatec CA630
 Manufacturer: RF Technologies
 Operating Condition: 70 deg. F, 32% R.H.
 Test Site: DLS O.F. Screen Room
 Operator: Craig B
 Test Specification: 120 V 60 Hz
 Comment: Line 2
 Date: 04-09-2013

SCAN TABLE: "Line Cond SR Final"

Short Description:			Line Conducted Emissions			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	5.0 s	9 kHz	LISN DLS#128
			CISPR AV			



x x	MES	CA630L2_fin	
+ +	MES	CA630L2_fin2	
—	MES	CA630L2_pre	
—	MES	CA630L2_pre2	
—	LIM	FCC 15.207 V QP	Voltage Amplitude QP Limit
—	LIM	FCC 15.207 V AV	Voltage Amplitude AV Limit

MEASUREMENT RESULT: "CA630L2_fin"

4/9/2013 3:08PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.158000	38.40	13.5	66	27.2	QP
0.184000	36.30	12.9	64	28.0	QP
0.263000	32.40	12.0	61	28.9	QP
0.276000	32.10	11.9	61	28.8	QP
0.359000	29.80	11.5	59	29.0	QP
0.443000	26.90	11.3	57	30.1	QP
0.540000	24.80	11.1	56	31.2	QP
0.780000	21.30	10.7	56	34.7	QP
1.080000	18.30	10.6	56	37.7	QP
1.670000	8.60	10.6	56	47.4	QP
3.380000	8.60	10.7	56	47.4	QP
4.390000	8.60	10.6	56	47.4	QP
5.000000	9.10	10.6	56	46.9	QP
7.805000	10.80	10.8	60	49.2	QP
10.940000	8.90	10.9	60	51.1	QP
15.335000	9.00	11.1	60	51.0	QP
21.905000	10.30	11.3	60	49.7	QP
23.705000	10.90	11.4	60	49.1	QP

MEASUREMENT RESULT: "CA630L2_fin2"

4/9/2013 3:08PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.155000	13.10	13.6	56	42.6	CAV
0.202000	11.20	12.7	54	42.3	CAV
0.248000	10.00	12.1	52	41.8	CAV
0.316000	9.10	11.7	50	40.7	CAV
0.350000	8.30	11.5	49	40.7	CAV
0.486000	6.50	11.2	46	39.7	CAV
0.560000	5.50	11.0	46	40.5	CAV
0.750000	5.20	10.7	46	40.8	CAV
1.090000	4.10	10.6	46	41.9	CAV
2.200000	4.10	10.6	46	41.9	CAV
3.180000	4.20	10.7	46	41.8	CAV
4.240000	4.20	10.6	46	41.8	CAV
5.000000	5.00	10.6	46	41.0	CAV
7.910000	6.80	10.8	50	43.2	CAV
12.215000	5.40	11.0	50	44.6	CAV
16.475000	5.60	11.1	50	44.4	CAV
21.725000	6.50	11.3	50	43.5	CAV
24.620000	6.60	11.4	50	43.4	CAV



166 South Carter, Genoa City, WI 53128

Company: RF Technologies, Inc.
Model Tested: 0800-0491
Report Number: 18925
DLS Project: 5788

END OF REPORT

Revision #	Date	Comments	By
1.0	04-11-2013	Preliminary Release	CB
1.1	04-18-2013	Added company and product information from DLS Part A form	CB