1250 Peterson Dr., Wheeling, IL 60090

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

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:	SkyeReader 300
Kind of Equipment:	Desktop RFID Reader
Frequency Range:	902.7 MHz - 927.3 MHz
Test Configuration:	PC interface via USB (Tested at 120 vac, 60 Hz)
Model Number(s):	SkyeReader 300
Model(s) Tested:	SkyeReader 300
Serial Number(s):	NA
Date of Tests:	November 23, December 22, 23, 2008 and January 5, & 6, 2009
Test Conducted For:	SkyeTek, Inc. 11030 Circle Point Road, Suite 300 Westminster, Colorado 80020

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

SIGNATURE PAGE

Report By:

Arnom C. Rowe
Test Engineer
EMC-001375-NE

Reviewed By:

William Stumpf
OATS Manager

Approved By:

Brian Mattson
General Manager

TABLE OF CONTENTS

TABLE OF CONTENTS

United States Department of Commerce
National Institute of Standards and Technology

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NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.

Wheeling, IL

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This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).

2008-10-01 through 2009-09-30
Effective dates

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2006-09-13)

1.0 SUMMARY OF TEST REPORT

It was found that the SkyeReader 300, Model Number(s) SkyeReader 300, **meets** the radio interference conducted and radiated emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands.

2.0 INTRODUCTION

On November 23, December 22, 23, 2008 and January 5, & 6, 2009, a series of radio frequency interference measurements was performed on SkyeReader 300, Model Number(s) SkyeReader 300, 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 & the FCC Public Notice DA 00-705 “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” operating under Section 15.247 - March 30, 2000. Tests were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

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

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

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

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency interference emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Sections 15.205, 15.209 & 15.247 for Intentional Radiators operating in the Bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

1250 Peterson Dr., Wheeling, IL 60090

4.0 TEST SET-UP

All emission tests were performed at D.L.S. Electronic Systems, Inc. and set up according to the ANSI C63.4-2003, Annex H or following the guidelines in the FCC Public Notice DA 00-705 "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" operating under Section 15.247 - March 30, 2000. The conducted tests were performed with the test item placed on a non-conductive table (table top equipment), located in the test room. Equipment normally operated on the floor was tested by placing it on the metal ground plane. The ground plane has an electrical isolation layer over its surface approximately 7mm thick. The power line supplied was connected to a dual line impedance stabilization network electrically bonded to the ground plane, located on the floor. The networks were constructed per the requirements of the ANSI C63.4-2003, Annex H.

All radiated emissions tests were performed with the test item placed on a 80 cm high rotating non-conductive table, located in the test room. Equipment normally operated on the floor was placed on a metal covered turntable which is flush with the surrounding conducting ground plane. The ground plane has an electrical isolation layer over its surface approximately 7 mm thick. The EUT is separated from the turntable ground plane by a non-conductive layer. The equipment under test was set up according to ANSI C63.4-2003, Sections 6 and 8 or following the guidelines in the FCC Public Notice DA 00-705 "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" operating under Section 15.247 - March 30, 2000, as indicated in the test data section of this test report.

NOTE:

All possible orientations of the EUT were investigated in order to maximize the emissions (see photographs).

1250 Peterson Dr., Wheeling, IL 60090

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

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

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

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

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

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

1250 Peterson Dr., Wheeling, IL 60090

6.0 AMBIENT MEASUREMENTS

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

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

1250 Peterson Dr., Wheeling, IL 60090

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

7.1 Description:

The product is a desktop RFID reader. It is connected to a host PC via USB, and using software on the host PC, interacts with UHF RFID tags. The reader is capable of reading data from and writing data to EPC Class 1 Generation 2 tags, as well as take advantage of other tag specific commands. The unit is powered via USB, contains an internal antenna, and is recognized as a USB HID device, so no special drivers are required.

The unit was connected to the provided host PC via USB. The unit was placed on a wooden desktop with the screw holes facing down. EPC C1G2 tags was on top of the unit, and the user will use SkyeWare, which is our graphical interface software, to interact with the unit. SkyeWare can access all tag and reader functions, as well as perform updates to the reader firmware.

The responses from the reader were monitored. In call cases the reader should respond somehow, either with an error code or with the appropriate response to the command given. The reader does not respond unless a command is issued. Out of spec conditions would be if the reader does not respond at all to a command or several commands, or if the host PC cannot find the USB device.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 5.8" Width: 3.5" Height: 0.98"

7.3 LINE FILTER USED:

NA

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

NA

Clock Frequencies:

862-960 MHz, 60 MHz, 13 MHz & 12 MHz

1250 Peterson Dr., Wheeling, IL 60090

7.0 DESCRIPTION OF TEST SAMPLE: (CON'T)

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

1. Interface Board PN: EIB v1.3
2. RFID module PN: M7 v1.3

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

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

NOTE:

Powered by USB through laptop computer or through power supply. USB cable connected to laptop computer, also controls transmit and receive settings.

9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 SkyeReader 300
Model Number: SkyeReader 300 Serial Number: NA

Item 1 Phihong Switching Power Supply with 2 meter cable.

Model Number: PSA15R-090P; Serial Number: P62400306A1

Item 2 Dell Latitude D630

Model Number: PP18L; Serial Number: 8941954645

Item 3 Shielded USB Cable. 2m

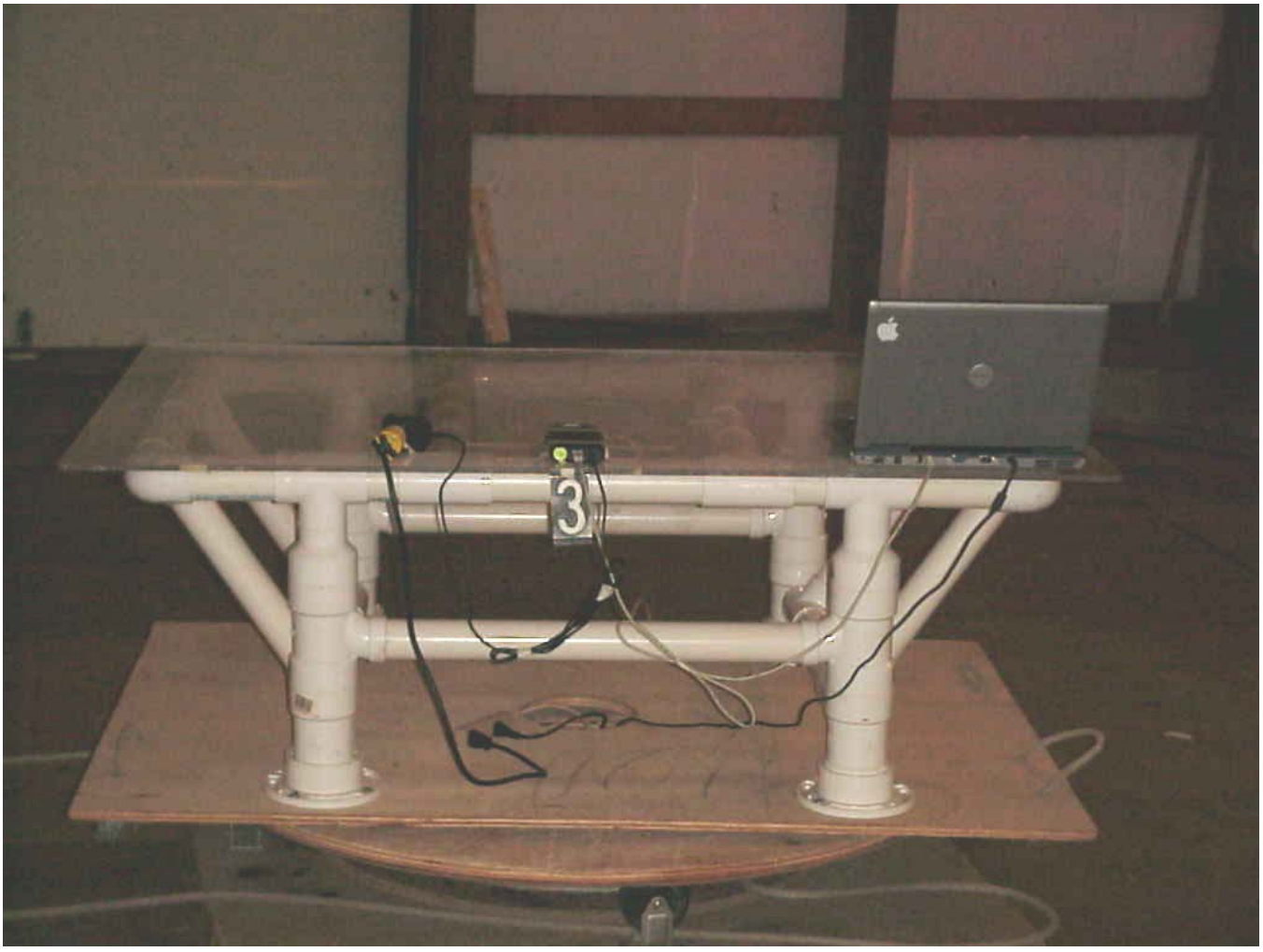
1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING

HORIZONTAL EUT RADIATED SETUP FRONT

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)



HORIZONTAL EUT RADIATED SETUP BACK

1250 Peterson Dr., Wheeling, IL 60090

10.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

VERTICAL EUT RADIATED SETUP FRONT

1250 Peterson Dr., Wheeling, IL 60090

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING

AC LINE CONDUCTED SETUP FRONT

1250 Peterson Dr., Wheeling, IL 60090

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING (CON'T)

AC LINE CONDUCTED SETUP BACK

1250 Peterson Dr., Wheeling, IL 60090

11.0 RESULTS OF TESTS

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

12.0 CONCLUSION

It was found that the SkyeReader 300, Model Number(s) SkyeReader 300 **meets** the radio interference conducted and 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.

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	3/09
Preamplifier	Rohde & Schwarz	TS-PR10	032001/004	9 kHz – 1 GHz	1/09
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	4/10
Antenna	EMCO	3146	1205	200 MHz – 1 GHz	4/10
Preamp	Ciao	CA118-4010	101	1 GHz-18 GHz	1/09
Horn Antenna	EMCO	3115	4451	1-18 GHz	5/09
Filter – High Pass	Q-Microwave	100460	--------	1.1 GHz	5/09
RF Cable	Micro-Coax	UFB205A-0 3937-50U50U	--------	1 – 18 GHz	12/09
Attenuator 20dB Fixed	Aeroflex Weinschel	75A-20-12	1071	DC – 40 GHz	7/09
RF Cable	Insulated Wire Inc.	KPS-1501-1182-KPS	--------	30 MHz – 40 GHz	5/09
Antenna	Rohde & Schwarz	HUF-Z1	829381005	20 MHz – 1 GHz	8/08

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

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Receiver	Rhode & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	12/09
LISN	Solar	9252-50-R-24-BNC	961019	10 kHz – 30 MHz	7/09
Filter- High-Pass	SOLAR	7930-10	921541	12 kHz	1/09
Limiter	Electro-Metrics	EM-7600	706	10 kHz – 30 MHz	1/09

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

APPENDIX A

TEST PROCEDURE

Part 15, Subpart C, Section 15.207

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

1.0 AC POWER LINE CONDUCTED EMISSION MEASUREMENTS

If applicable, the conducted emissions were measured over the frequency range from 150 kHz to 30 MHz in accordance with the power line measurements as specified in the American National Standards Institute, ANSI C63.4-2003, Section 12. Since the device is operated from the public utility lines, the 115 Vac 60 Hz power leads, high and low sides, were to be measured by connecting the measuring equipment to the appropriate meter terminal of the LISN. All signals were then recorded. The allowed levels for Intentional Radiators cannot exceed the following:

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

All conducted emissions measurements were made at a test room temperature of **68°F** at **23%** relative humidity.

NOTE:

The Transducer Factor is already included in the Level reading. The results are calculated from subtracting the Level from the Margin. The Limit column cannot have any decibels, so the number in the Table for the limit is rounded up or down by the software to a whole number.

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

AC POWER LINE DATA AND GRAPH(S)

TAKEN DURING TESTING

PART 15.207

FCC Part 15 Class B

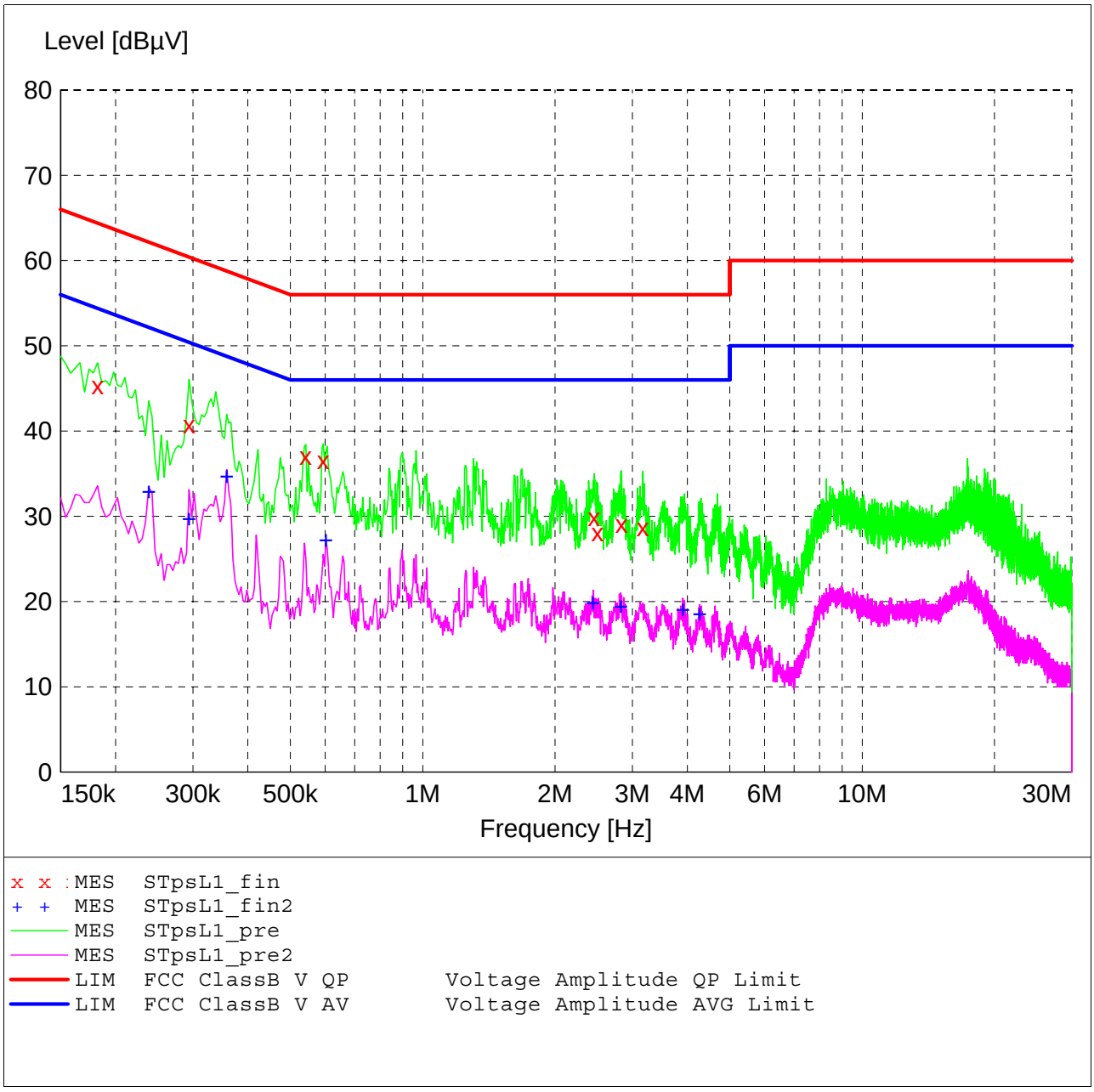
Voltage Mains Test

EUT:	Skye Reader 300
Manufacturer:	Skyetek
Operating Condition:	68 deg. F, 23% R.H.
Test Site:	DLS O.F. Site 1 (Screenroom)
Operator:	Adam A
Test Specification:	120 V 60 Hz
Comment:	Line 1 (Power Supply)
	Date: 01-06-2009

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description: Line Conducted Emissions

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



MEASUREMENT RESULT: "STpsL1_fin"

1/6/2009 12:05PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.182000	45.30	11.1	64	19.1	QP	---	---
0.294000	40.70	10.5	60	19.7	QP	---	---
0.542000	37.10	10.3	56	18.9	QP	---	---
0.594000	36.60	10.3	56	19.4	QP	---	---
2.454000	29.90	10.4	56	26.1	QP	---	---
2.498000	28.10	10.4	56	27.9	QP	---	---
2.834000	29.10	10.5	56	26.9	QP	---	---
3.170000	28.70	10.6	56	27.3	QP	---	---

MEASUREMENT RESULT: "STpsL1_fin2"

1/6/2009 12:05PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.238000	32.90	10.7	52	19.3	CAV	---	---
0.294000	29.70	10.5	50	20.7	CAV	---	---
0.358000	34.70	10.4	49	14.1	CAV	---	---
0.602000	27.20	10.3	46	18.8	CAV	---	---
2.442000	19.80	10.4	46	26.2	CAV	---	---
2.822000	19.40	10.5	46	26.6	CAV	---	---
3.910000	19.00	10.4	46	27.0	CAV	---	---
4.266000	18.50	10.4	46	27.5	CAV	---	---

FCC Part 15 Class B

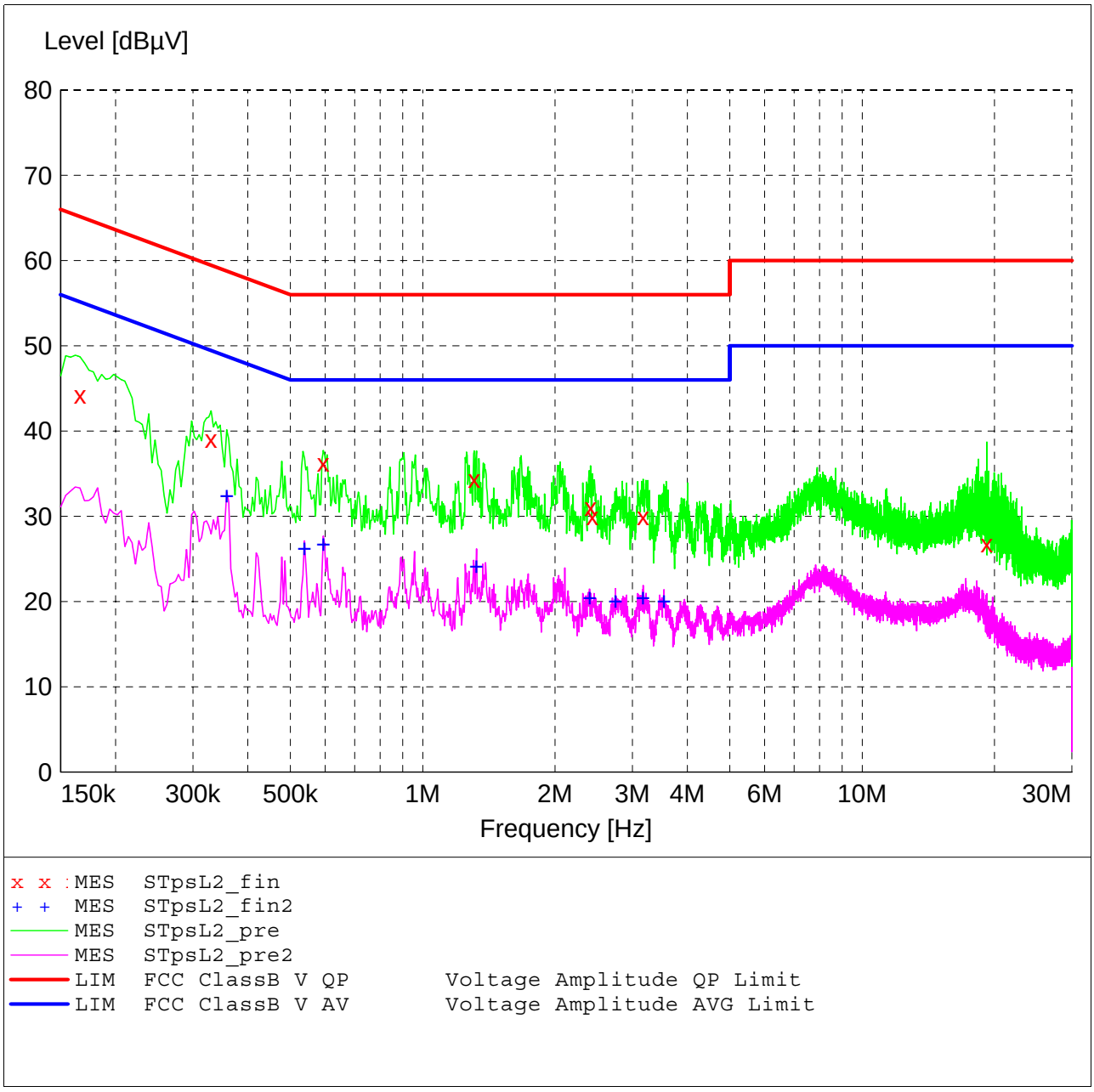
Voltage Mains Test

EUT: Skye Reader 300
Manufacturer: Skyetek
Operating Condition: 68 deg. F, 23% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Adam A
Test Specification: 120 V 60 Hz
Comment: Line 2 (Power Supply)
Date: 01-06-2009

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description: Line Conducted Emissions

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



MEASUREMENT RESULT: "STpsL2_fin"

1/6/2009 12:10PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.166000	44.20	11.3	65	21.0	QP	---	---
0.330000	39.00	10.5	60	20.5	QP	---	---
0.594000	36.30	10.3	56	19.7	QP	---	---
1.310000	34.40	10.3	56	21.6	QP	---	---
2.410000	31.10	10.4	56	24.9	QP	---	---
2.434000	30.00	10.4	56	26.0	QP	---	---
3.174000	30.00	10.6	56	26.0	QP	---	---
19.210000	26.80	11.4	60	33.2	QP	---	---

MEASUREMENT RESULT: "STpsL2_fin2"

1/6/2009 12:10PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.358000	32.40	10.4	49	16.4	CAV	---	---
0.538000	26.20	10.3	46	19.8	CAV	---	---
0.594000	26.70	10.3	46	19.3	CAV	---	---
1.326000	24.10	10.3	46	21.9	CAV	---	---
2.398000	20.40	10.4	46	25.6	CAV	---	---
2.746000	20.00	10.4	46	26.0	CAV	---	---
3.174000	20.40	10.6	46	25.6	CAV	---	---
3.538000	20.00	10.5	46	26.0	CAV	---	---

FCC Part 15 Class B

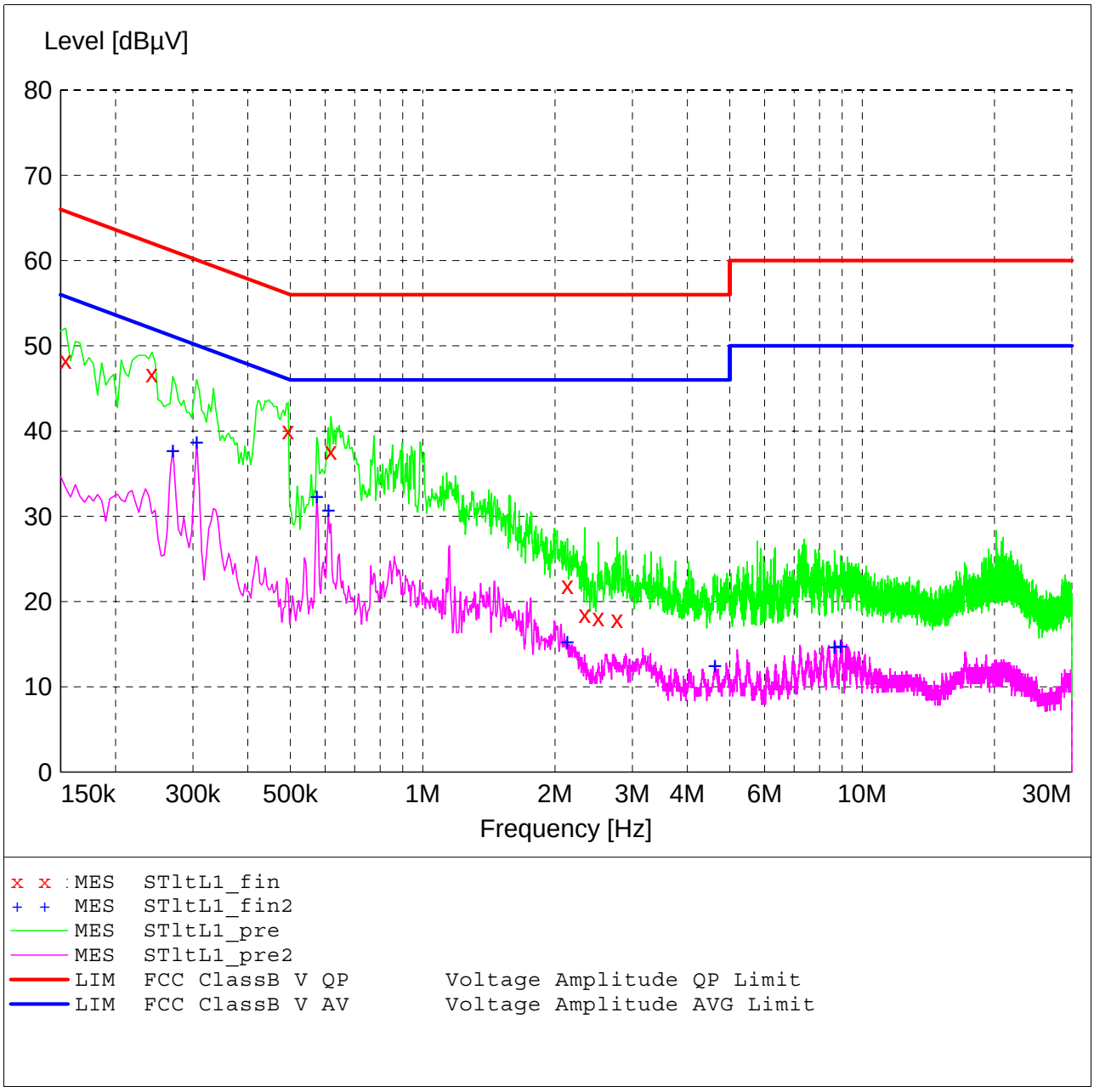
Voltage Mains Test

EUT: Skye Reader 300
Manufacturer: Skyetek
Operating Condition: 68 deg. F, 23% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Adam A
Test Specification: 120 V 60 Hz
Comment: Line 1 (Powered over USB; Laptop)
Date: 01-06-2009

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description: Line Conducted Emissions

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



MEASUREMENT RESULT: "STltL1_fin"

1/6/2009 12:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154000	48.30	11.4	66	17.5	QP	---	---
0.242000	46.70	10.7	62	15.3	QP	---	---
0.494000	40.10	10.3	56	16.0	QP	---	---
0.618000	37.60	10.3	56	18.4	QP	---	---
2.134000	21.90	10.4	56	34.1	QP	---	---
2.338000	18.50	10.4	56	37.5	QP	---	---
2.510000	18.10	10.4	56	37.9	QP	---	---
2.770000	17.90	10.4	56	38.1	QP	---	---

MEASUREMENT RESULT: "STltL1_fin2"

1/6/2009 12:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.270000	37.60	10.6	51	13.5	CAV	---	---
0.306000	38.70	10.5	50	11.4	CAV	---	---
0.574000	32.30	10.3	46	13.7	CAV	---	---
0.610000	30.70	10.3	46	15.3	CAV	---	---
2.134000	15.20	10.4	46	30.8	CAV	---	---
4.626000	12.40	10.4	46	33.6	CAV	---	---
8.650000	14.60	10.7	50	35.4	CAV	---	---
8.946000	14.70	10.7	50	35.3	CAV	---	---

FCC Part 15 Class B

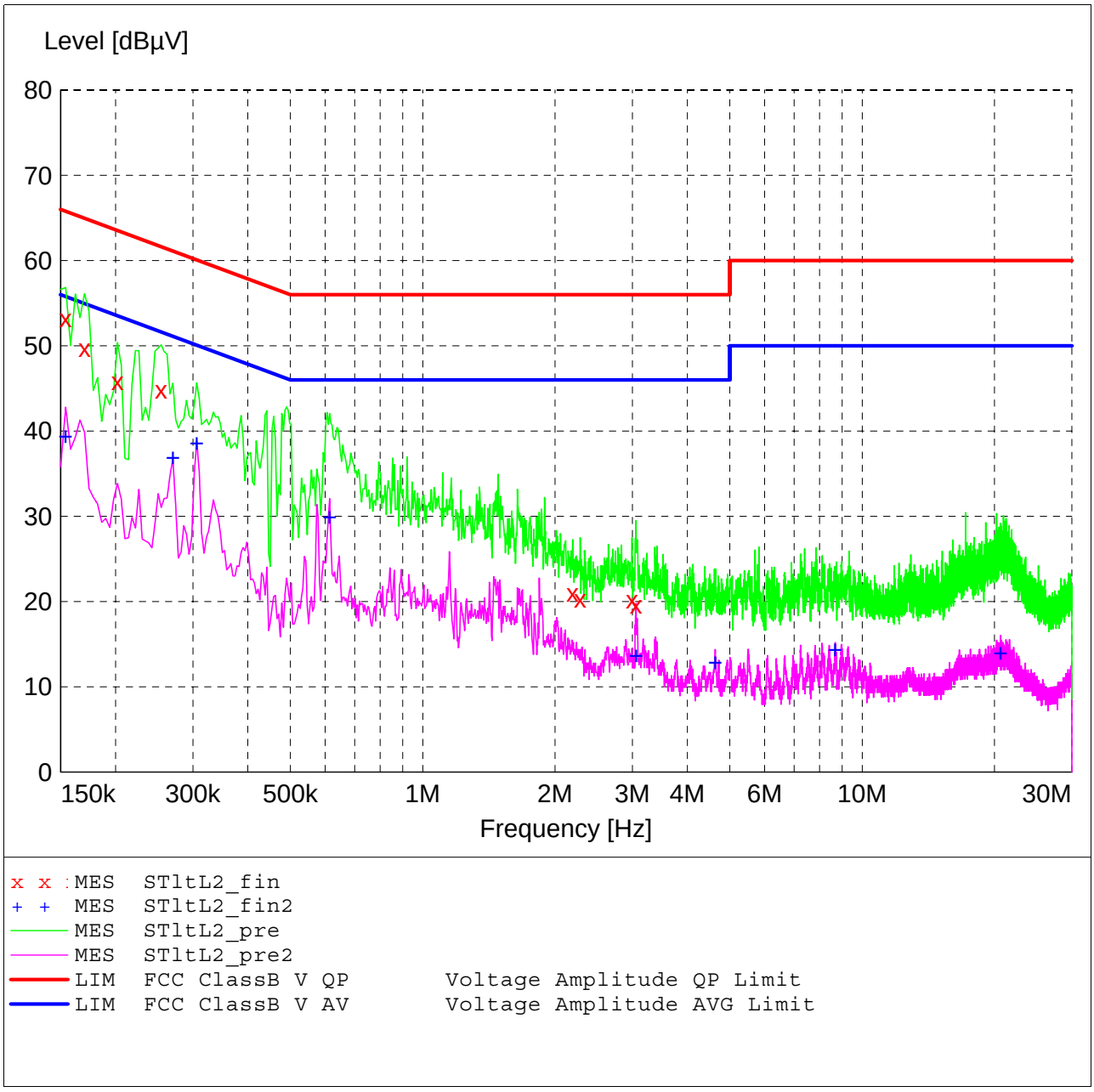
Voltage Mains Test

```
EUT:                  Skye Reader 300
Manufacturer:         Skyetek
Operating Condition:  68 deg. F,  23%  R.H.
Test Site:            DLS O.F. Site 1 (Screenroom)
Operator:             Adam A
Test Specification:   120 V  60 Hz
Comment:              Line 2 (Powered over USB; Laptop)
                      Date:  01-06-2009
```

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description: Line Conducted Emissions

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



MEASUREMENT RESULT: "STltL2_fin"

1/6/2009 12:21PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154000	53.20	11.4	66	12.6	QP	---	---
0.170000	49.70	11.2	65	15.3	QP	---	---
0.202000	45.80	10.9	64	17.7	QP	---	---
0.254000	44.80	10.7	62	16.8	QP	---	---
2.194000	21.00	10.4	56	35.0	QP	---	---
2.282000	20.30	10.4	56	35.7	QP	---	---
2.994000	20.20	10.5	56	35.8	QP	---	---
3.058000	19.60	10.5	56	36.4	QP	---	---

MEASUREMENT RESULT: "STltL2_fin2"

1/6/2009 12:21PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154000	39.40	11.4	56	16.4	CAV	---	---
0.270000	36.90	10.6	51	14.2	CAV	---	---
0.306000	38.60	10.5	50	11.5	CAV	---	---
0.614000	29.90	10.3	46	16.1	CAV	---	---
3.058000	13.60	10.5	46	32.4	CAV	---	---
4.630000	12.80	10.4	46	33.2	CAV	---	---
8.686000	14.30	10.7	50	35.7	CAV	---	---
20.670000	13.90	11.5	50	36.1	CAV	---	---

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX B

TEST PROCEDURE

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

ANSI C63.4-2003 & FCC Public Notice DA 00-705 March 30, 2000 (FHSS)

OPERATION WITHIN THE BAND 902-928 MHz,

2400-2483.5 MHz AND 5725-5857 MHz

NOTE:

Per the FCC Public Notice DA 00-705 “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” operating under Section 15.247 - March 30, 2000, as indicated in the test data section of this test report.

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

1.0 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – PART 15.247(d) & FCC Public Notice DA 00-705 "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" operating under Section 15.247 - March 30, 2000.

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

The allowed emissions for transmitters operating in the 902 MHz - 928 MHz bands for SkyeReader 300 equipment are found under Part 15, Section 15.247(d). This paragraph states that in any 100 kHz bandwidth outside the frequency band which the spread spectrum intentional radiator is operating, the radio frequency power produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

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

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RF CONDUCTED EMISSION DATA AND GRAPH(S)

TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

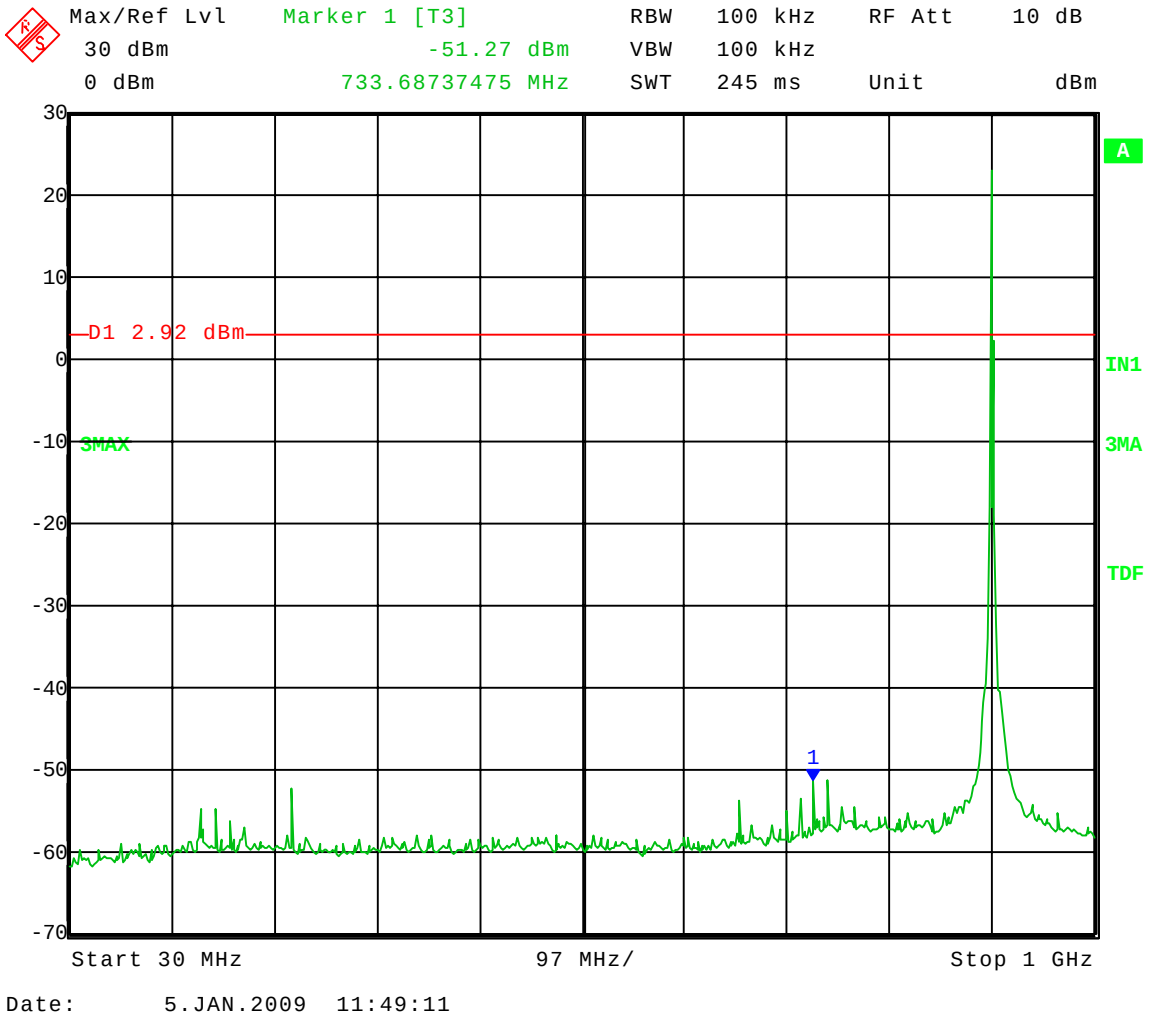
AT THE ANTENNA TERMINALS

PART 15.247(d)

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

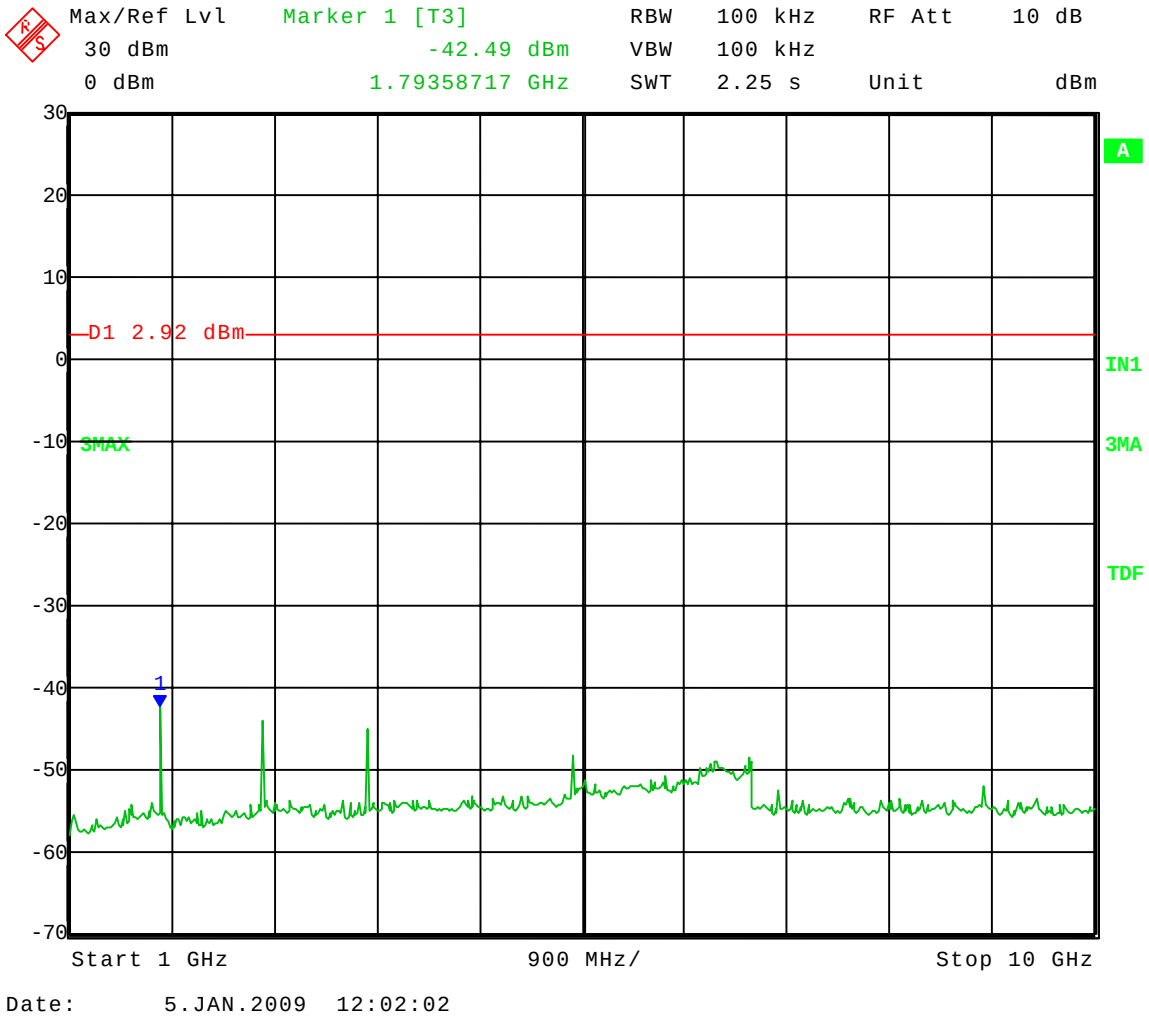
Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(d) – Conducted Spurious Emissions
Operator: Adam A
Comment: Low Channel Transmit = 902.7 MHz
Frequency Range: 30 to 1000 MHz
Limit = 2.92 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

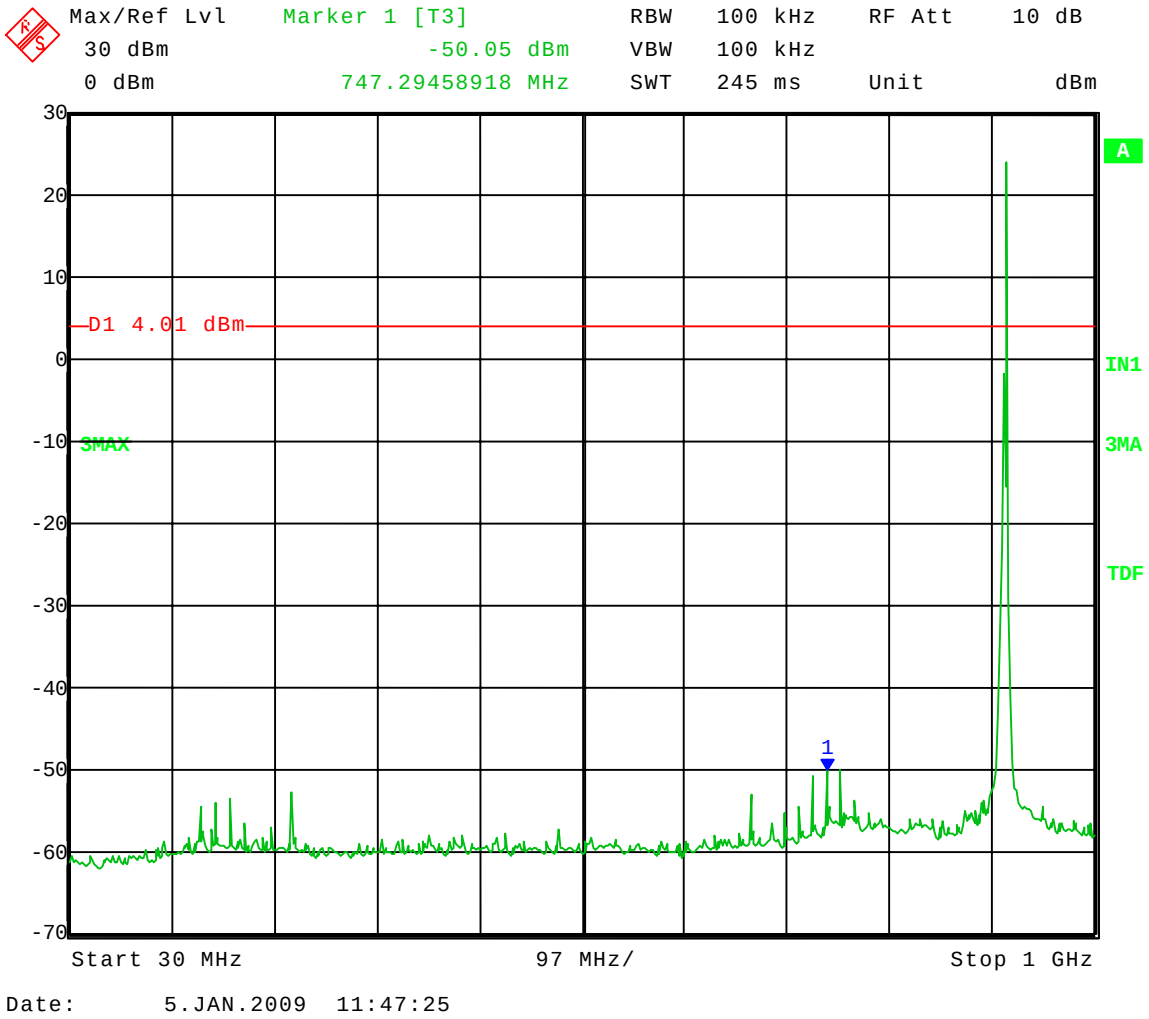
Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(d) – Conducted Spurious Emissions
Operator: Adam A
Comment: Low Channel Transmit = 902.7 MHz
Frequency Range: 1 to 10 GHz
Limit = 2.92 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

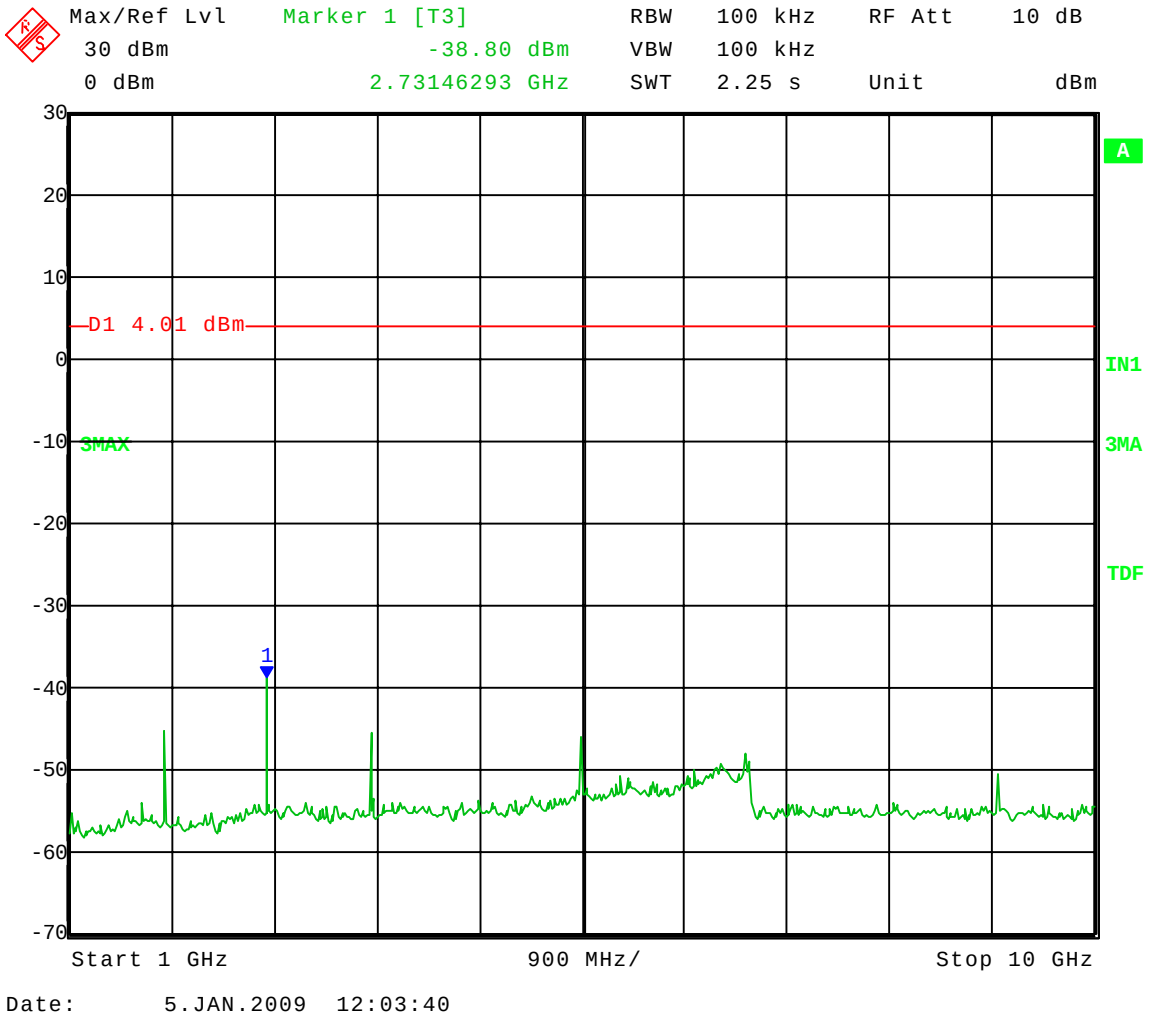
Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(d) – Conducted Spurious Emissions
Operator: Adam A
Comment: Mid Channel Transmit = 915 MHz
Frequency Range: 30 to 1000 MHz
Limit = 4.01 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

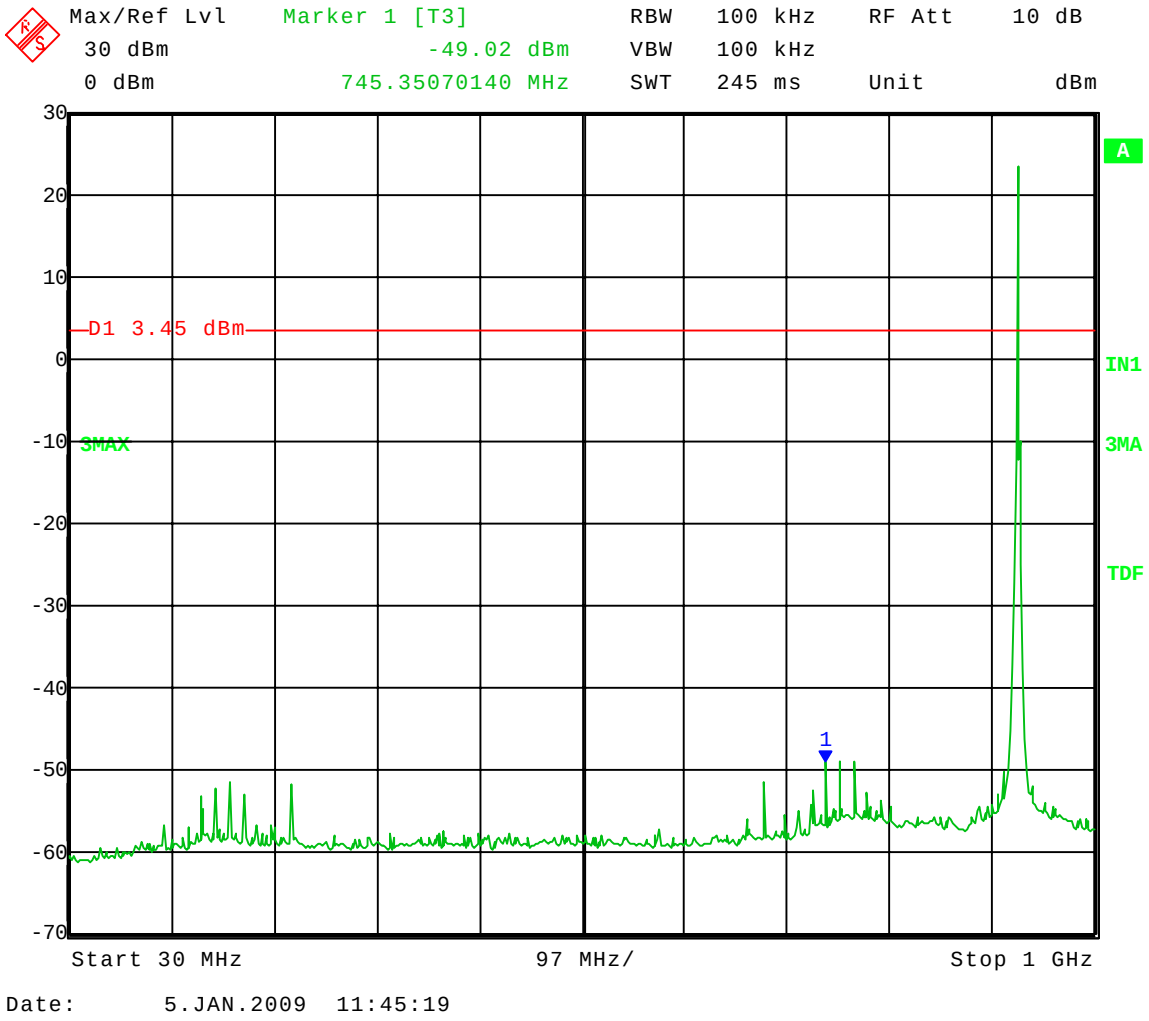
Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(d) – Conducted Spurious Emissions
Operator: Adam A
Comment: Mid Channel Transmit = 915 MHz
Frequency Range: 1 to 10 GHz
Limit = 4.01dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

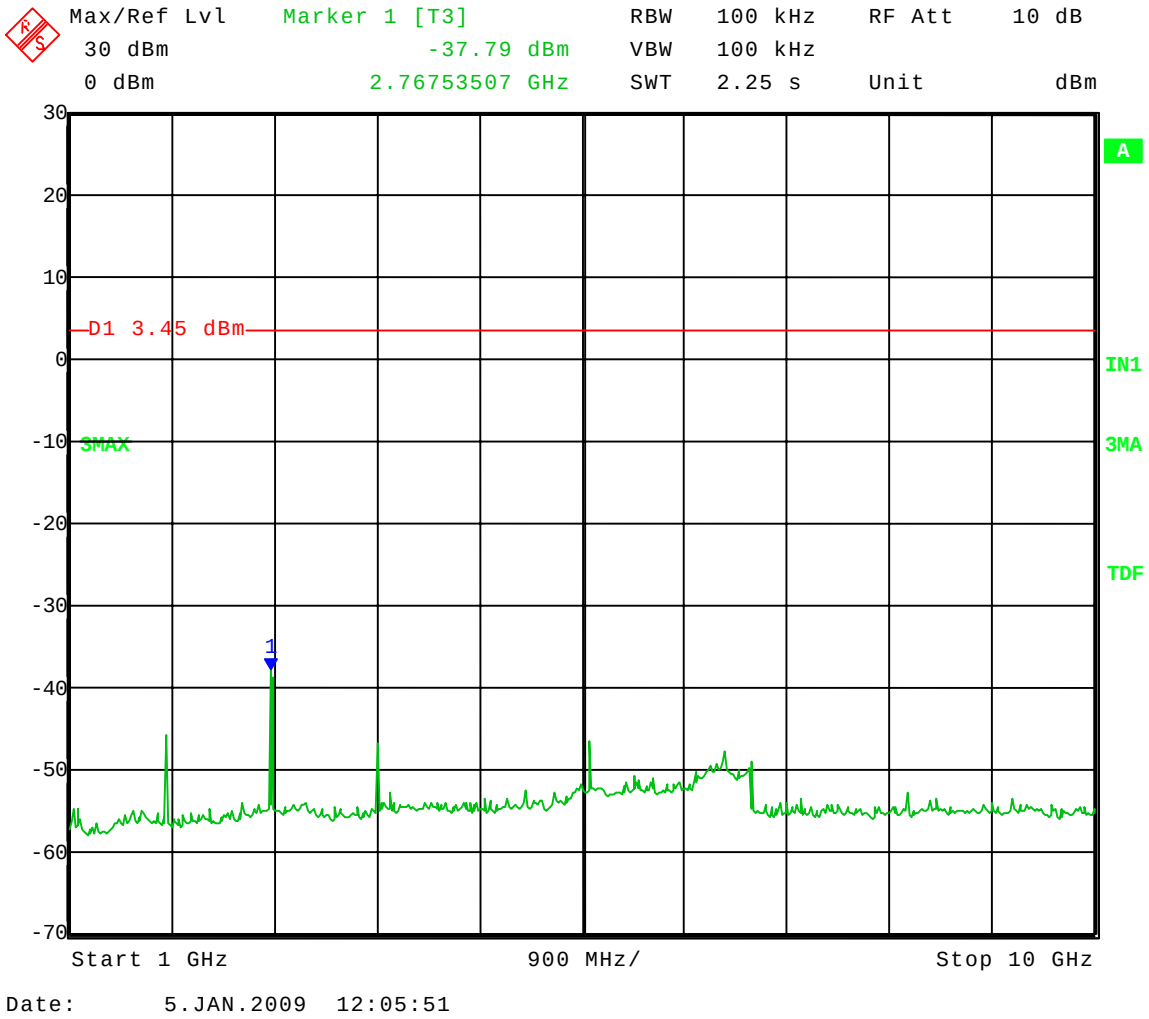
Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(d) – Conducted Spurious Emissions
Operator: Adam A
Comment: High Channel Transmit = 927.3 MHz
Frequency Range: 30 to 1000 MHz
Limit = 3.45 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(d) – Conducted Spurious Emissions
Operator: Adam A
Comment: High Channel Transmit = 927.3 MHz
Frequency Range: 1 to 10 GHz
Limit = 3.45 dBm
All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

2.0 RF CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING

RF CONDUCTED SETUP

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

3.0 RESTRICTED BANDS

As stated in Section 15.205a, the fundamental emission from the SkyeReader 300 shall not fall within any of the bands listed below:

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

NOTE:

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

4.0 RESTRICTED BAND AND BAND EDGE COMPLIANCE

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

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

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

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DATA TAKEN SHOWING

THE RESTRICTED BAND COMPLIANCE

PART 15.247(d) & 15.205

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

1250 Peterson Dr., Wheeling, IL 60090

Radiated Spurious Emissions 30 MHz – 10 GHz
Tested at a 3 Meter Distance

EUT: Skye Reader 300
Manufacturer: SkyeTek, Inc.
Operating Condition: 66 deg F; 33% R.H.
Test Site: Site 2
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 902.7 MHz Transmit Frequency
Date: 12/23/2008

Notes: **(1)** Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
(3) All other restricted band emissions at least 20 dB under the limit.
(4) Limit for spurious emissions is 20 dB below fundamental measurement. Section 15.247(d)
(5) All other spurious emissions at least 20 dB under the limit.

Low Channel: 902.7 MHz

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
2.7081	Average	Vert	58.14	29.28	-36.0	51.42	13.47	37.95	54	16.05	Res. Band
2.7081	Max Peak	Vert	73.35	29.28	-36.0	66.63	---	66.63	74	7.37	Res. Band
2.7081	Average	Horz	58.58	29.28	-36.0	51.86	13.47	38.39	54	15.61	Res. Band
2.7081	Max Peak	Horz	71.15	29.28	-36.0	64.43	---	64.43	74	9.57	Res. Band
3.6108	Average	Vert	56.33	31.57	-35.1	52.80	13.47	39.33	54	14.67	Res. Band
3.6108	Max Peak	Vert	66.56	31.57	-35.1	63.03	---	63.03	74	10.97	Res. Band
3.6108	Average	Horz	49.93	31.57	-35.1	46.40	13.47	32.93	54	21.07	Res. Band
3.6108	Max Peak	Horz	62.97	31.57	-35.1	59.44	---	59.44	74	14.56	Res. Band
4.5135	Average	Vert	50.26	32.52	-33.3	49.48	13.47	36.01	54	17.99	Res. Band
4.5135	Max Peak	Vert	63.21	32.52	-33.3	62.43	---	62.43	74	11.57	Res. Band
4.5135	Average	Horz	48.41	32.52	-33.3	47.63	13.47	34.16	54	19.84	Res. Band
4.5135	Max Peak	Horz	61.27	32.52	-33.3	60.49	---	60.49	74	13.51	Res. Band
5.4162	Average	Vert	48.71	34.03	-32.2	50.54	13.47	37.07	54	16.93	Res. Band
5.4162	Max Peak	Vert	58.13	34.03	-32.2	59.96	---	59.96	74	14.04	Res. Band
5.4162	Average	Horz	46.07	34.03	-32.2	47.90	13.47	34.43	54	19.57	Res. Band
5.4162	Max Peak	Horz	56.58	34.03	-32.2	58.41	---	58.41	74	15.59	Res. Band

1250 Peterson Dr., Wheeling, IL 60090

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

Radiated Spurious Emissions 30 MHz – 10 GHz
Tested at a 3 Meter Distance

EUT: Skye Reader 300
Manufacturer: SkyeTek, Inc.
Operating Condition: 66 deg F; 33% R.H.
Test Site: Site 2
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 915 MHz Transmit Frequency
Date: 12/23/2008

Notes: **(1)** Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
(3) All other restricted band emissions at least 20 dB under the limit.
(4) Limit for spurious emissions is 20 dB below fundamental measurement. Section 15.247(d)
(5) All other spurious emissions at least 20 dB under the limit.

Mid Channel: 915 MHz

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
2.745	Average	Vert	54.55	29.39	-36.0	47.94	13.38	34.56	54	19.44	Res. Band
2.745	Max Peak	Vert	70.18	29.39	-36.0	63.57	---	63.57	74	10.43	Res. Band
2.745	Average	Horz	54.22	29.39	-36.0	47.61	13.38	34.23	54	19.77	Res. Band
2.745	Max Peak	Horz	72.16	29.39	-36.0	65.55	---	65.55	74	8.45	Res. Band
3.660	Average	Vert	55.58	31.68	-34.9	52.36	13.38	38.98	54	15.02	Res. Band
3.660	Max Peak	Vert	66.23	31.68	-34.9	63.01	---	63.01	74	10.99	Res. Band
3.660	Average	Horz	49.61	31.68	-34.9	46.39	13.38	33.01	54	20.99	Res. Band
3.660	Max Peak	Horz	63.16	31.68	-34.9	59.94	---	59.94	74	14.06	Res. Band
4.575	Average	Vert	50.59	32.60	-33.4	49.79	13.38	36.41	54	17.59	Res. Band
4.575	Max Peak	Vert	63.72	32.60	-33.4	62.92	---	62.92	74	11.08	Res. Band
4.575	Average	Horz	50.18	32.60	-33.4	49.38	13.38	36.00	54	18.00	Res. Band
4.575	Max Peak	Horz	63.17	32.60	-33.4	62.37	---	62.37	74	11.63	Res. Band

1250 Peterson Dr., Wheeling, IL 60090

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

Radiated Spurious Emissions 30 MHz – 10 GHz
Tested at a 3 Meter Distance

EUT: Skye Reader 300
Manufacturer: SkyeTek, Inc.
Operating Condition: 66 deg F; 33% R.H.
Test Site: Site 2
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 927.3 MHz Transmit Frequency
Date: 12/23/2008

Notes: **(1)** Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
(3) All other restricted band emissions at least 20 dB under the limit.
(4) Limit for spurious emissions is 20 dB below fundamental measurement. Section 15.247(d)
(5) All other spurious emissions at least 20 dB under the limit.

High Channel: 927.3 MHz

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
2.7819	Average	Vert	55.81	29.49	-36.1	49.20	13.29	35.91	54	18.09	Res. Band
2.7819	Max Peak	Vert	67.89	29.49	-36.1	61.28	---	61.28	74	12.72	Res. Band
2.7819	Average	Horz	54.96	29.49	-36.1	48.35	13.29	35.06	54	18.94	Res. Band
2.7819	Max Peak	Horz	70.91	29.49	-36.1	64.30	---	64.30	74	9.70	Res. Band
3.7092	Average	Vert	59.08	31.80	-34.7	56.18	13.29	42.89	54	11.11	Res. Band
3.7092	Max Peak	Vert	66.97	31.80	-34.7	64.07	---	64.07	74	9.93	Res. Band
3.7092	Average	Horz	52.52	31.80	-34.7	49.62	13.29	36.33	54	17.67	Res. Band
3.7092	Max Peak	Horz	64.11	31.80	-34.7	61.21	---	61.21	74	12.79	Res. Band
4.6365	Average	Vert	50.52	32.69	-33.0	50.21	13.29	36.92	54	17.08	Res. Band
4.6365	Max Peak	Vert	63.59	32.69	-33.0	63.28	---	63.28	74	10.72	Res. Band
4.6365	Average	Horz	48.84	32.69	-33.0	48.53	13.29	35.24	54	18.76	Res. Band
4.6365	Max Peak	Horz	61.81	32.69	-33.0	61.50	---	61.50	74	12.50	Res. Band

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DATA AND GRAPH(S) TAKEN SHOWING

THE BAND EDGE CONDUCTED COMPLIANCE

PART 15.247

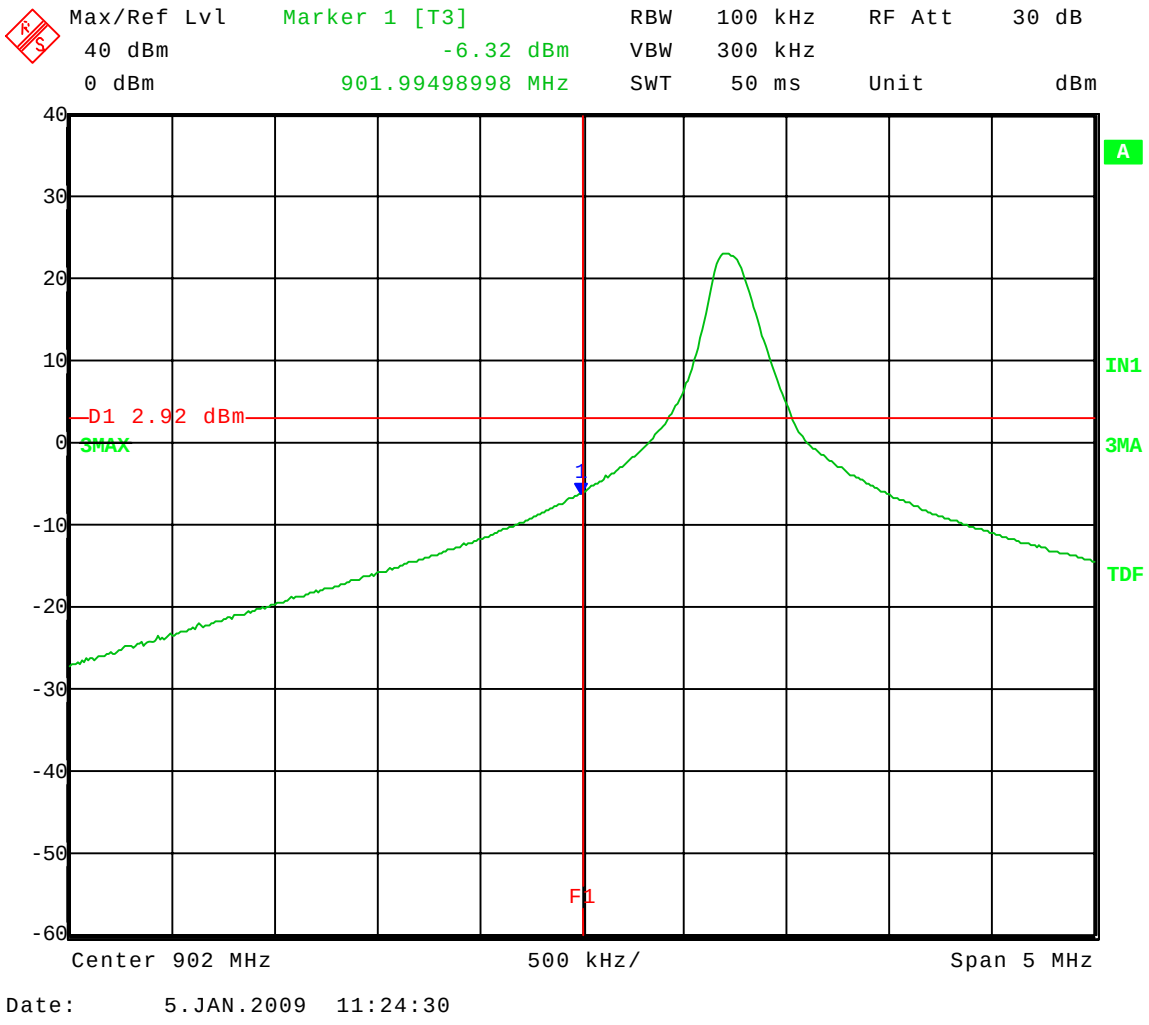
NOTE:

Using FCC Public Notice DA 00-705 “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” operating under Section 15.247 - March 30, 2000.

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

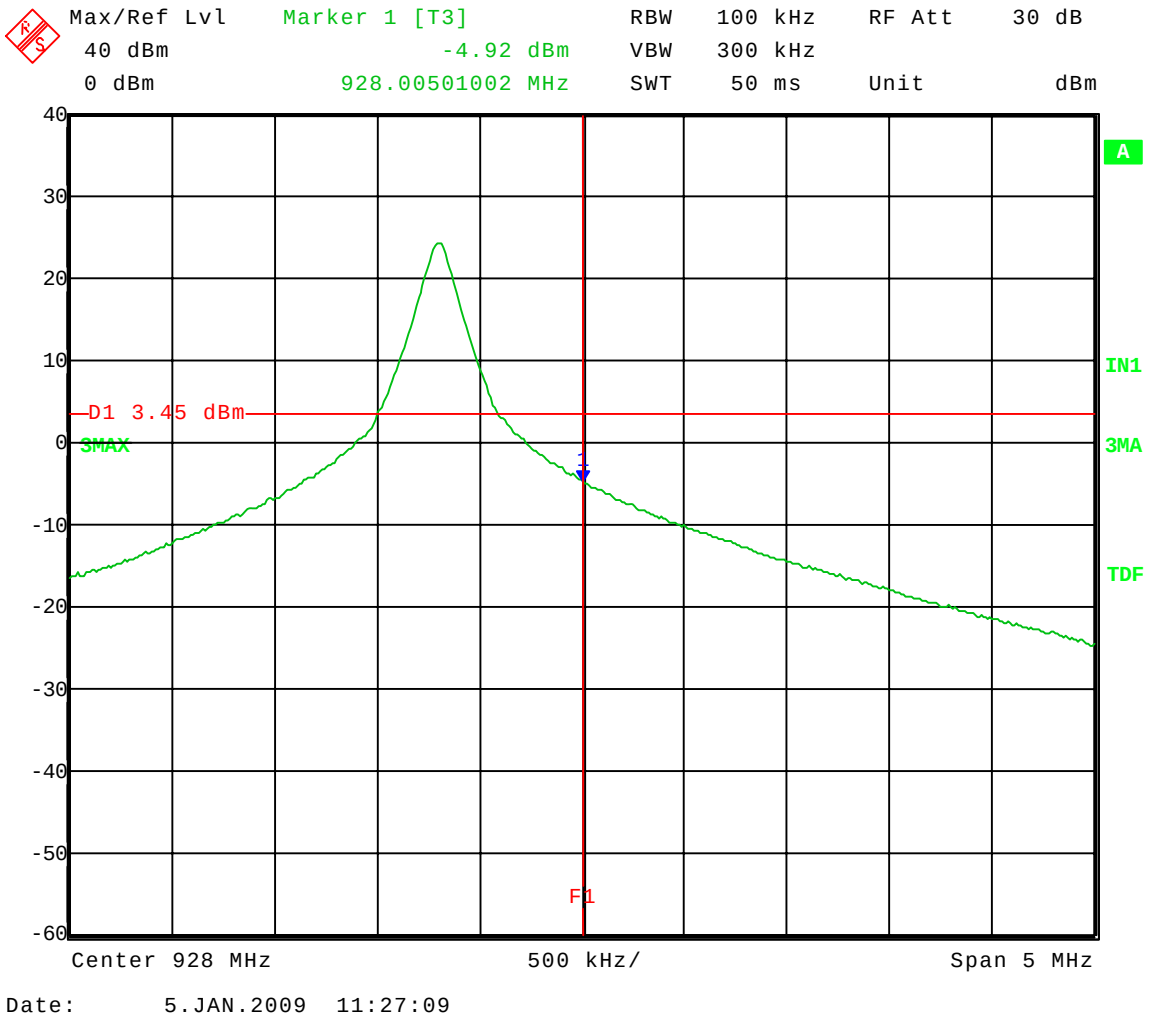
Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(c) – Band-Edge
Operator: Adam A
Comment: Low Channel 902.7 MHz
Limit: 20 dB below fundamental



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(c) – Band-Edge
Operator: Adam A
Comment: High Channel 927.3 MHz
Limit: 20 dB below fundamental



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

5.0 FIELD STRENGTH OF FUNDAMENTAL AND SPURIOUS EMISSION MEASUREMENTS

The radiated measurements made at D.L.S. Electronic Systems, Inc., for the SkyeReader 300, Model Number: SkyeReader 300, 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 SkyeReader 300 were made up to 10000 MHz, in accordance with Section 15.33a for Intentional Radiators with a fundamental frequency of 902.7 MHz - 927.3 MHz. For intentional radiators, the frequency range to be investigated is determined by the lowest radio frequency generated by the device without going below 30 MHz, up to at least the tenth harmonic of the highest fundamental frequency or 10 GHz, whichever is lower. At those frequencies where significant signals were detected, measurements were made over the entire frequency range specified in FCC Part 15, Subpart C, Section 15.247 at the open field test site, located at Genoa City, Wisconsin, FCC file number **31040/SIT**. When required, limits were extrapolated using a linear extrapolation.

All signals in the frequency range of 30 MHz to 2000 MHz were measured with a Biconical Antenna or tuned dipoles and from 200 MHz to 1000 MHz, a Log Periodic or Tuned Dipoles were used. From 1000 MHz to 25 GHz Horn Antennas were used. During the test the equipment was rotated and the antenna was raised and lowered from 1 meter to 4 meters to find the maximum level of emissions. In order to find maximum emissions, the cables were moved through all the positions the equipment would be expected to experience in the field. The EUT, peripheral equipment and cables were configured to meet the conditions in ANSI C63.4-2003, Clauses 6 & 8, Test procedures for the radiated field strength of spurious emissions is per FCC Public Notice DA 00-705 “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” operating under Section 15.247 - March 30, 2000. 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.

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

5.0 FIELD STRENGTH OF FUNDAMENTAL AND SPURIOUS EMISSION MEASUREMENTS (CON'T)

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

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

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

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

NOTE:

All radiated emissions measurements were made at a test room temperature of 66°F at 33% relative humidity.

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

RADIATED DATA TAKEN FOR

FIELD STRENGTH OF FUNDAMENTAL AND

SPURIOUS EMISSION MEASUREMENTS

PART 15.247

30 MHz – 10 GHz

NOTE:

FCC Public Notice DA 00-705 “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” operating under Section 15.247 - March 30, 2000.

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

1250 Peterson Dr., Wheeling, IL 60090

Radiated Spurious Emissions 30 MHz – 10 GHz
Tested at a 3 Meter Distance

EUT: Skye Reader 300
Manufacturer: SkyeTek, Inc.
Operating Condition: 66 deg F; 33% R.H.
Test Site: Site 2
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 902.7 MHz Transmit Frequency
Date: 12/23/2008

Notes: **(1)** Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
(3) All other restricted band emissions at least 20 dB under the limit.
(4) Limit for spurious emissions is 20 dB below fundamental measurement. Section 15.247(d)
(5) All other spurious emissions at least 20 dB under the limit.

Low Channel: 902.7 MHz

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
2.7081	Average	Vert	58.14	29.28	-36.0	51.42	13.47	37.95	54	16.05	Res. Band
2.7081	Max Peak	Vert	73.35	29.28	-36.0	66.63	---	66.63	74	7.37	Res. Band
2.7081	Average	Horz	58.58	29.28	-36.0	51.86	13.47	38.39	54	15.61	Res. Band
2.7081	Max Peak	Horz	71.15	29.28	-36.0	64.43	---	64.43	74	9.57	Res. Band
3.6108	Average	Vert	56.33	31.57	-35.1	52.80	13.47	39.33	54	14.67	Res. Band
3.6108	Max Peak	Vert	66.56	31.57	-35.1	63.03	---	63.03	74	10.97	Res. Band
3.6108	Average	Horz	49.93	31.57	-35.1	46.40	13.47	32.93	54	21.07	Res. Band
3.6108	Max Peak	Horz	62.97	31.57	-35.1	59.44	---	59.44	74	14.56	Res. Band
4.5135	Average	Vert	50.26	32.52	-33.3	49.48	13.47	36.01	54	17.99	Res. Band
4.5135	Max Peak	Vert	63.21	32.52	-33.3	62.43	---	62.43	74	11.57	Res. Band
4.5135	Average	Horz	48.41	32.52	-33.3	47.63	13.47	34.16	54	19.84	Res. Band
4.5135	Max Peak	Horz	61.27	32.52	-33.3	60.49	---	60.49	74	13.51	Res. Band
5.4162	Average	Vert	48.71	34.03	-32.2	50.54	13.47	37.07	54	16.93	Res. Band
5.4162	Max Peak	Vert	58.13	34.03	-32.2	59.96	---	59.96	74	14.04	Res. Band
5.4162	Average	Horz	46.07	34.03	-32.2	47.90	13.47	34.43	54	19.57	Res. Band
5.4162	Max Peak	Horz	56.58	34.03	-32.2	58.41	---	58.41	74	15.59	Res. Band

1250 Peterson Dr., Wheeling, IL 60090

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

Radiated Spurious Emissions 30 MHz – 10 GHz
Tested at a 3 Meter Distance

EUT: Skye Reader 300
Manufacturer: SkyeTek, Inc.
Operating Condition: 66 deg F; 33% R.H.
Test Site: Site 2
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 915 MHz Transmit Frequency
Date: 12/23/2008

Notes: **(1)** Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
(3) All other restricted band emissions at least 20 dB under the limit.
(4) Limit for spurious emissions is 20 dB below fundamental measurement. Section 15.247(d)
(5) All other spurious emissions at least 20 dB under the limit.

Mid Channel: 915 MHz

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
2.745	Average	Vert	54.55	29.39	-36.0	47.94	13.38	34.56	54	19.44	Res. Band
2.745	Max Peak	Vert	70.18	29.39	-36.0	63.57	---	63.57	74	10.43	Res. Band
2.745	Average	Horz	54.22	29.39	-36.0	47.61	13.38	34.23	54	19.77	Res. Band
2.745	Max Peak	Horz	72.16	29.39	-36.0	65.55	---	65.55	74	8.45	Res. Band
3.660	Average	Vert	55.58	31.68	-34.9	52.36	13.38	38.98	54	15.02	Res. Band
3.660	Max Peak	Vert	66.23	31.68	-34.9	63.01	---	63.01	74	10.99	Res. Band
3.660	Average	Horz	49.61	31.68	-34.9	46.39	13.38	33.01	54	20.99	Res. Band
3.660	Max Peak	Horz	63.16	31.68	-34.9	59.94	---	59.94	74	14.06	Res. Band
4.575	Average	Vert	50.59	32.60	-33.4	49.79	13.38	36.41	54	17.59	Res. Band
4.575	Max Peak	Vert	63.72	32.60	-33.4	62.92	---	62.92	74	11.08	Res. Band
4.575	Average	Horz	50.18	32.60	-33.4	49.38	13.38	36.00	54	18.00	Res. Band
4.575	Max Peak	Horz	63.17	32.60	-33.4	62.37	---	62.37	74	11.63	Res. Band

1250 Peterson Dr., Wheeling, IL 60090

Company: SkyeTek, Inc.
Model Tested: SkyeReader 300
Report Number: 15005

Radiated Spurious Emissions 30 MHz – 10 GHz
Tested at a 3 Meter Distance

EUT: Skye Reader 300
Manufacturer: SkyeTek, Inc.
Operating Condition: 66 deg F; 33% R.H.
Test Site: Site 2
Operator: Adam A
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 927.3 MHz Transmit Frequency
Date: 12/23/2008

Notes: **(1)** Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
(3) All other restricted band emissions at least 20 dB under the limit.
(4) Limit for spurious emissions is 20 dB below fundamental measurement. Section 15.247(d)
(5) All other spurious emissions at least 20 dB under the limit.

High Channel: 927.3 MHz

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
2.7819	Average	Vert	55.81	29.49	-36.1	49.20	13.29	35.91	54	18.09	Res. Band
2.7819	Max Peak	Vert	67.89	29.49	-36.1	61.28	---	61.28	74	12.72	Res. Band
2.7819	Average	Horz	54.96	29.49	-36.1	48.35	13.29	35.06	54	18.94	Res. Band
2.7819	Max Peak	Horz	70.91	29.49	-36.1	64.30	---	64.30	74	9.70	Res. Band
3.7092	Average	Vert	59.08	31.80	-34.7	56.18	13.29	42.89	54	11.11	Res. Band
3.7092	Max Peak	Vert	66.97	31.80	-34.7	64.07	---	64.07	74	9.93	Res. Band
3.7092	Average	Horz	52.52	31.80	-34.7	49.62	13.29	36.33	54	17.67	Res. Band
3.7092	Max Peak	Horz	64.11	31.80	-34.7	61.21	---	61.21	74	12.79	Res. Band
4.6365	Average	Vert	50.52	32.69	-33.0	50.21	13.29	36.92	54	17.08	Res. Band
4.6365	Max Peak	Vert	63.59	32.69	-33.0	63.28	---	63.28	74	10.72	Res. Band
4.6365	Average	Horz	48.84	32.69	-33.0	48.53	13.29	35.24	54	18.76	Res. Band
4.6365	Max Peak	Horz	61.81	32.69	-33.0	61.50	---	61.50	74	12.50	Res. Band

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

TRANSMITTER DUTY CYCLE DATA AND GRAPHS

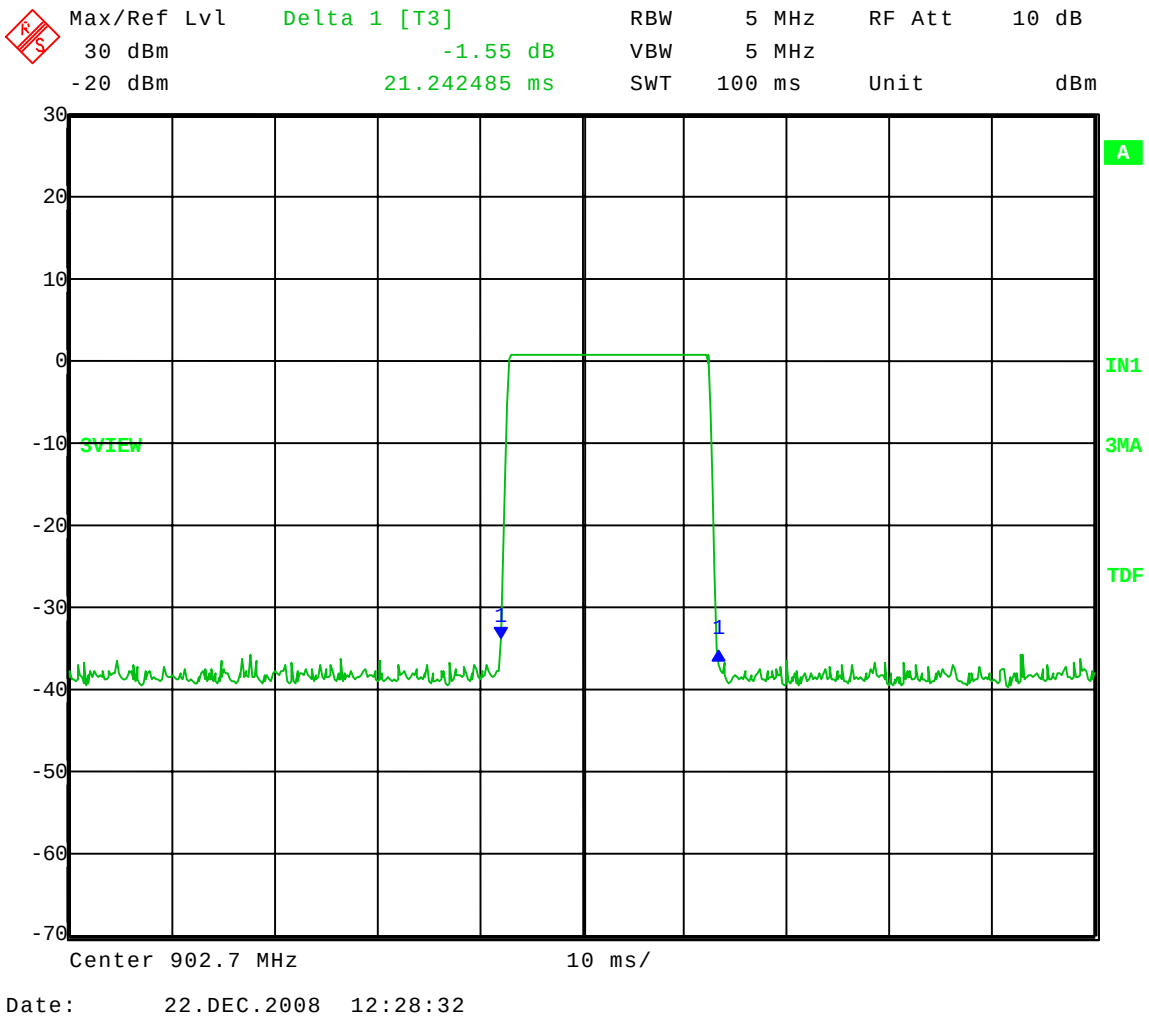
PART 15.35(c)

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 12-22-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Duty Cycle
Operator: Adam A
Transmit Frequency: 902.7 MHz

Comment: Total on Time = 21.24 ms during 100 ms Sweep
20 log (21.24 / 100) = -13.47
Duty Cycle Correction Factor = 13.47 dB

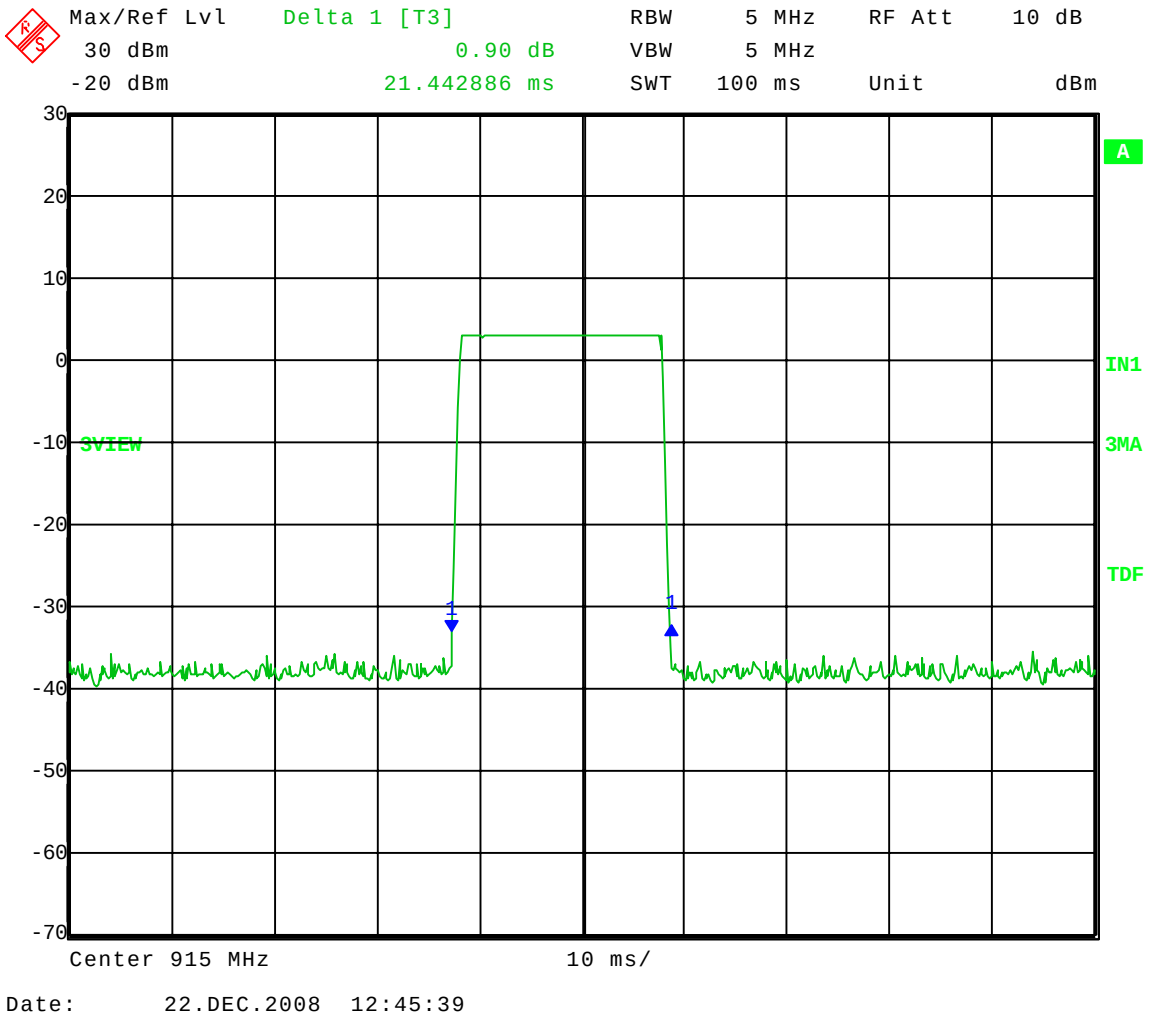


1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 12-22-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Duty Cycle
Operator: Adam A
Transmit Frequency: 915 MHz

Comment: Total on Time = 21.44 ms during 100 ms Sweep
20 log (21.44 / 100) = -13.38
Duty Cycle Correction Factor = 13.38 dB

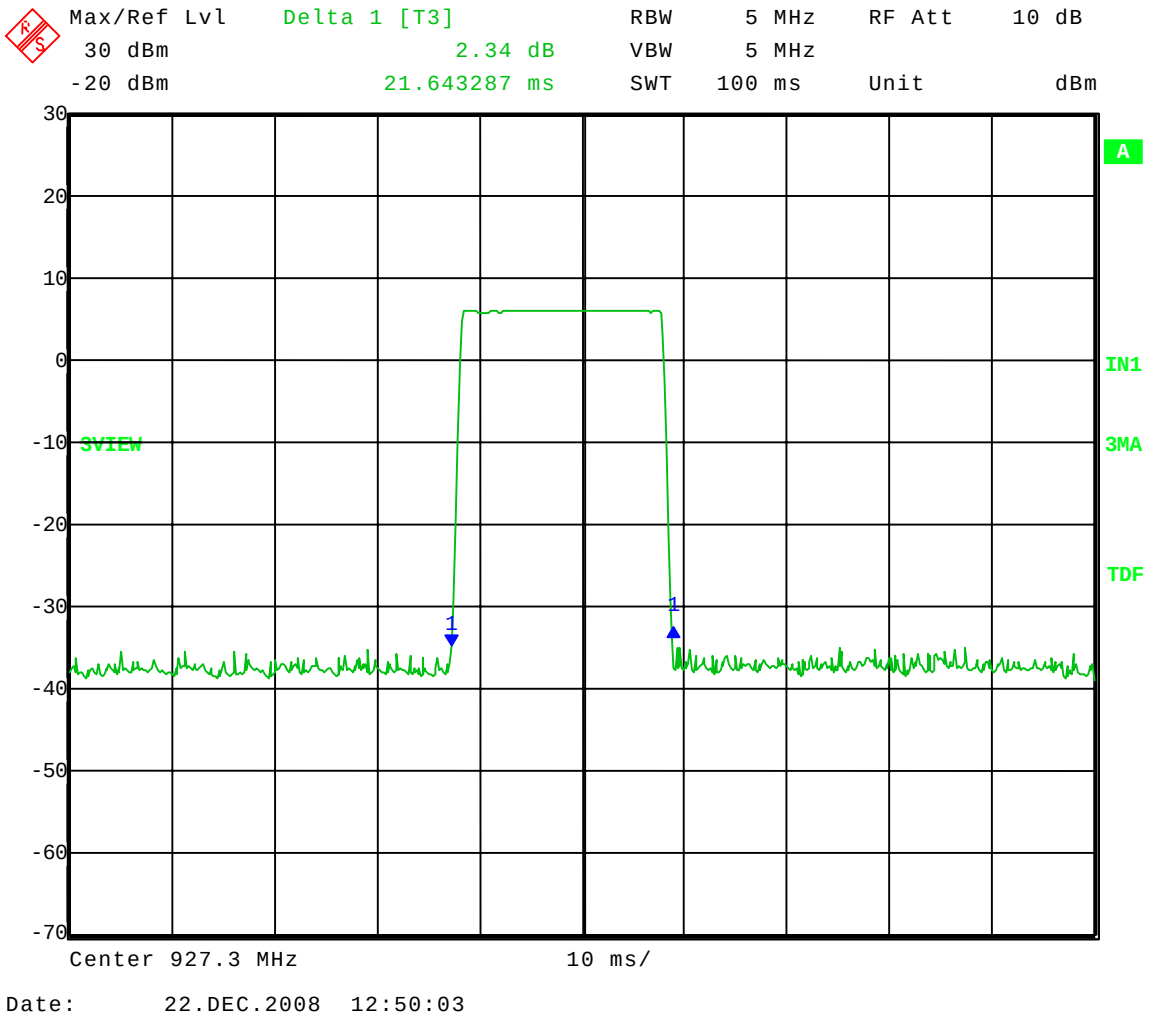


1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 12-22-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Duty Cycle
Operator: Adam A
Transmit Frequency: 927.3 MHz

Comment: Total on Time = 21.64 ms during 100 ms Sweep
20 log (21.64 / 100) = -13.29
Duty Cycle Correction Factor = 13.29 dB



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

20 dB BANDWIDTH DATA AND GRAPHS

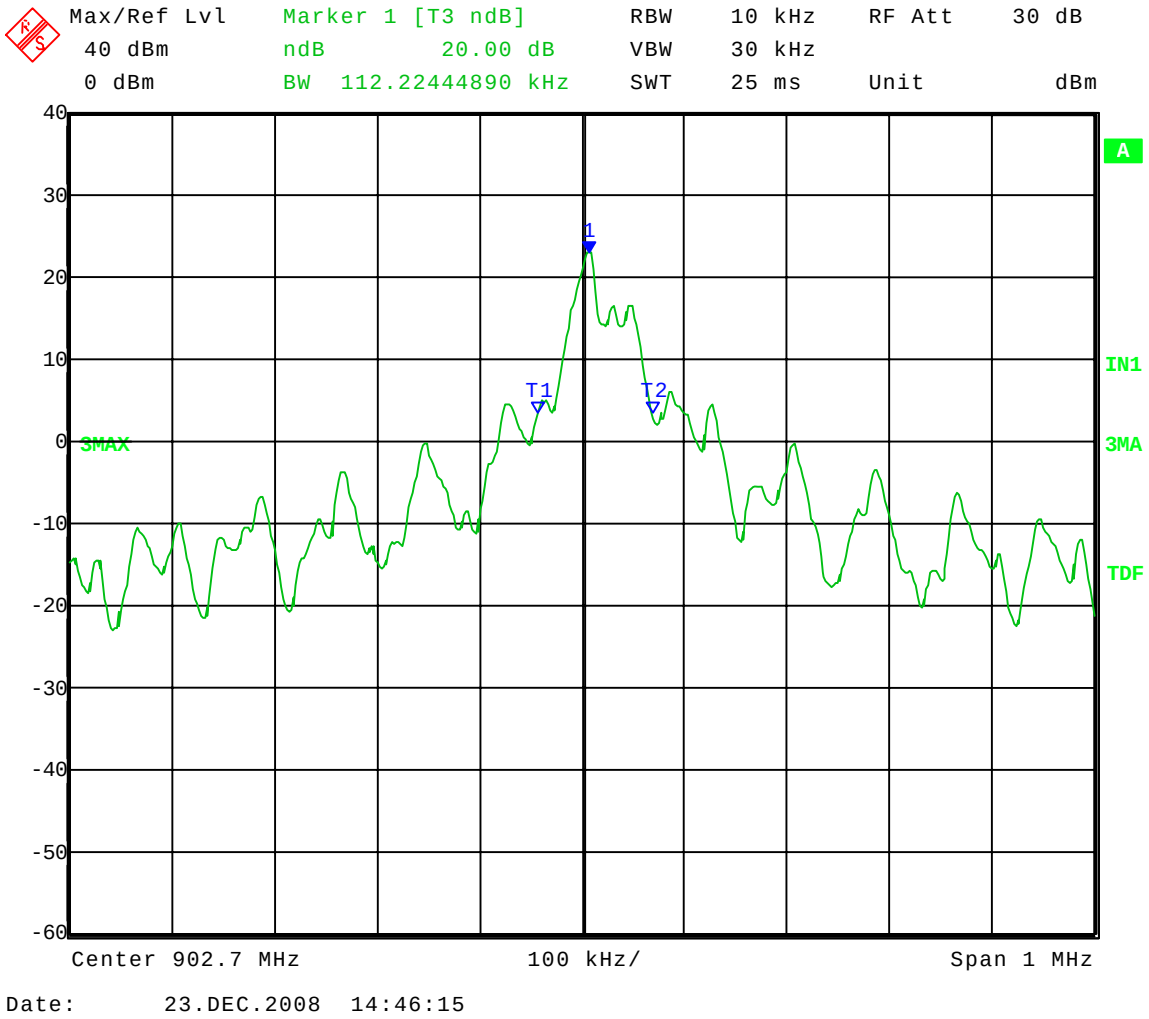
PART 15.247

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 11-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(a)(1) - 20 dB Bandwidth
Operator: Adam A
Comment: Low Channel 902.7 MHz

20 dB bandwidth: 112 kHz

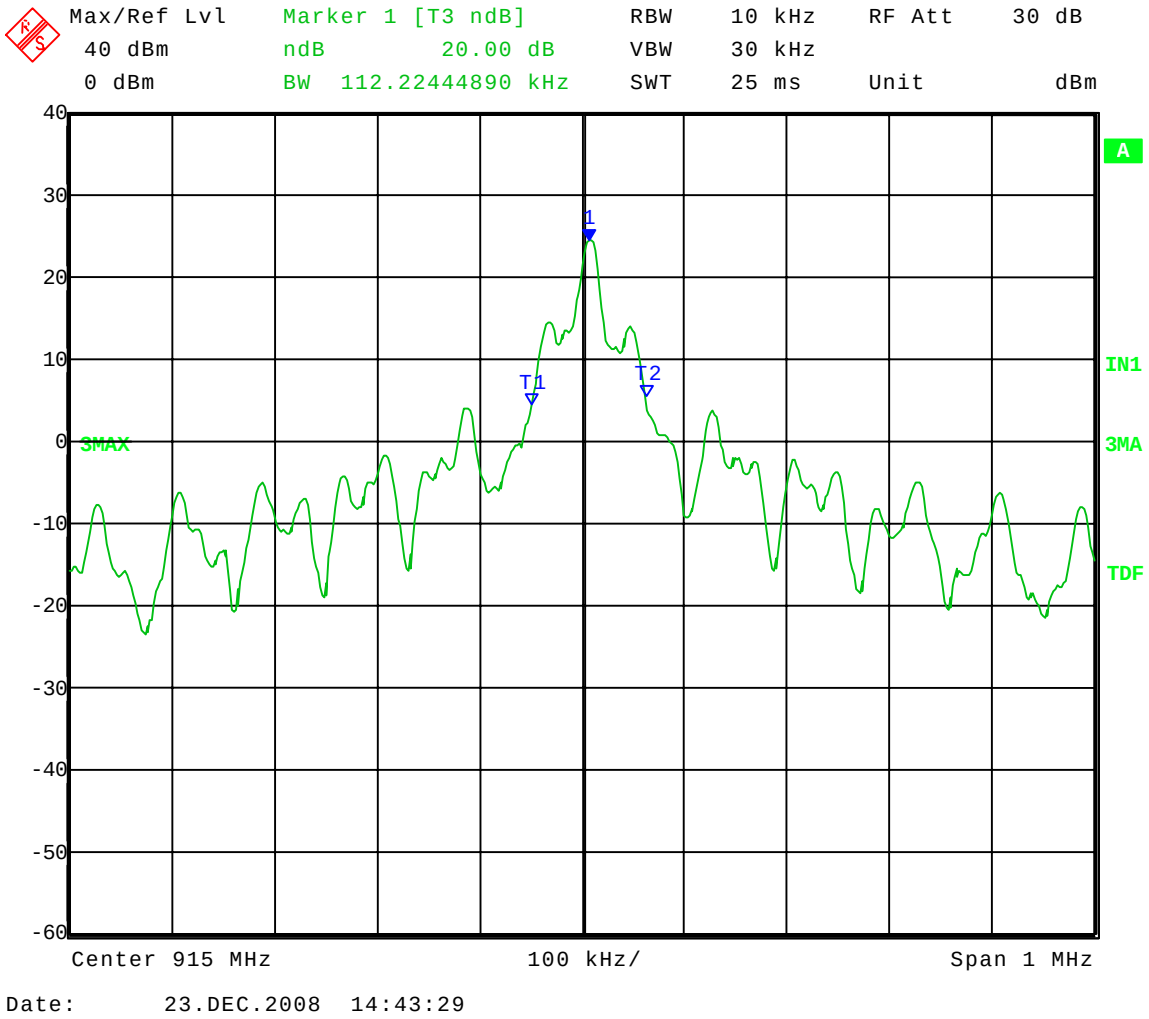


1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 11-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(a)(1) - 20 dB Bandwidth
Operator: Adam A
Comment: Mid Channel 915 MHz

20 dB bandwidth: 112 kHz

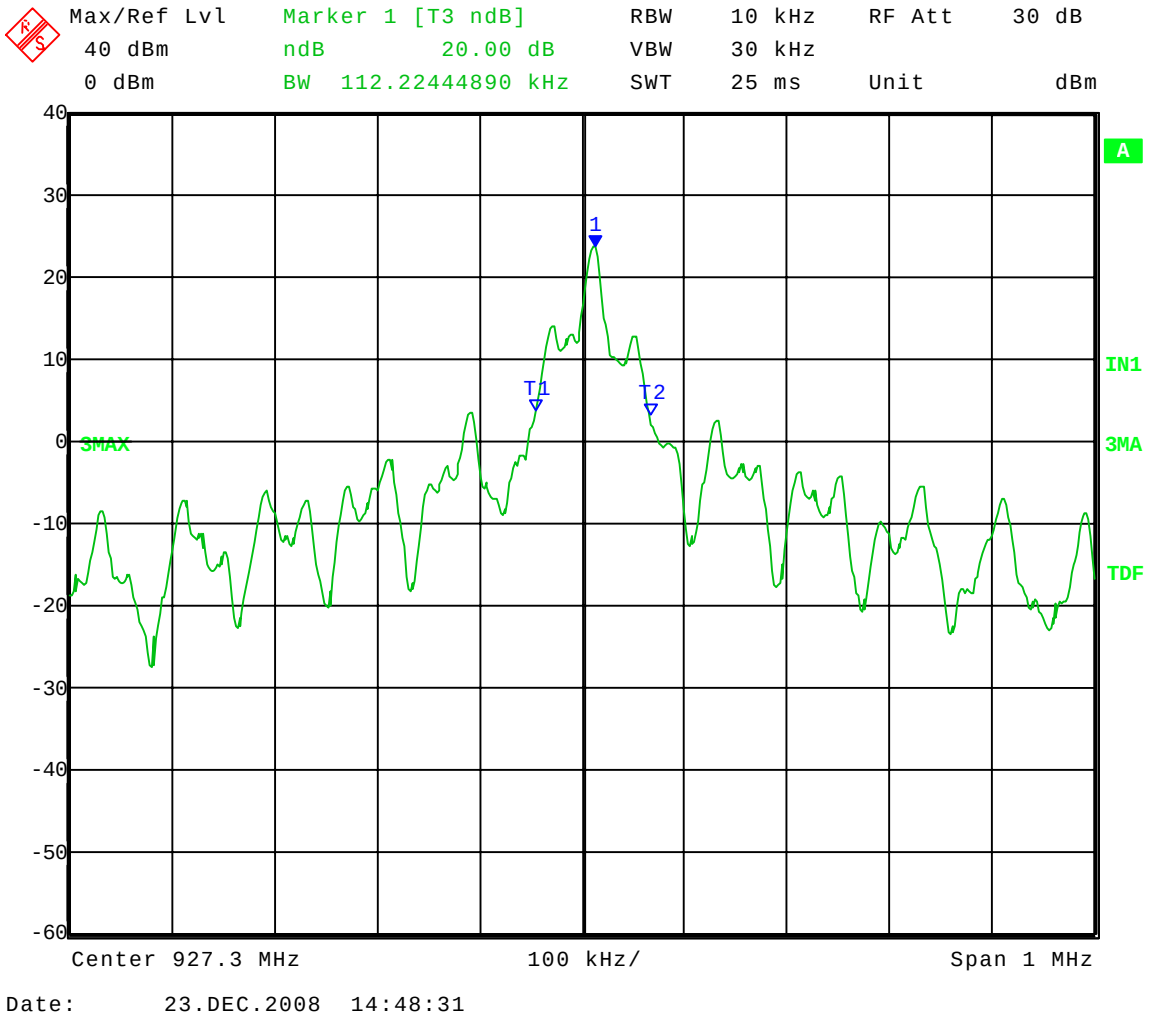


1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 11-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(a)(1) - 20 dB Bandwidth
Operator: Adam A
Comment: High Channel 927.3 MHz

20 dB bandwidth: 112 kHz



1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

NUMBER OF HOPPING FREQUENCIES DATA

AND GRAPH(S)

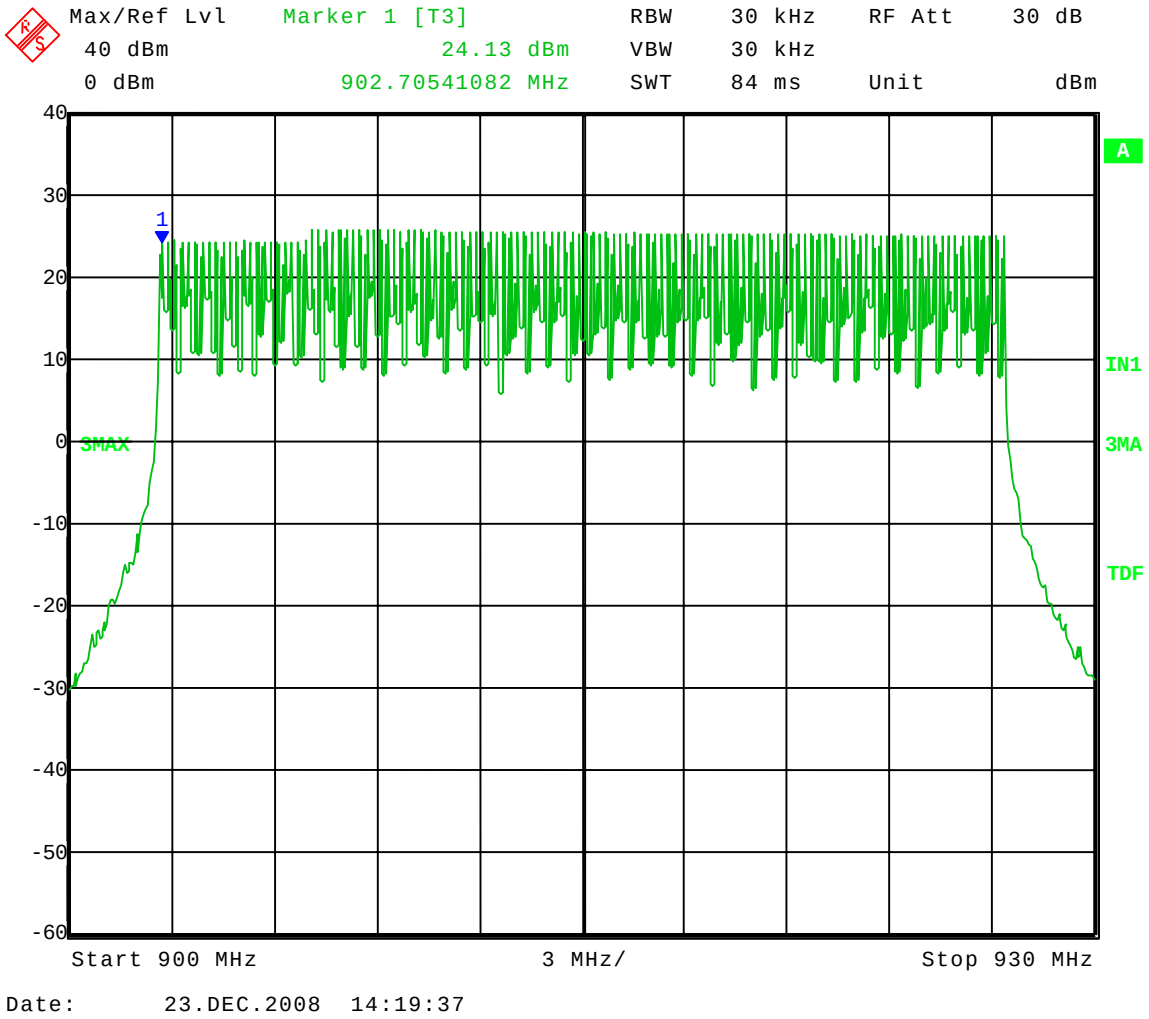
PART 15.247

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 11-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(a)(1) - Number of Hopping Channels
Operator: Adam A
Comment: Frequency 902.7 to 927.3 MHz

Number of Channels : 124



skyetek

SkyeReader 300 Operating Frequencies

The SkyeReader 300 uses an RFID module that was designed to generate a fundamental frequency from 862MHz-960MHz in 100KHz increments. These frequencies are synthesized by an N PLL that scales a 13MHz crystal clock. For use in North America, SkyeTek, Inc. has set the operational frequency band to 902.7MHz – 927.3MHz during manufacture. The frequency band cannot be changed by the user.

Once the band edges are defined, the firmware generates a pseudo-random frequency hopping table with a channel spacing of 200KHz. This band uses the 124 channels listed below.

Channel	Freq. (MHz)	Channel	Freq.(MHz)	Channel	Freq (MHz)	Channel	Freq (Mhz)
1	902.7	41	910.7	81	918.7	121	926.7
2	902.9	42	910.9	82	918.9	122	926.9
3	903.1	43	911.1	83	919.1	123	927.1
4	903.3	44	911.3	84	919.3	124	927.3
5	903.5	45	911.5	85	919.5		
6	903.7	46	911.7	86	919.7		
7	903.9	47	911.9	87	919.9		
8	904.1	48	912.1	88	920.1		
9	904.3	49	912.3	89	920.3		
10	904.5	50	912.5	90	920.5		
11	904.7	51	912.7	91	920.7		
12	904.9	52	912.9	92	920.9		
13	905.1	53	913.1	93	921.1		
14	905.3	54	913.3	94	921.3		
15	905.5	55	913.5	95	921.5		
16	905.7	56	913.7	96	921.7		
17	905.9	57	913.9	97	921.9		
18	906.1	58	914.1	98	922.1		
19	906.3	59	914.3	99	922.3		
20	906.5	60	914.5	100	922.5		
21	906.7	61	914.7	101	922.7		
22	906.9	62	914.9	102	922.9		
23	907.1	63	915.1	103	923.1		
24	907.3	64	915.3	104	923.3		
25	907.5	65	915.5	105	923.5		
26	907.7	66	915.7	106	923.7		
27	907.9	67	915.9	107	923.9		
28	908.1	68	916.1	108	924.1		
29	908.3	69	916.3	109	924.3		
30	908.5	70	916.5	110	924.5		
31	908.7	71	916.7	111	924.7		
32	908.9	72	916.9	112	924.9		

skyetek

33	909.1	73	917.1	113	925.1
34	909.3	74	917.3	114	925.3
35	909.5	75	917.5	115	925.5
36	909.7	76	917.7	116	925.7
37	909.9	77	917.9	117	925.9
38	910.1	78	918.1	118	926.1
39	910.3	79	918.3	119	926.3
40	910.5	80	918.5	120	926.5

Signed by _____ Date 1-14-09

VP Engineering

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

DWELL TIME DATA AND GRAPHS

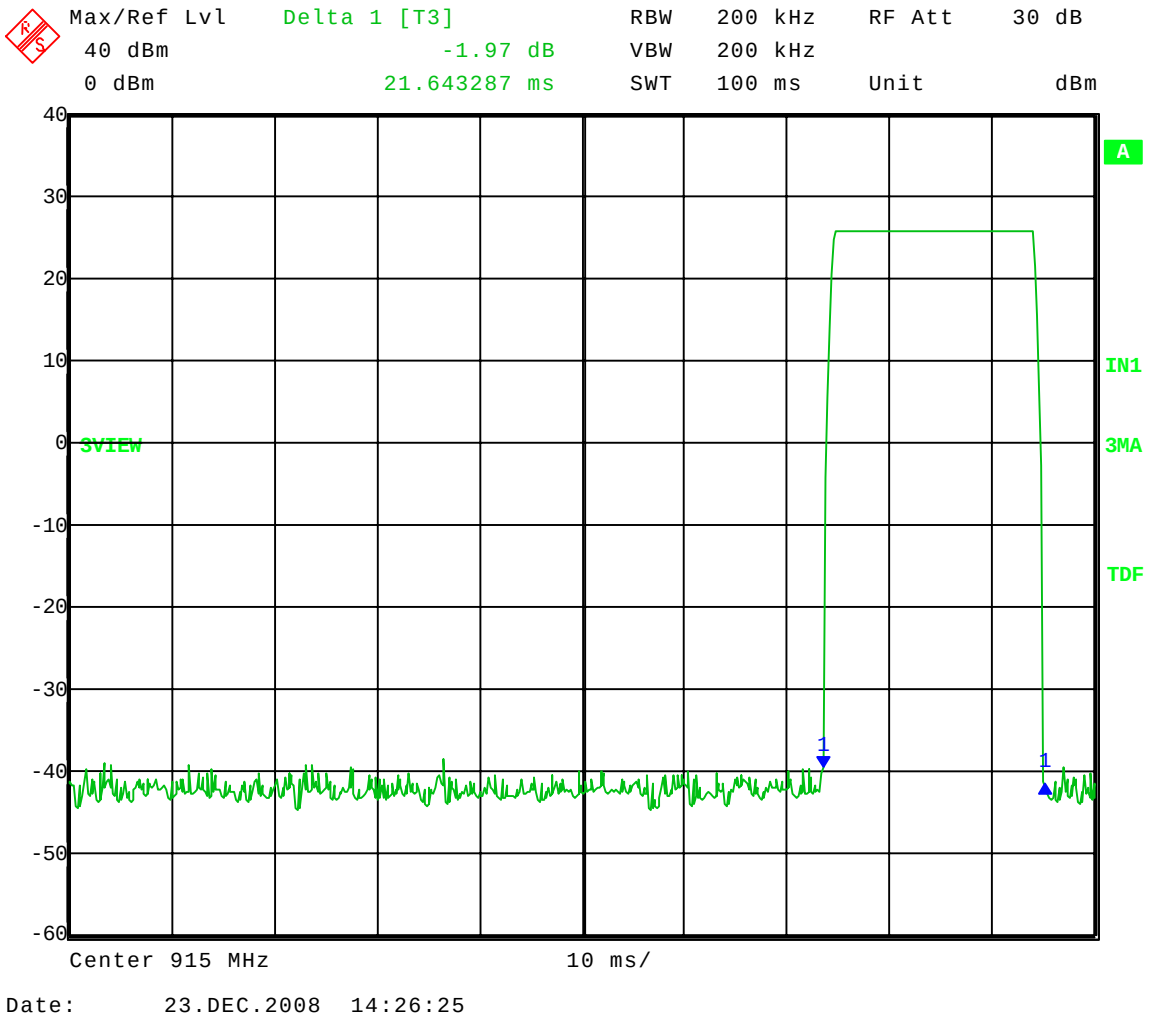
PART 15.247

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

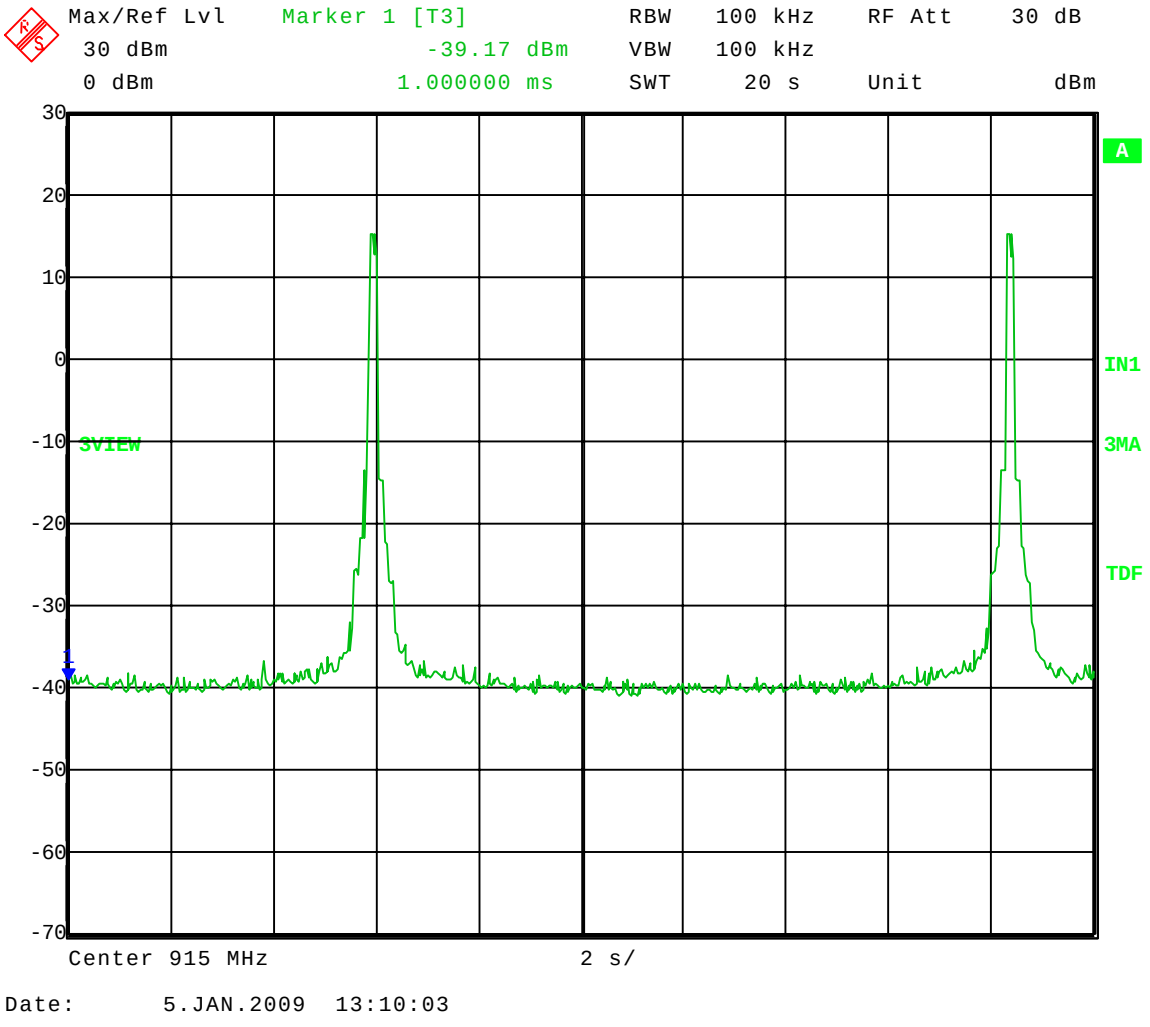
Test Date: 11-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(a)(1) - Dwell Time
Operator: Adam A
Comment: Transmit Frequency 915 MHz

Dwell Time: 21.64 ms



Test Date: 01-05-2009
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(a)(1) - Dwell Time
Operator: Adam A
Comment: Transmit Frequency 902.7 to 927.3 MHz

Dwell Time: 21.64 ms
Number of Hops in 20 seconds: 2
Total dwell time in 20 seconds: 43.28 ms
Limit: 400 ms



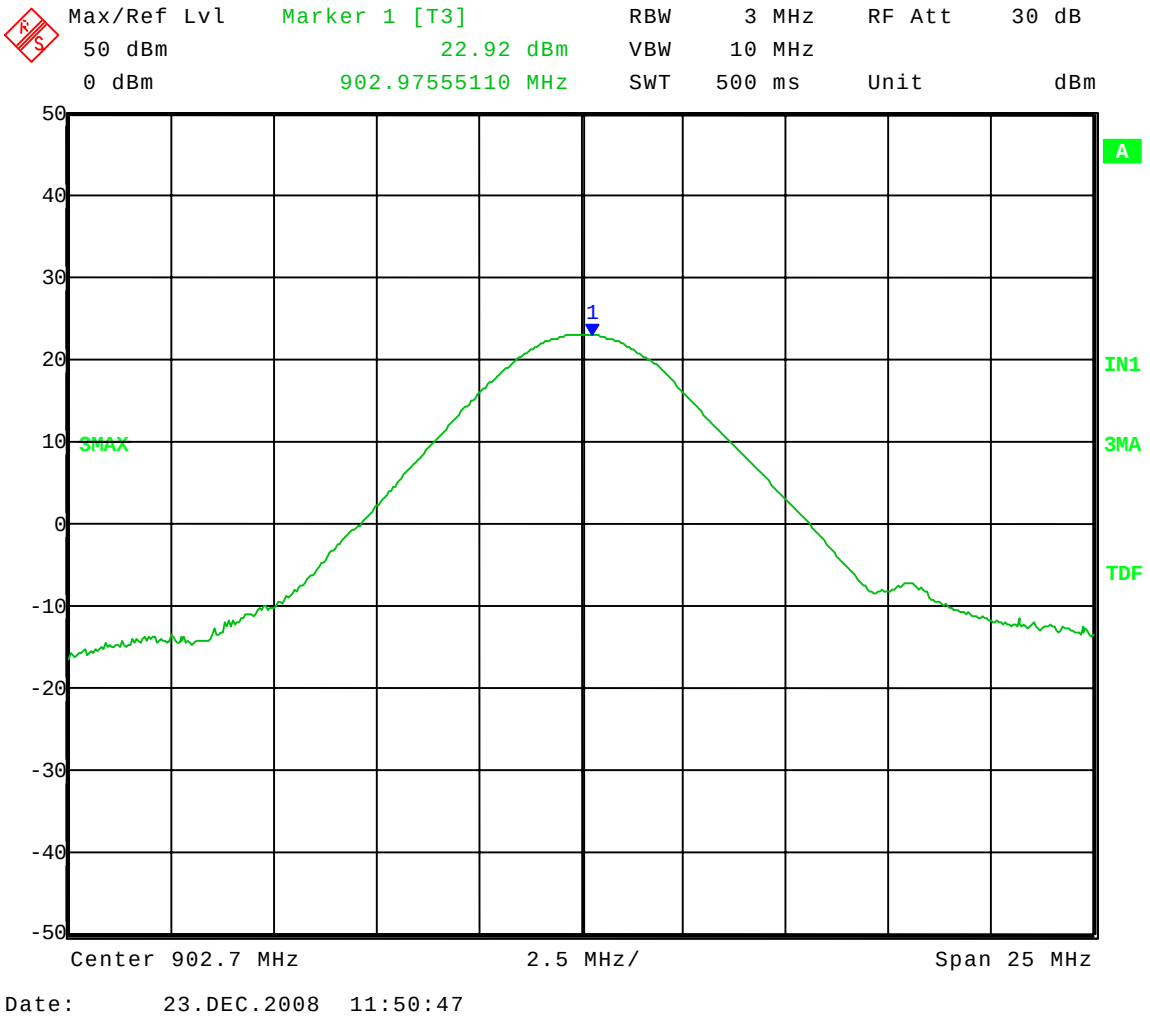
CONDUCTED PEAK OUTPUT POWER DATA

AND GRAPHS

PART 15.247

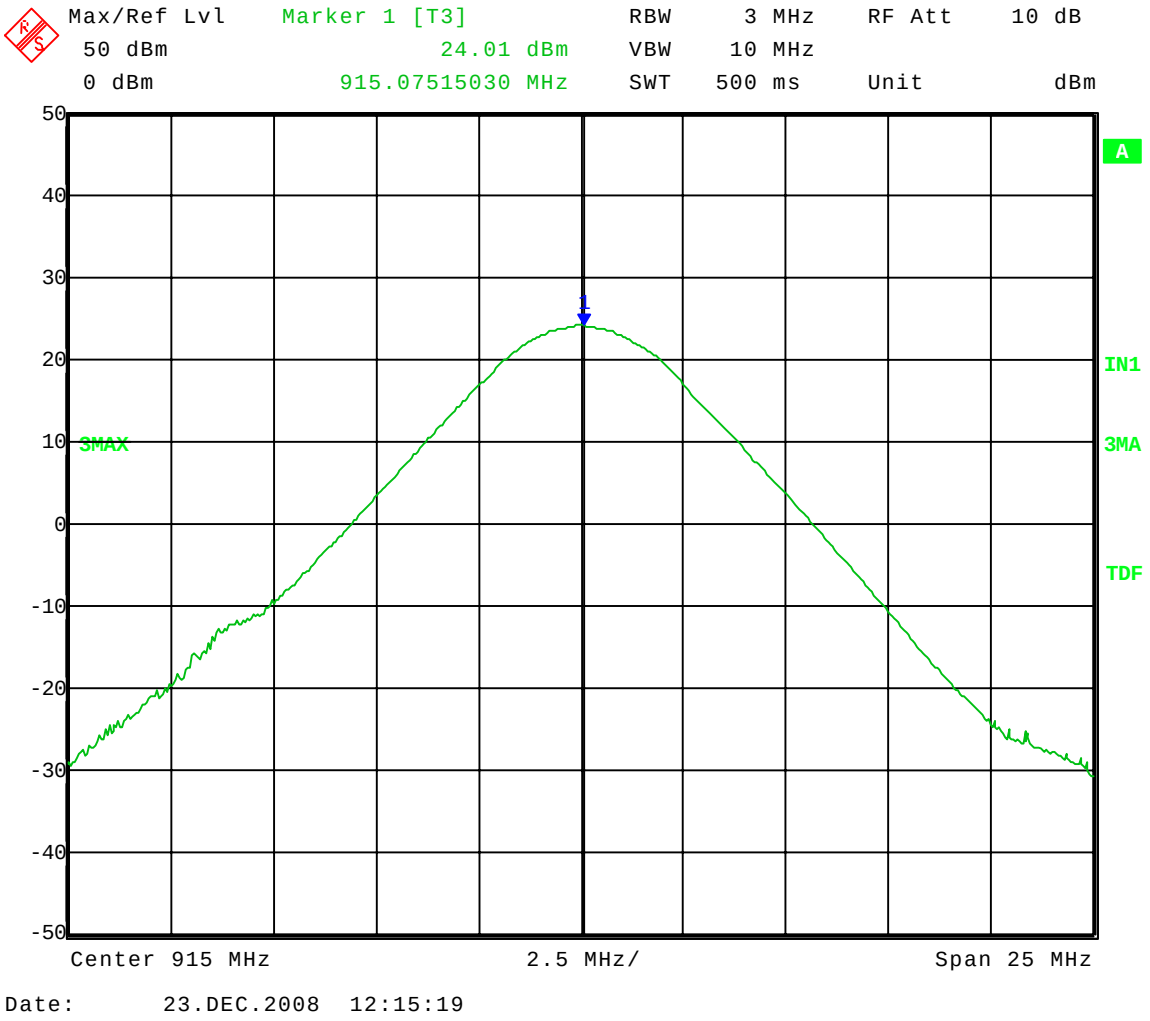
Test Date: 12-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(b) – Conducted Peak Output Power
Operator: Adam A
Comment: Low Channel: Frequency 902.7 MHz

Peak Output Power = 22.92 dBm = **196 mW**



Test Date: 12-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(b) – Conducted Peak Output Power
Operator: Adam A
Comment: Mid Channel: Frequency 915 MHz

Peak Output Power = 24.01 dBm = **251 mW**



Test Date: 12-23-2008
Company: SkyeTek, Inc.
EUT: Skye Reader 300
Test: Section 15.247(b) – Conducted Peak Output Power
Operator: Adam A
Comment: High Channel: Frequency 927.3 MHz

Peak Output Power = 23.45 dBm = **221 mW**