

**FCC PART 15 SUBPART B & SUBPART C SECTION 15.249,
RSS 210, & RSS GEN
TEST REPORT**

for

**ELECTRONIC LOCK
Model: 925-GED1500-CVT**

Prepared for

SPECTRUM BRANDS
19701 DAVINCI
LAKE FOREST, CA 92610

Prepared by: _____

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DATE: JULY 29th, 2016

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	18	2	2	2	11	16	51

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1	Plot Map And Layout of Test Site Below 1GHz
2	Plot Map And Layout of Test Site Above 1GHz



GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full with the written permission of Compatible Electronics.

This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

Device Tested: Electronic Lock
Model: 925-GED1500-CVT
S/N: None

Product Description: The EUT is an Electronic Lock operating via Bluetooth 4.0 Low Energy technology.

Modifications: The EUT was not modified in order to comply with specifications.

Manufacturer: Spectrum Brands
19701 DaVinci
Lake Forest, CA 92610

Test Date: July 29th, 2016

Test Specifications covered by accreditation:



EMI Requirements:

CFR Title 47, Part 15 Subpart B Sections 15.107, 15.109, Subpart C Sections 15.205, 15.207, 15.209, 15.249,

RSS 210, and RSS GEN

Test Procedure: ANSI C63.4 & C63.10



SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz.	The EUT is battery powered; therefore this test was not performed.
2	Radiated RF Emissions & Harmonics, 9 kHz – 25,000 MHz.	Complies with the limits of CFR Title 47 Part 15 Subpart B Section 15.109 & Subpart C Sections 15.205, 15.209, & 15.249, RSS 210 & RSS GEN
3	Fundamental Field Strength	Complies with the limits of CFR Title 47 Part 15 Subpart C Section 15.249 & RSS 210
4	Emissions Radiated Outside of the Fundamental Frequency Band	Complies with the limits of CFR Title 47 Part 15 Subpart B Section 15.109 & Subpart C Sections 15.205, 15.209, & 15.249, RSS 210 & RSS GEN
5	Occupied Bandwidth	Complies with the limits of RSS 210 & RSS GEN

**TABLE 1:
SIX HIGHEST RADIATED EMISSIONS READINGS**

	Reading Type (PK / QP / AV)	Polarization (Vert / Horz)	Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Delta (dB)	Test Distance
1	AV	H	2402	92.02	93.97	-1.95	3-Meter
2	AV	H	2480	90.06	93.97	-3.91	3-Meter
3	AV	H	2400	50.05	53.98	-3.93	3-Meter
4	AV	H	2426	89.51	93.97	-4.46	3-Meter
5	AV	V	4852	48.72	53.98	-5.26	3-Meter
6	AV	H	4960	46.59	53.98	-7.39	3-Meter



1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Electronic Lock Model: 925-GED1500-CVT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 & C63.10. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT (equipment under test) hereafter, are within the specification limits defined by the Code of Federal Regulations Title 47, Part 15 Subpart B sections 15.109, & Part 15 Subpart C sections 15.205, 15.209, 15.249, RSS GEN, & RSS 210.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The tests described herein were performed at the test facility of Compatible Electronics, 20621 Pascal Way Lake Forest, California 92630.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Spectrum Brands

Troy Brown Senior Electronics Engineer

Compatible Electronics, Inc.

Torey Oliver Test Engineer

Matt Harrison Lab Manager

2.4 Date Test Sample was Received

The test sample was received on July 29th, 2016.

2.5 Disposition of the Test Sample

The test sample remains at Compatible Electronics, Inc. as of the date of this test report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
PCB	Printed Circuit Board
TX	Transmit
RX	Receive



3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4 2014	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.
ANSI C63.10: 2013	American National Standard for Testing Unlicensed Wireless Devices
RSS GEN	General Requirements for Compliance of Radio Apparatus
RSS 210	Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment



4. DESCRIPTION OF TEST CONFIGURATION

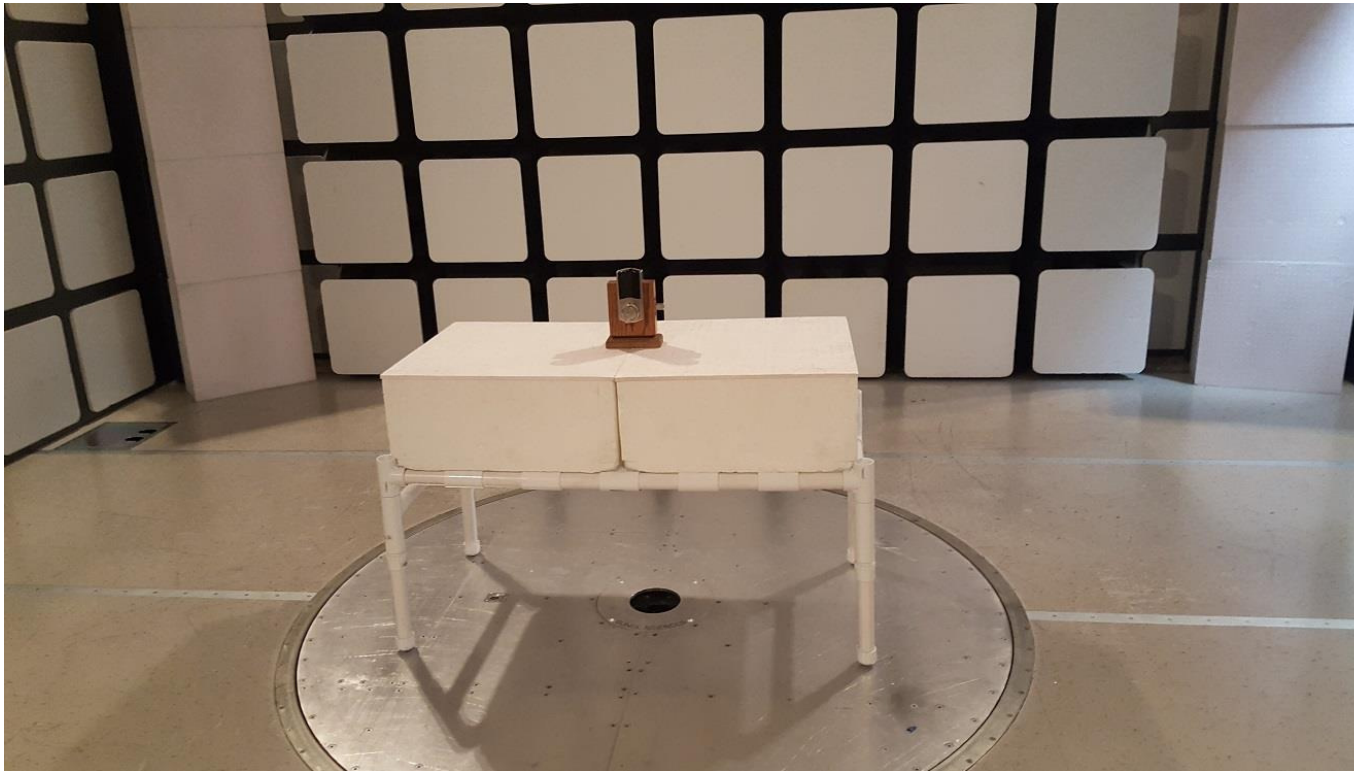
4.1 Description of Test Configuration

The Electronic Lock Model: 925-GED1500-CVT (EUT) was setup in a tabletop configuration. The EUT was checked in all 3 axis. The worst case was found to be the X-Axis. The EUT was continuously transmitting a data stream during testing.

The tests were performed using new batteries.

It was determined that the emissions were at their highest level when the EUT was transmitting in the configuration described above for Radiated Emissions. The final radiated data was taken in the above configuration. Please see Appendix E for the test data.

4.1.1 *Photograph Test Configuration (X-Axis)*



4.1.2 Cable Construction and Termination

There were no interconnecting cables.

4.1.3 Axis Determination



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

#	EQUIPMENT TYPE	MANU-FACTURER	MODEL	SERIAL NUMBER
1	ELECTRONIC LOCK (EUT)	SPECTRUM BRANDS	925-GED1500-CVT	NONE
2	BATTERIES (4)	RAYOVAC	AA	NONE

5.1.1 Software Used to Exercise the Transmitter:

Date: 7/29/2016

Version Number: 01.00.10000

Storage Location: Spectrum Brands Corporation



5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Computer	Compatible Electronics	NONE	NONE	N/A	N/A
EMI Receiver	Rohde & Schwarz	ESIB40	100219	09/03/2015	09/03/2016
Antenna, Loop	Com Power	AL-130	121049	12/06/2013	12/06/2016
Antenna, CombiLog	Com Power	AC-220	25857	05/19/2016	05/19/2017
Antenna, Horn 1-18GHz	Com Power	AH-118	071250	05/18/2016	05/18/2017
Antenna, Horn 18-26GHz	Com-Power	AH-826	081033	05/16/2016	05/16/2017
Pre-Amp, 1-18GHz	Com Power	PAM-118A	443011	04/18/2016	04/18/2017
Pre-Amp, 18-40GHz	Com-Power	PA-840	181289	06/16/2015	06/16/2017
High Pass Filter	AMTI Microwave Circuits	H3G020G4	481230	08/26/2015	08/26/2016
Mast, Antenna Positioner	Sunol Science Corporation	TWR 95-4	020808-3	N/A	N/A
Antenna Mast	Sunol Science Corporation	TWR 95-4	020808-3	N/A	N/A
Turntable	Sunol Science Corporation	FM 2001	N/A	N/A	N/A
Mast and Turntable Controller	Sunol Science Corporation	SC104V	020808-1	N/A	N/A



6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and the figures in Appendix D of this report for test location.

6.2 EUT Mounting, Bonding and Grounding

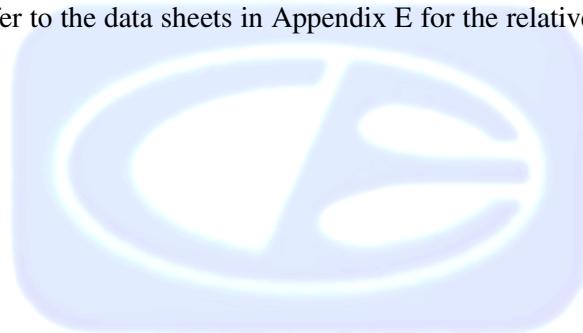
The EUT was mounted on a 1.0 by 1.5 by 0.8 meter high non-conductive table, which was placed on the ground plane.

For above 1GHz testing the EUT was placed 1.5 meters above high, above the ground plane.

The EUT was not grounded.

6.3 Facility Environmental Characteristics

When applicable refer to the data sheets in Appendix E for the relative humidity, air temperature, and barometric pressure.



7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Channel Number and Frequencies

There are a total of 40 channels. The low channel is at 2402.0 MHz and the high channel is at 2480.0 MHz. There is approximately 2 MHz separation between channels and the EUT uses GFSK modulation.

7.2 Antenna

The Antenna is a Chip Antenna located on the transmitter PCB.



8. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

8.1 RF Emissions

8.1.1 *Conducted Emissions Test*

Test Results: The EUT is battery powered; therefore, this test was not performed.

The EMI receiver was used as a measuring meter. A quasi-peak and/or average reading was taken only where indicated in the data sheets. The LISN output was measured using the EMI receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding, and grounding of the EUT. The EUT received its power through the LISN, which was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI 63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The different configurations were investigated to find the worst case as well the worst case channel. The final data was collected under program control by the computer software. The final qualification data is located in Appendix E.



8.1.2 Radiated Emissions (Spurious and Harmonics) Test

The EMI receiver was used as a measuring meter. The receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the receiver records the highest measured reading over all the sweeps. Amplifiers were used to increase the sensitivity of the instrument. There was one Microwave Preamplifier used for frequencies above 1 GHz.

For spurious emissions the quasi-peak detector was used for frequencies below 1GHz and the average detector was used for frequencies above 1 GHz.

For the harmonic, fundamental, and the non-intentional emissions a linear average was used.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE (MHz)	TRANSDUCER	EFFECTIVE MEASUREMENT BANDWIDTH
.009 to .150	Active Loop Antenna	200 Hz
.150 to 30	Active Loop Antenna	9 kHz
30 to 1000	Combilog Antenna	100 kHz (120 kHz for QP Measurements)
1000 to 25000	Horn Antenna	1 MHz

The TDK FAC-3 shielded test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is in full compliance with ANSI C63.4 & ANSI C63.10. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters in both vertical and horizontal polarizations (for E field radiated field strength).

Test Results:

The EUT complies with the limits of CFR Title 47 Part 15 Subpart B section 15.109, & Part 15 Subpart C sections 15.205, 15.209, 15.249, RSS GEN, & RSS 210. The six highest emissions are listed in table 1.



8.1.3 *Fundamental Field Strength*

The Peak Transmit Radiated Field Strength was measured at a 3-meter test distance. The EMI Receiver was used to obtain the final test data. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with Part 15 Subpart C, Section 15.249.

8.1.4 *Emissions Radiated Outside of the Fundamental Frequency Band*

The Band Edge measurement was measured using the EMI Receiver at a 3-meter test distance to obtain the final test data. The lower and upper channels were tuned during the low and high band edge tests. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with Part 15 Subpart C, Section 15.205, 15.249, RSS GEN, & RSS 210.



9. TEST PROCEDURE DEVIATIONS

The test procedures were not deviated from throughout all tests.

10. CONCLUSIONS

The Electronic Lock Model: 925-GED1500-CVT meets all of the relevant specification requirements defined in the Code of Federal Regulations Title 47, Part 15 Subpart B section 15.109, & Subpart C sections 15.205, 15.209, 15.249, RSS GEN, & RSS 210.



APPENDIX A

***LABORATORY ACCREDITATIONS AND
RECOGNITIONS***



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LABORATORY ACCREDITATIONS AND RECOGNITIONS



For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025.

For the most up-to-date version of our scopes and certificates please visit

<http://celectronics.com/quality/scope/>

Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."

IC OAT's Test Site Registration Number: 2154C-1



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APPENDIX B

MODIFICATIONS TO THE EUT



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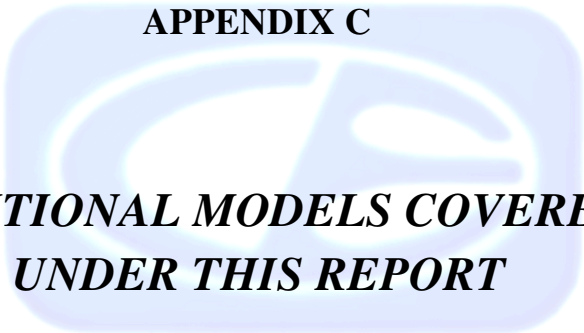
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MODIFICATIONS TO THE EUT

There were no modifications were made during testing.



APPENDIX C



***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***



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ADDITIONAL MODELS COVERED UNDER THIS REPORT

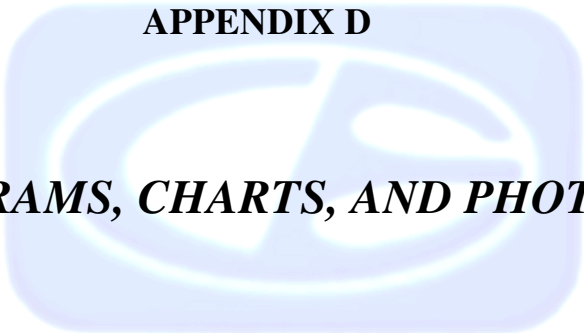
USED FOR THE PRIMARY TEST

ELECTRONIC LOCK
Model: 925-GED1500-CVT
S/N: NONE

No additional models were tested.



APPENDIX D



DIAGRAMS, CHARTS, AND PHOTOS



FIGURE 1: PLOT MAP AND LAYOUT OF TEST SITE BELOW 1GHZ

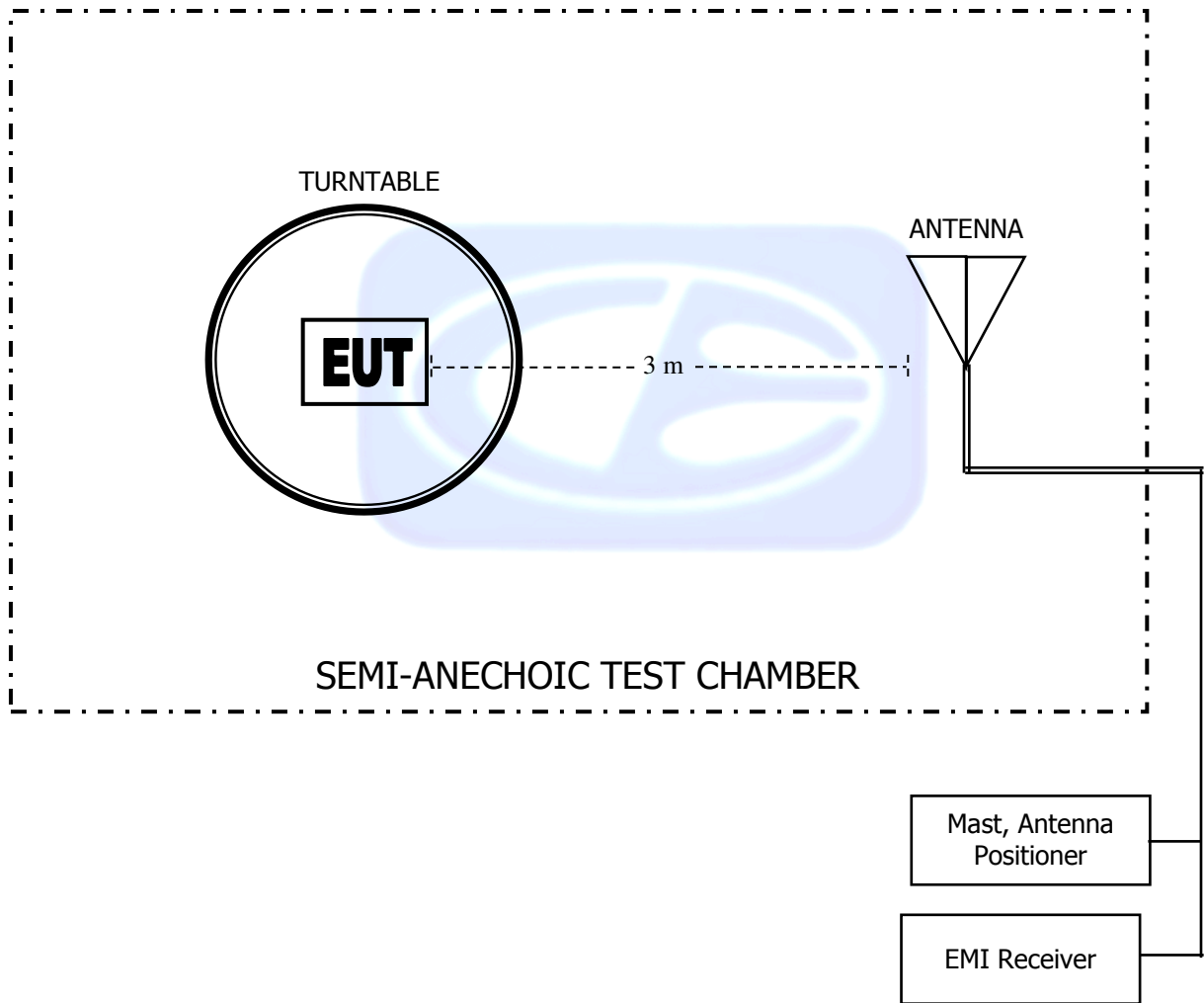
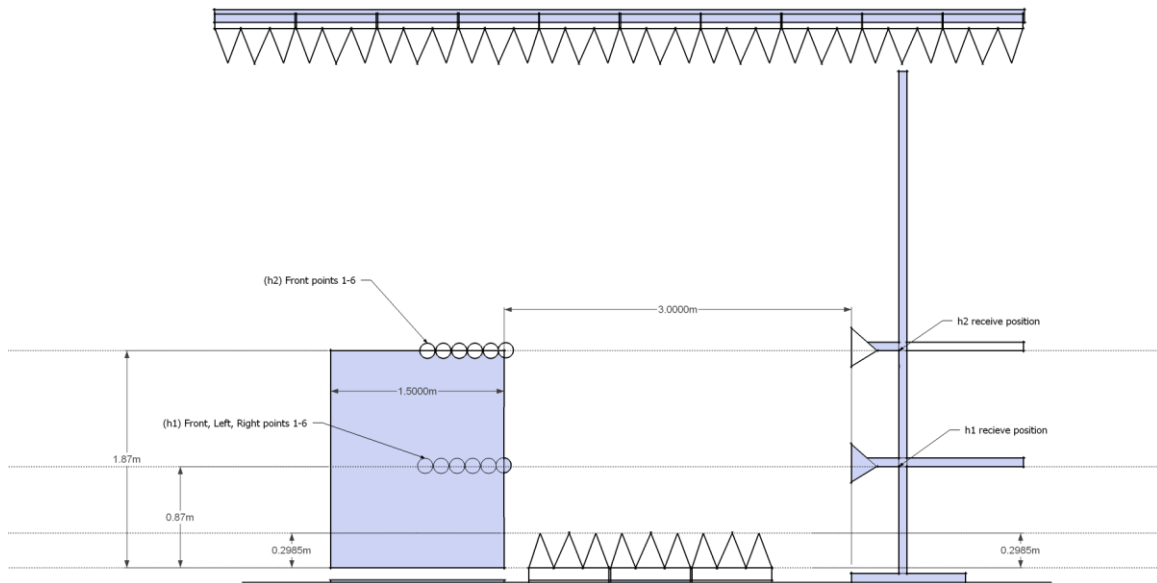


FIGURE 2: PLOT MAP AND LAYOUT OF TEST SITE ABOVE 1GHZ



COM-POWER AL-130**LOOP ANTENNA**

S/N: 121049

CALIBRATION DUE: DECEMBER 6, 2016

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)	FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-34.64	16.86	0.8	-36.32	15.18
0.01	-34.78	16.72	0.9	-36.22	15.28
0.02	-35.91	15.59	1.0	-36.22	15.28
0.03	-35.48	16.02	2.0	-35.91	15.59
0.04	-35.82	15.68	3.0	-35.91	15.59
0.05	-36.49	15.01	4.0	-36.01	15.49
0.06	-36.30	15.20	5.0	-35.80	15.70
0.07	-36.43	15.07	6.0	-36.00	15.50
0.08	-36.30	15.20	7.0	-35.90	15.60
0.09	-36.39	15.11	8.0	-35.70	15.80
0.1	-36.41	15.09	9.0	-35.70	15.80
0.2	-36.61	14.89	10.0	-35.60	15.90
0.3	-36.63	14.87	15.0	-36.52	14.98
0.4	-36.52	14.99	20.0	-35.75	15.75
0.5	-36.63	14.87	25.0	-37.78	13.72
0.6	-36.62	14.88	30.0	-38.62	12.88
0.7	-36.53	14.97			



COM-POWER AC-220**LAB R - COMBILOG ANTENNA**

S/N: 25857

CALIBRATION DUE: MAY 19, 2017

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	22.5	160	13.3
35	22.5	180	15.0
40	23.0	200	14.6
45	21.5	250	16.5
50	21.3	300	18.1
60	18.2	400	19.4
70	13.2	500	20.6
80	11.6	600	21.6
90	11.9	700	23.7
100	12.6	800	26.0
120	15.1	900	26.6
140	15.2	1000	28.5



COM-POWER AH-118**HORN ANTENNA**

S/N: 071250

CALIBRATION DUE: MAY 18, 2017

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
1000	30.1	9500	44.2
1500	29.2	10000	43.4
2000	31.6	10500	44.6
2500	35.5	11000	45.1
3000	33.7	11500	45.7
3500	36.0	12000	46.2
4000	35.4	12500	45.4
4500	35.5	13000	44.8
5000	40.1	13500	46.7
5500	37.8	14000	47.8
6000	39.0	14500	46.4
6500	39.9	15000	47.2
7000	40.4	15500	45.5
7500	44.4	16000	45.0
8000	44.1	16500	44.5
8500	43.1	17000	47.0
9000	43.0	17500	47.8
		18000	44.2



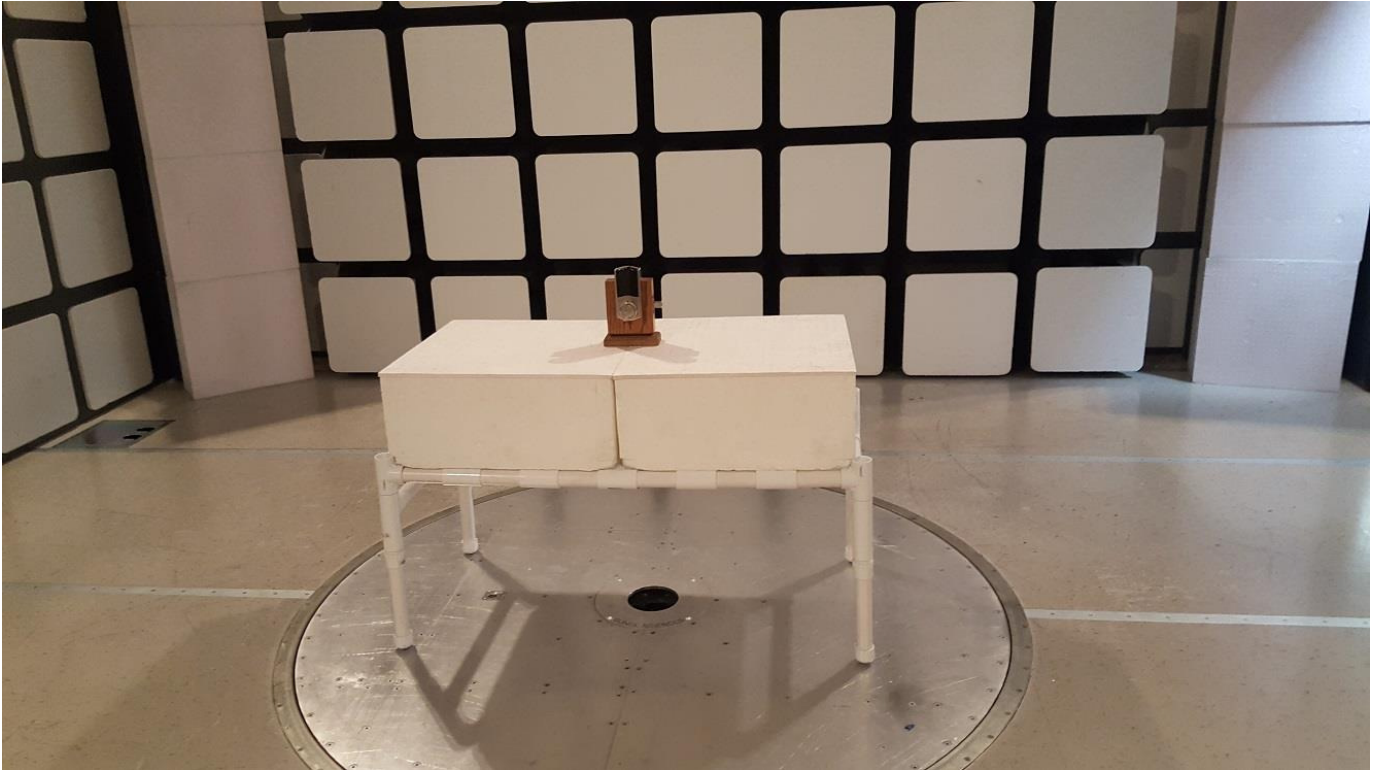
COM-POWER PAM-118**1-18GHz - PREAMPLIFIER**

S/N: 443011

CALIBRATION DUE: April 18, 2017

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
0.500	39.74	7.000	35.31
1.000	40.74	7.500	35.9
1.500	38.4	8.000	34.08
2.000	40.64	8.500	34.37
2.500	39.71	9.500	34.45
3.000	39.39	10.000	34.23
3.500	41.05	11.000	35.23
4.000	38.74	12.000	33.36
4.500	39.95	13.000	33.27
5.000	39.88	14.000	34.84
5.500	39.32	15.000	33.19
6.000	40.83	16.000	36.25
6.500	41.14	17.000	32.33
		18.000	34.1





FRONT VIEW

SPECTRUM BRANDS

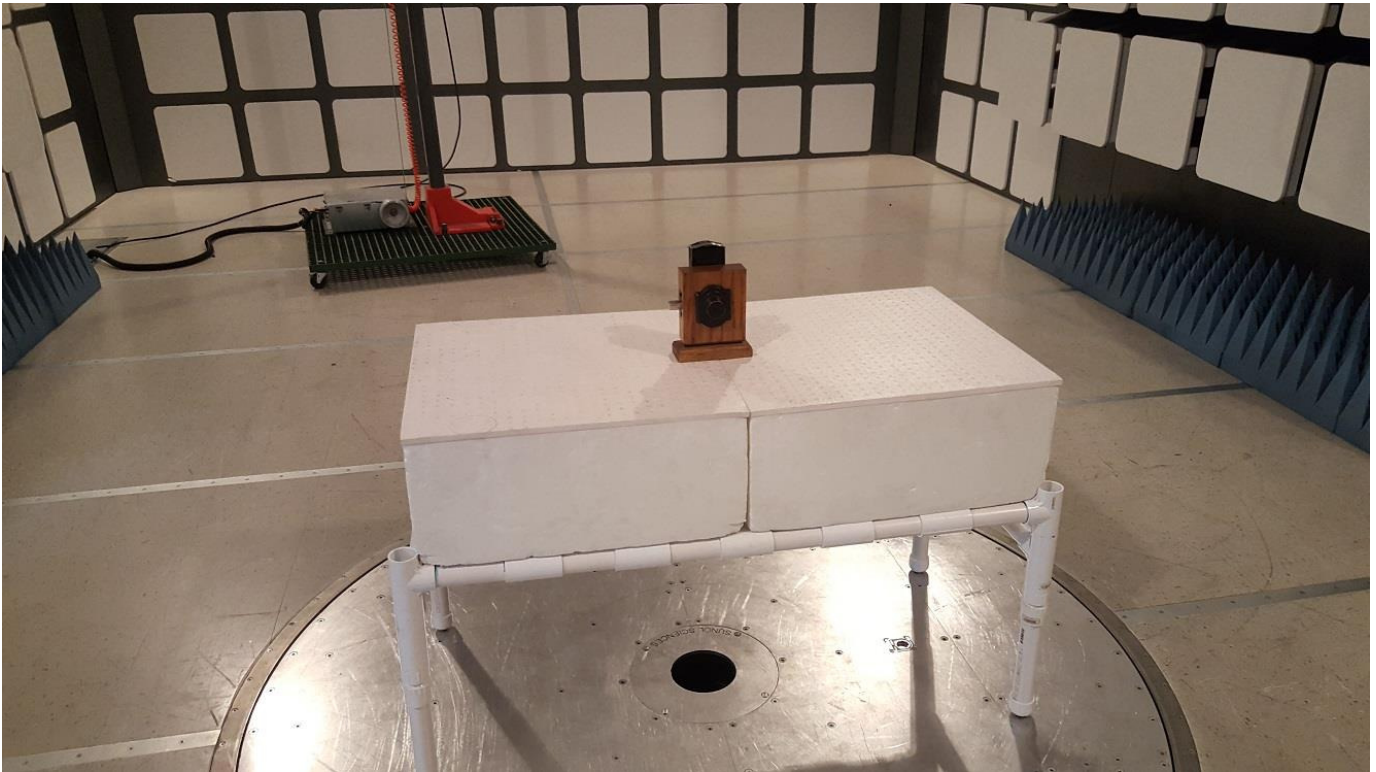
ELECTRONIC LOCK

Model: 925-GED1500-CVT

FCC SUBPART B & C - RADIATED EMISSIONS < 1GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**





REAR VIEW

SPECTRUM BRANDS

ELECTRONIC LOCK

Model: 925-GED1500-CVT

FCC SUBPART B & C - RADIATED EMISSIONS < 1GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**





FRONT VIEW

SPECTRUM BRANDS

ELECTRONIC LOCK

Model: 925-GED1500-CVT

FCC SUBPART B & C - RADIATED EMISSIONS > 1GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**





REAR VIEW

SPECTRUM BRANDS

ELECTRONIC LOCK

Model: 925-GED1500-CVT

FCC SUBPART B & C - RADIATED EMISSIONS > 1GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION

FOR MAXIMUM EMISSIONS



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APPENDIX E

RADIATED EMISSIONS DATA SHEETS



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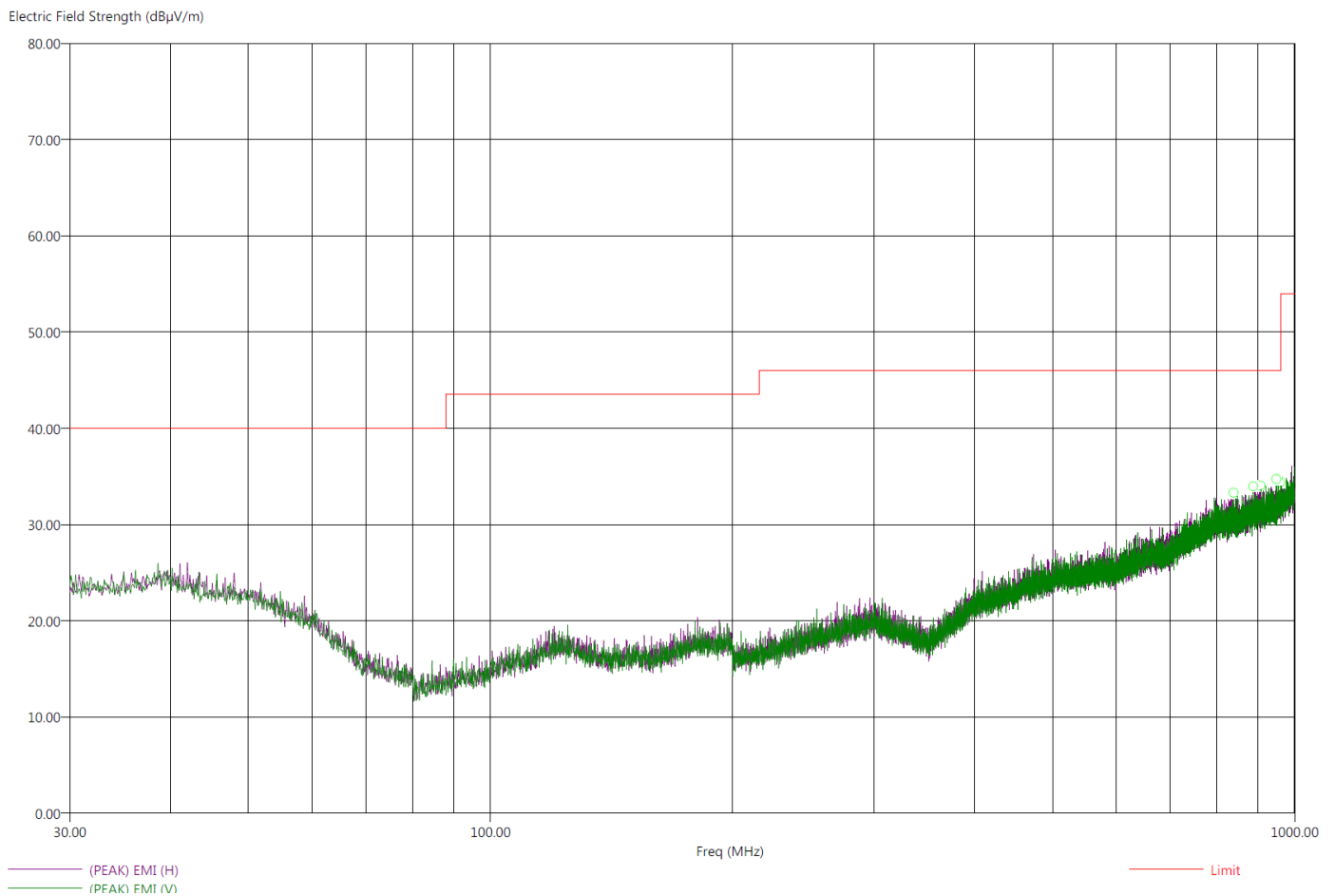
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(949) 587-0400

Title: FCC 15.209
File: Radiated Pre-Scan 30-1000Mhz.set
Operator: Torey Oliver
EUT Type: Electronic Lock / 925-GED1500-CVT
EUT Condition: The EUT is constantly transmitting 2426 MHz.
Comments: Temp: 72f
Hum: 38%
Battery Powered

7/31/2016 2:03:30 PM
Sequence: Preliminary Scan

Compatible Electronics, Inc. FAC-3 (Lab R)



**There were no radiated emissions other than harmonics found below 30 MHz or above 1GHz.
This is the worst case channel and mode for spurious emissions.**



Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

Title: FCC 15.209

7/31/2016 2:27:36 PM

File: Radiated Final 30-1000Mhz.set

Sequence: Final Measurements

Operator: Torey Oliver

EUT Type: Electronic Lock / 925-GED1500-CVT

EUT Condition: The EUT is constantly transmitting 2426 MHz.

Comments: Temp: 72f

Hum: 38%

Battery Powered

Compatible Electronics, Inc. FAC-3 (Lab R)

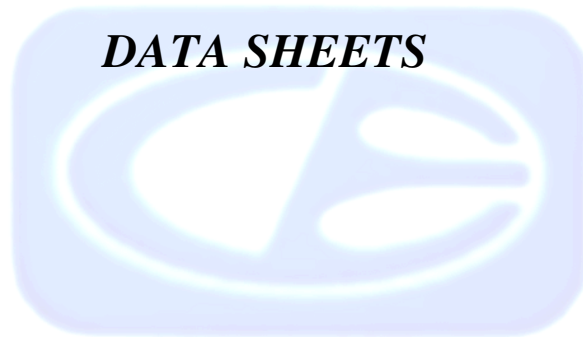
Freq (MHz)	(QP) Margin (dB)	(QP) EMI (dB μ V/m)	(PEAK) EMI (dB μ V/m)	Limit (dB μ V/m)	Pol	Ttbl Agl (deg)	Twr Ht (cm)	Transducer(dB)	Cable (dB)
839.70	-18.62	27.38	33.41	46.00	H	70.50	370.35	26.00	2.70
888.50	-17.98	28.02	33.92	46.00	V	17.25	236.68	26.47	2.77
906.70	-17.74	28.26	34.21	46.00	H	184.50	328.02	26.64	2.78
949.30	-17.26	28.74	34.73	46.00	V	203.75	105.04	26.90	2.80
953.40	-17.14	28.86	33.92	46.00	V	62.75	151.37	27.01	2.80
958.80	-17.01	28.99	34.73	46.00	H	210.25	281.28	27.19	2.81

*There were no radiated emissions other than harmonics found below 30 MHz or above 1GHz.
This is the worst case channel and mode.*



FUNDAMENTAL & HARMONICS

DATA SHEETS



Brea Division
114 Olinda Drive
Brea, CA 92823
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(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

FUNDAMENTAL FIELD STRENGTH

FCC 15.249

Company: Spectrum Brands
EUT: Electronic Lock
Model: 925-GED1500-CVT

Date: 7/29/2016
Lab: R
Tested By: Torey Oliver

Compatible Electronics, Inc. FAC-3

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table	Tower	Comments
2402.00	96.06	H	113.97	-17.91	Peak	0	1.83	X-Axis
2402.00	92.02	H	93.97	-1.95	Avg	0	1.83	X-Axis
2402.00	89.25	V	113.97	-24.72	Peak	117	1.86	X-Axis
2402.00	83.32	V	93.97	-10.65	Avg	117	1.86	X-Axis
2426.00	97.49	H	113.97	-16.48	Peak	21	1.51	X-Axis
2426.00	89.51	H	93.97	-4.46	Avg	21	1.51	X-Axis
2426.00	86.73	V	113.97	-27.24	Peak	275	1.95	X-Axis
2426.00	79.83	V	93.97	-14.14	Avg	275	1.95	X-Axis
2480.00	98.17	H	113.97	-15.80	Peak	22	1.71	X-Axis
2480.00	90.06	H	93.97	-3.91	Avg	22	1.71	X-Axis
2480.00	89.13	V	113.97	-24.84	Peak	129	1.59	X-Axis
2480.00	81.89	V	93.97	-12.08	Avg	129	1.59	X-Axis

Test distance
3 meter



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(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

HARMONICS LOW CHANNEL HORIZONTAL

FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4804.0	49.22	H	73.98	-24.76	Peak	1.35	0	
4804.0	45.19	H	53.98	-8.79	Avg	1.35	0	
7206.0		H	73.98		Peak			No Emissions Found
7206.0		H	53.98		Avg			No Emissions Found
9608.0		H	73.98		Peak			No Emissions Found
9608.0		H	53.98		Avg			No Emissions Found
12010.0		H	73.98		Peak			No Emissions Found
12010.0		H	53.98		Avg			No Emissions Found
14412.0		H	73.98		Peak			No Emissions Found
14412.0		H	53.98		Avg			No Emissions Found
16814.0		H	73.98		Peak			No Emissions Found
16814.0		H	53.98		Avg			No Emissions Found
19216.0		H	73.98		Peak			No Emissions Found
19216.0		H	53.98		Avg			No Emissions Found
21618.0		H	73.98		Peak			No Emissions Found
21618.0		H	53.98		Avg			No Emissions Found
24020.0		H	73.98		Peak			No Emissions Found
24020.0		H	53.98		Avg			No Emissions Found

 Test distance
 3 meter


HARMONICS LOW CHANNEL VERTICAL

FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4804.0	50.49	V	73.98	-23.49	Peak	1.36	33	
4804.0	46.62	V	53.98	-7.36	Avg	1.36	33	
7206.0		V	73.98		Peak			No Emissions Found
7206.0		V	53.98		Avg			No Emissions Found
9608.0		V	73.98		Peak			No Emissions Found
9608.0		V	53.98		Avg			No Emissions Found
12010.0		V	73.98		Peak			No Emissions Found
12010.0		V	53.98		Avg			No Emissions Found
14412.0		V	73.98		Peak			No Emissions Found
14412.0		V	53.98		Avg			No Emissions Found
16814.0		V	73.98		Peak			No Emissions Found
16814.0		V	53.98		Avg			No Emissions Found
19216.0		V	73.98		Peak			No Emissions Found
19216.0		V	53.98		Avg			No Emissions Found
21618.0		V	73.98		Peak			No Emissions Found
21618.0		V	53.98		Avg			No Emissions Found
24020.0		V	73.98		Peak			No Emissions Found
24020.0		V	53.98		Avg			No Emissions Found

 Test distance
 3 meter


HARMONICS MID CHANNEL HORIZONTAL

FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4852.0	49.52	H	73.98	-24.46	Peak	1.00	285	
4852.0	44.78	H	53.98	-9.20	Avg	1.00	285	
7278.0		H	73.98		Peak			No Emissions Found
7278.0		H	53.98		Avg			No Emissions Found
9704.0		H	73.98		Peak			No Emissions Found
9704.0		H	53.98		Avg			No Emissions Found
12130.0		H	73.98		Peak			No Emissions Found
12130.0		H	53.98		Avg			No Emissions Found
14556.0		H	73.98		Peak			No Emissions Found
14556.0		H	53.98		Avg			No Emissions Found
16982.0		H	73.98		Peak			No Emissions Found
16982.0		H	53.98		Avg			No Emissions Found
19408.0		H	73.98		Peak			No Emissions Found
19408.0		H	53.98		Avg			No Emissions Found
21834.0		H	73.98		Peak			No Emissions Found
21834.0		H	53.98		Avg			No Emissions Found
24260.0		H	73.98		Peak			No Emissions Found
24260.0		H	53.98		Avg			No Emissions Found

 Test distance
 3 meter


HARMONICS MID CHANNEL VERTICAL

FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4852.0	52.00	V	73.98	-21.98	Peak	1.09	14	
4852.0	48.72	V	53.98	-5.26	Avg	1.09	14	
7278.0		V	73.98		Peak			No Emissions Found
7278.0		V	53.98		Avg			No Emissions Found
9704.0		V	73.98		Peak			No Emissions Found
9704.0		V	53.98		Avg			No Emissions Found
12130.0		V	73.98		Peak			No Emissions Found
12130.0		V	53.98		Avg			No Emissions Found
14556.0		V	73.98		Peak			No Emissions Found
14556.0		V	53.98		Avg			No Emissions Found
16982.0		V	73.98		Peak			No Emissions Found
16982.0		V	53.98		Avg			No Emissions Found
19408.0		V	73.98		Peak			No Emissions Found
19408.0		V	53.98		Avg			No Emissions Found
21834.0		V	73.98		Peak			No Emissions Found
21834.0		V	53.98		Avg			No Emissions Found
24260.0		V	73.98		Peak			No Emissions Found
24260.0		V	53.98		Avg			No Emissions Found

 Test distance
 3 meter


HARMONICS HIGH CHANNEL HORIZONTAL

FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4960.0	50.93	H	73.98	-23.05	Peak	1.36	54	
4960.0	46.59	H	53.98	-7.39	Avg	1.36	54	
7440.0		H	73.98		Peak			No Emissions Found
7440.0		H	53.98		Avg			No Emissions Found
9920.0		H	73.98		Peak			No Emissions Found
9920.0		H	53.98		Avg			No Emissions Found
12400.0		H	73.98		Peak			No Emissions Found
12400.0		H	53.98		Avg			No Emissions Found
14880.0		H	73.98		Peak			No Emissions Found
14880.0		H	53.98		Avg			No Emissions Found
17360.0		H	73.98		Peak			No Emissions Found
17360.0		H	53.98		Avg			No Emissions Found
19840.0		H	73.98		Peak			No Emissions Found
19840.0		H	53.98		Avg			No Emissions Found
22320.0		H	73.98		Peak			No Emissions Found
22320.0		H	53.98		Avg			No Emissions Found
24800.0		H	73.98		Peak			No Emissions Found
24800.0		H	53.98		Avg			No Emissions Found

 Test distance
 3 meter


HARMONICS HIGH CHANNEL VERTICAL

FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4960.0	49.79	V	73.98	-24.19	Peak	1.09	7	
4960.0	45.23	V	53.98	-8.75	Avg	1.09	7	
7440.0		V	73.98		Peak			No Emissions Found
7440.0		V	53.98		Avg			No Emissions Found
9920.0		V	73.98		Peak			No Emissions Found
9920.0		V	53.98		Avg			No Emissions Found
12400.0		V	73.98		Peak			No Emissions Found
12400.0		V	53.98		Avg			No Emissions Found
14880.0		V	73.98		Peak			No Emissions Found
14880.0		V	53.98		Avg			No Emissions Found
17360.0		V	73.98		Peak			No Emissions Found
17360.0		V	53.98		Avg			No Emissions Found
19840.0		V	73.98		Peak			No Emissions Found
19840.0		V	53.98		Avg			No Emissions Found
22320.0		V	73.98		Peak			No Emissions Found
22320.0		V	53.98		Avg			No Emissions Found
24800.0		V	73.98		Peak			No Emissions Found
24800.0		V	53.98		Avg			No Emissions Found

 Test distance
 3 meter




***EMISSIONS RADIATED OUTSIDE OF THE FUNDAMENTAL
FREQUENCY BAND***

DATA SHEETS



Brea Division
114 Olinda Drive
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Agoura Division
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Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
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BAND EDGES HORIZONTAL

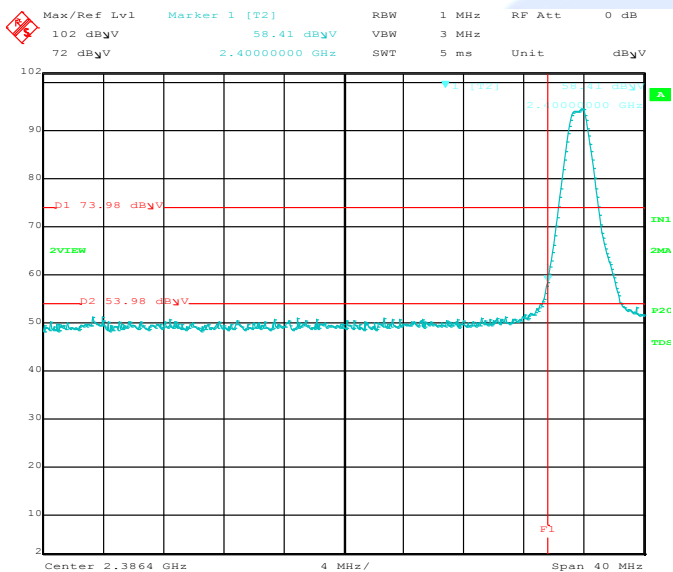
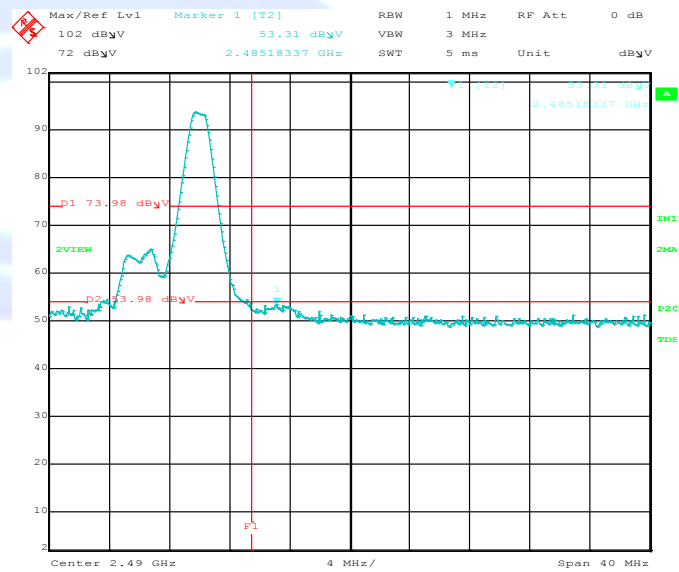
FCC 15.249

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: Torey Oliver
 Lab: R
 Test ENG: 7/29/2016

Compatible Electronics, Inc. FAC-3 (Lab R)

Freq. (MHz)	Level (dB μ V/m)	Pol	Limit (dB μ V)	Margin (dB)	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2400.00	58.41	H	73.98	-15.57	Peak	1.83	0	No Marker Delta
2400.00	50.05	H	53.98	-3.93	AVG	1.83	0	Method Used
2485.18	53.31	H	73.98	-20.67	Peak	1.71	22	No Marker Delta
2485.18	43.09	H	53.98	-10.89	AVG	1.71	22	Method Used

 Test distance
 3 meter

 Comment A: Lower Band Edge Horizontal
 Date: 29.JUL.2016 13:50:55

 Comment A: Upper Band Edge Horizontal
 Date: 29.JUL.2016 12:36:26


BAND EDGES VERTICAL

FCC 15.249

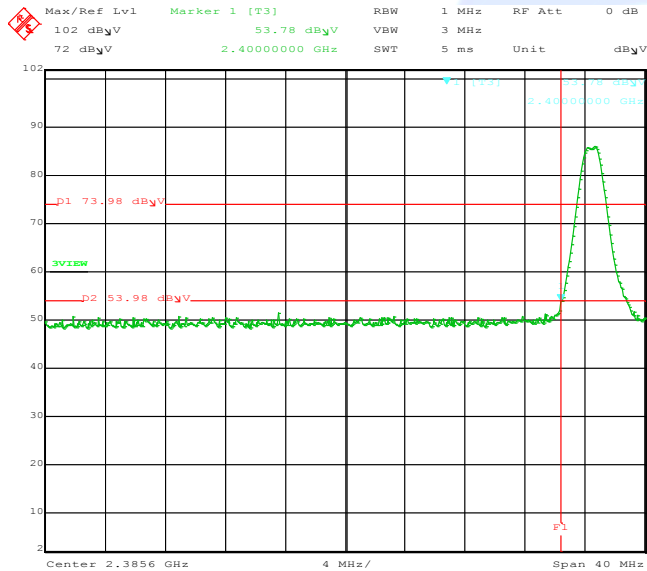
Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

Date: Torey Oliver
 Lab: R
 Test ENG: 7/29/2016

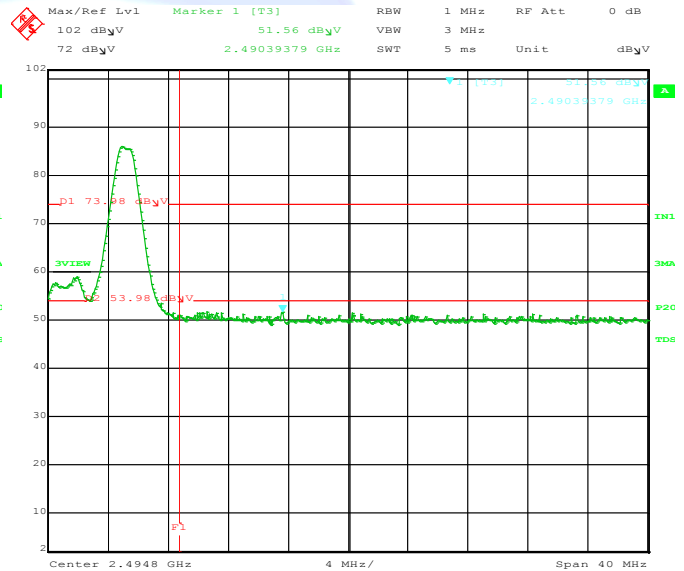
Compatible Electronics, Inc. FAC-3 (Lab R)

Freq. (MHz)	Level (dBμV/m)	Pol	Limit (dBμV)	Margin (dB)	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2400.00	53.78	V	73.98	-20.2	Peak	1.86	117	No Marker Delta
2400.00	43.10	V	53.98	-10.88	AVG	1.86	117	Method Used
2490.39	51.56	V	73.98	-22.42	Peak	1.59	129	No Marker Delta
2490.39	38.39	V	53.98	-15.59	AVG	1.59	129	Method Used

Test distance
 3 meter



Comment A: Lower Band Edge Vertical
 Date: 29.JUL.2016 13:56:45



Comment A: Upper Band Edge Vertical
 Date: 29.JUL.2016 12:44:18



Brea Division
 114 Olinda Drive
 Brea, CA 92823
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Agoura Division
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 Lake Forest, CA 92630
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99% OCCUPIED BANDWIDTH

DATA SHEETS



Brea Division
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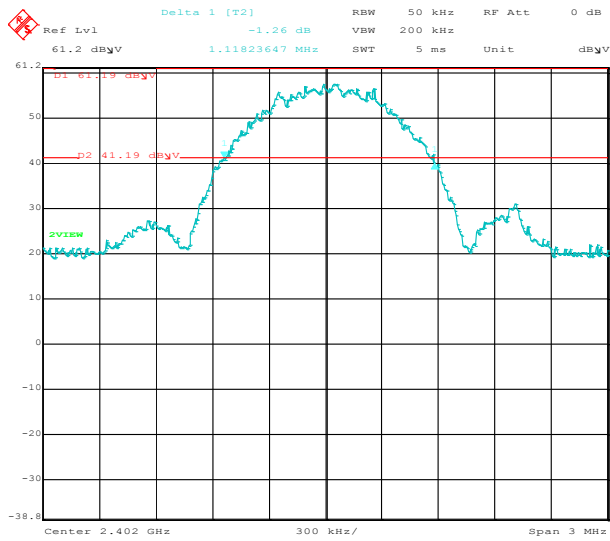
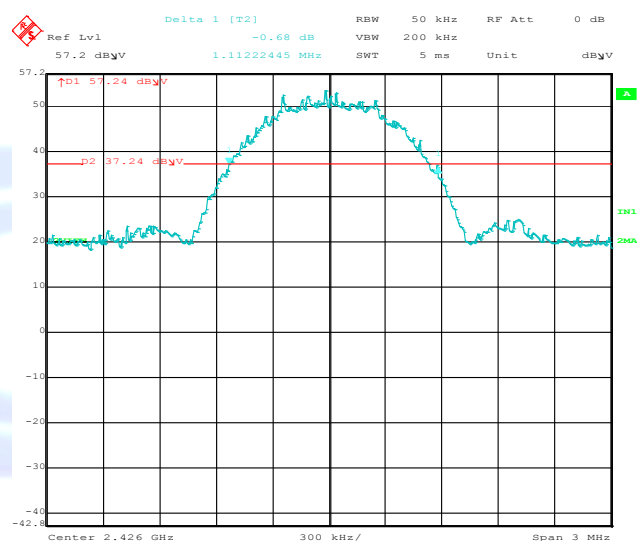
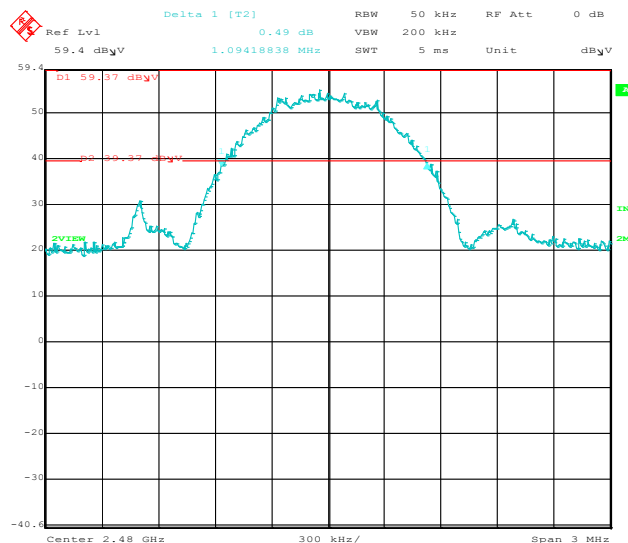
RSS 210

 Company: Spectrum Brands
 EUT: Electronic Lock
 Model: 925-GED1500-CVT

 Date: 7/29/2016
 Lab: R
 Tested By: Torey Oliver

Compatible Electronics, Inc. FAC-3 (Lab R)
99% Occupied Bandwidth

Freq. (MHz)	Measured BW (kHz)	Peak / QP / Avg	Comments
2402	1118.24	Peak	
2426	1112.22	Peak	
2480	1094.19	Peak	


 Comment A:
 Date: 29.JUL.2016 14:24:44

 Comment A: ICB
 Date: 29.JUL.2016 14:28:42

 Comment A:
 Date: 29.JUL.2016 14:32:11

Brea Division
 114 Olinda Drive
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