FCC PART 15 SUBPART B and C
TEST REPORT

for

LOAD CONTROL MODULE – DUPLEX RECEPTACLE

Model: SS8020

Prepared for

TELKONET, INC.
10200 WEST INNOVATION DRIVE, SUITE 300
MILWAUKEE, WISCONSIN 53226

Prepared by:_____

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DATE: SEPTEMBER 30, 2013

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
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GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this electromagnetic emission test report, 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 without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	Load Control Module – Duplex Receptacle Model: SS8020 S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified in order to meet the specifications.
Manufacturer:	Telkonet, Inc. 10200 West Innovation Drive, Suite 300 Milwaukee, Wisconsin 53226
Test Date(s):	July 16 and 17, 2013
Test Specifications:	Emissions requirements CFR Title 47, Part 15, Subpart B and Subpart C, Sections 15.205, 15.209, and 15.249
Test Procedure:	ANSI C63.4
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions 150 kHz to 30 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.207.
2	Radiated RF Emissions 10 kHz to 25000 MHz (Transmitter and Digital Portion)	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the Load Control Module – Duplex Receptacle, Model: SS8020 (EUT). The Emissions measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.207, 15.209, and 15.249 for the transmitter portion.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The Emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

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

Telkonet, Inc.

Clark Stremke	Principal Firmware Engineer
Jeff Sobieski	CTO

Compatible Electronics Inc.

James Ross	Test Engineer
Kyle Fujimoto	Test Engineer

2.4 Date Test Sample was Received

The test sample was received by Compatible Electonics, Inc. on July 15, 2013.

2.5 Disposition of the Test Sample

The test sample has not been returned to Telkonet, Inc. as of the date of the test report.

2.6 Abbreviations and Acronyms

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

FCC	Federal Communications Commission
RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
ITE	Information Technology Equipment
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
N/A	Not Applicable
Ltd.	Limited
Inc.	Incorporated
NCR	No Calibration Required
ID	Identification
Tx	Transmit

3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – Emissions

The Load Control Module – Duplex Receptacle, Model: SS8020 (EUT) was connected to a lamp. Durng the tests, the EUT was continously transmitting and powering the lamp. The EUT was tested the X-Axis and Y-Axis.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The final emissions data was taken in this mode of operation and any cables were maximized. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. Photographs of the test setup are in Appendix D of this report.

4.1.1 Cable Construction and Termination

Cable 1 This is a 2-meter unshielded cable connecting the EUT to the lamp. The cable has a male 2-prong power connector at the EUT end and is hard wired into the lamp.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
LOAD CONTROL MODULE – DUPLEX RECEPTACLE (EUT)	TELKONET, INC.	SS8020	N/A	XV6SS8020
LAMP	N/A	N/A	N/A	N/A

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED IN LAB B					
EMI Receiver	Rohde & Schwarz	ESIB40	100194	November 19, 2012	2 Year
Computer	Compaq	CQ5210F	CNX9360CF9	N/A	N/A
Monitor	Hewlett Packard	HPs2031a	3CQ046N3MD	N/A	N/A
GENERAL TEST EQUIPMENT USED IN LAB A					
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	2637A03618	May 30, 2013	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A13404	May 30, 2013	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	May 30, 2013	1 Year
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
CombiLog Antenna	Com-Power	AC-220	61060	May 29, 2013	1 Year
Preamplifier	Com-Power	PA-103	1582	December 28, 2012	1 Year
Preamplifier	Com-Power	PA-118	181656	December 27, 2012	1 Year
Preamplifier	Com-Power	PA-840	711013	May 17, 2012	2 Year
Loop Antenna	Com-Power	AL-130	17089	January 29, 2013	2 Year
Horn Antenna	Com-Power	AH-118	071175	February 29, 2012	2 Year
Horn Antenna	Com-Power	AH-826	0071957	N/A	N/A
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
VARIATION OF THE INPUT POWER TEST EQUIPMENT					
Variable Auto Transformer	Staco Energy Products	3PN1010	N/A	N/A	N/A
Multimeter	Wavetek	DM25XT	40209875	May 30, 2012	2 Year

5.2 Emissions Test Equipment (Continued)

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION CYCLE
CONDCUTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
LISN	Com Power	LI-215	12082	June 17, 2013	1 Year
LISN	Com Power	LI-215	12090	June 17, 2013	1 Year
Transient Limiter	Seward	252A910	K39-0220	November 7, 2012	1 Year

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 of this report for Emissions test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was grounded via the AC mains safety ground.

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. TEST PROCEDURES

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

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The measurement receiver was used as a measuring meter. The data was collected with the measurement receiver in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the measurement receiver's input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the measurement 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 was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. 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 final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.207.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer, along with the quasi-peak adapter, and EMI Receiver were used as a measuring meter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Preamplifier Model: PA-103 was used for frequencies from 30 MHz to 1 GHz, the Com-Power Microwave Preamplifier Model: PA-118 was used for frequencies from 1 GHz to 18 GHz, and the Com-Power Microwave Preamplifier Model: PA-840 were used for frequencies above 18 GHz. The spectrum analyzer and EMI Receiver were used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer and EMI Receiver records the highest measured reading over the sweeps.

The quasi-peak function was used only for those readings which are marked accordingly on the data sheets.

The frequencies above 1 GHz were adjusted by a “duty cycle correction factor”, derived from 20 log (dwell time / 100 ms).

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

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 1000 MHz	120 kHz	CombiLog Antenna
1 GHz to 25 GHz	1 MHz	Horn Antennas

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. 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 by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gun sight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the vertical axis in order to ensure accurate results.

Radiated Emissions (Spurious and Harmonics) Test (continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3-meter test distance from 30 MHz to 25 GHz and at a 10-meter distance from 10 kHz to 30 MHz to obtain the final test data.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.249.

7.1.3 Variation of the Input Power

The variation of the input power test was performed using the EMI Receiver. The EUT input power was varied between 85% and 115% of the nominal rated supply voltage. The carrier frequency was monitored for any change in amplitude.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15. 31(e).

7.2 RF Emissions Test Results

Table 1.0 CONDUCTED EMISSION RESULTS
Load Control Module – Duplex Receptacle, Model: SS8020

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
0.305 (BL)	46.18	50.10	-3.92
0.354 (BL)	44.90	44.87	-3.97
1.663 (WL)	42.03	46.00	-3.97
0.383 (WL)	44.20	48.21	-4.01
0.381 (BL)	44.10	48.25	-4.15
0.345 (BL)	44.00	49.09	-5.09

* The complete emissions data is given in Appendix E of this report.
(BL) Black Lead (WL) White lead
(QP) Quasi-Peak (A) Average

Table 1.0 RADIATED EMISSION RESULTS
Load Control Module – Duplex Receptacle, Model: SS8020

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
2405 (V) (Y-Axis)	81.25 (A)	94.00	-12.75
2440 (H) (X-Axis)	78.66 (A)	94.00	-15.34
2405 (H) (X-Axis)	78.59 (A)	94.00	-15.41
2483.5 (V) (Y-Axis)	38.19 (A)	54.00	-15.81
2480 (V) (Y-Axis)	77.25 (A)	94.00	-16.75
2483.5 (H) (X-Axis)	37.15 (A)	54.00	-16.85

* The complete emissions data is given in Appendix E of this report.
(H) Horizontal (A) Average
(V) Vertical (QP) Quasi-Peak

8. CONCLUSIONS

The Load Control Module – Duplex Receptacle, Model: SS8020 (EUT), as tested, meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.249 for the transmitter portion.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP LAB CODES 200063-0, 200528-0, 200527-0

For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. Please follow the link to the NIST/NVLAP site for each of our facilities' NVLAP certificate and scope of accreditation

NVLAP listing links

Agoura Division / **Brea Division** / **Silverado/Lake Forest Division**

.Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfillment 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."

ANSI listing CETCB

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).
US/EU MRA list NIST MRA site

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA).
APEC MRA list NIST MRA site

We are also listed for IT products by the following country/agency:

VCCI Support member: Please visit http://www.vcci.jp/vcci_e/

FCC Listing, from FCC OET site
FCC test lab search https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm

Compatible Electronics IC listing can be found at:
http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 and/or FCC **Class B** specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.

APPENDIX C

ADDITIONAL MODELS

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST	Load Control Module – Duplex Receptacle Model: SS8020 S/N: N/A
ADDITIONAL MODELS COVERED:	The following models are considered by the manufacturer to be similar to the sample tested, however the test results contained in this report relate only to the sample tested.

There were no additional models covered under this test report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

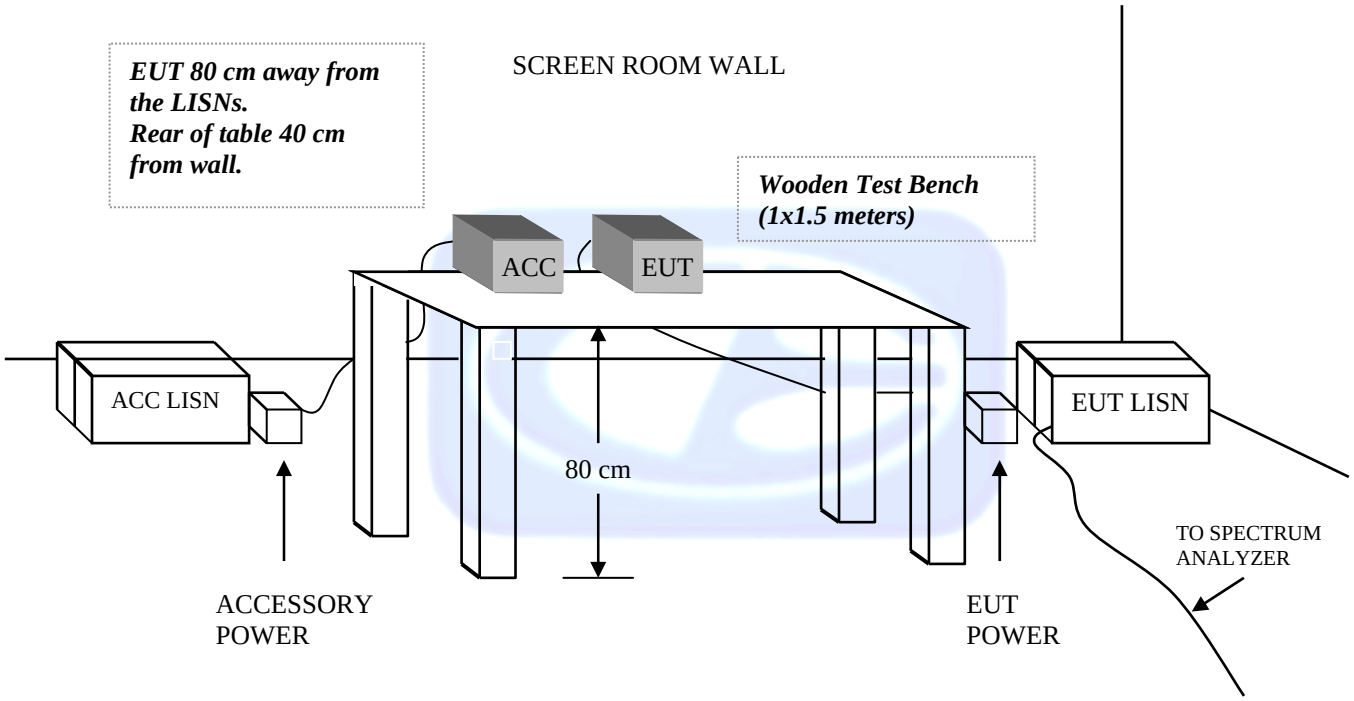
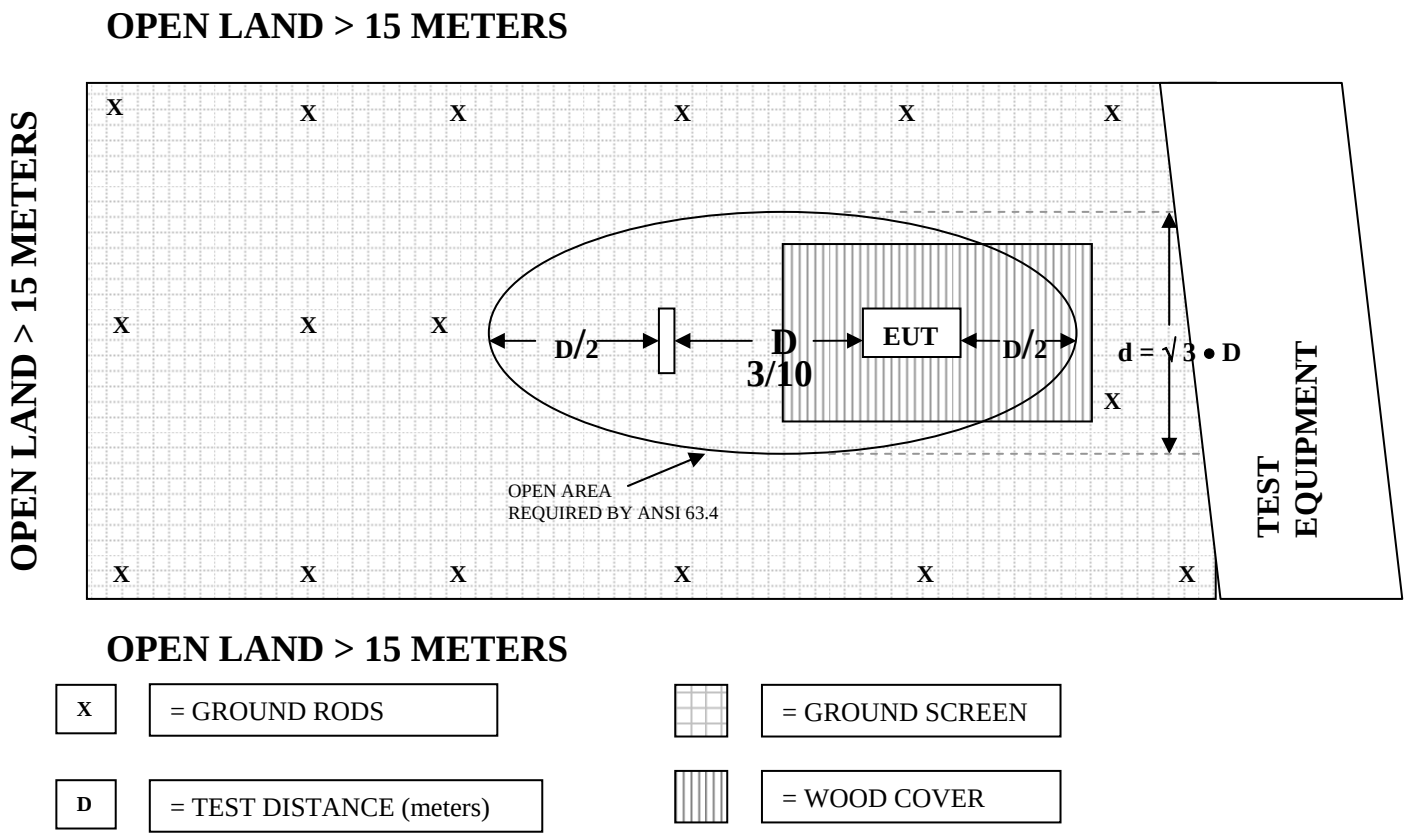


FIGURE 2: PLOT MAP AND LAYOUT OF THE RADIATED TEST SITE



COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: JANUARY 29, 2013

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-42.5	9
0.01	-42.3	9.2
0.02	-42.1	9.4
0.03	-41.4	10.1
0.04	-41.8	9.7
0.05	-42.4	9.1
0.06	-42.3	9.2
0.07	-42.5	9
0.08	-42.4	9.1
0.09	-42.5	9
0.1	-42.5	9
0.2	-42.7	8.8
0.3	-42.6	8.9
0.4	-42.5	9
0.5	-42.7	8.8
0.6	-42.7	8.8
0.7	-42.5	9
0.8	-42.3	9.2
0.9	-42.2	9.3
1	-42.2	9.3
2	-41.8	9.7
3	-41.7	9.8
4	-41.7	9.8
5	-41.5	10
6	-41.6	9.9
7	-41.4	10.1
8	-41	10.5
9	-40.8	10.7
10	-41.3	10.2
15	-41.4	10.1
20	-41.2	10.3
25	-42.6	8.9
30	-41.7	9.8

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61060

CALIBRATION DATE: MAY 29, 2013

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	19.40	200	9.10
35	19.10	250	11.40
40	19.70	300	11.90
45	18.00	350	14.20
50	16.80	400	15.20
60	12.50	450	16.50
70	7.30	500	17.10
80	4.40	550	16.20
90	8.00	600	17.70
100	8.80	650	19.10
120	10.50	700	20.00
125	10.60	750	21.50
140	8.60	800	21.50
150	11.20	850	21.70
160	8.90	900	22.70
175	9.60	950	22.10
180	8.50	1000	22.90

COM POWER AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: FEBRUARY 29, 2012

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.6	10.0	37.7
1.5	22.0	10.5	38.4
2.0	28.7	11.0	38.0
2.5	29.3	11.5	38.2
3.0	30.6	12.0	39.0
3.5	30.4	12.5	42.4
4.0	31.1	13.0	40.8
4.5	33.4	13.5	40.0
5.0	35.3	14.0	39.7
5.5	35.1	14.5	43.5
6.0	36.9	15.0	42.7
6.5	37.4	15.5	39.7
7.0	37.6	16.0	39.2
7.5	36.2	16.5	39.7
8.0	38.4	17.0	42.2
8.5	39.3	17.5	47.6
9.0	37.4	18.0	51.2
9.5	38.0		

COM-POWER AH826

HORN ANTENNA

S/N: 71957

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	33.5	22.5	35.5
18.5	33.5	23.0	35.9
19.0	34.0	23.5	35.7
19.5	34.0	24.0	35.6
20.0	34.3	24.5	36.0
20.5	34.9	25.0	36.2
21.0	34.7	25.5	36.1
21.5	35.0	26.0	36.2
22.0	35.0	26.5	35.7

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: DECEMBER 28, 2012

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.80	300	32.26
40	33.10	350	32.23
50	33.10	400	32.17
60	33.10	450	32.16
70	33.00	500	32.11
80	33.00	550	32.07
90	33.10	600	32.02
100	33.00	650	31.97
125	33.00	700	31.87
150	33.00	750	31.81
175	32.90	800	31.73
200	32.80	850	31.57
225	32.34	900	31.43
250	32.32	950	31.29
275	32.28	1000	31.14

COM-POWER PA-118

PREAMPLIFIER

S/N: 181656

CALIBRATION DATE: DECEMBER 27, 2012

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
0.50	25.29	6.00	25.75
0.60	25.26	6.50	25.28
0.70	25.23	7.00	24.83
0.80	25.13	7.50	24.49
0.90	24.91	8.00	24.38
1.00	24.68	8.50	25.06
1.25	25.85	9.00	25.55
1.50	26.23	9.50	25.32
1.75	26.42	10.0	25.25
2.00	26.48	10.5	25.31
2.25	26.55	11.0	24.99
2.50	26.59	11.5	24.84
2.75	26.64	12.0	25.08
3.00	26.67	12.5	24.64
3.25	26.67	13.0	24.44
3.50	26.66	13.5	24.85
3.75	26.58	14.0	25.02
4.00	26.82	14.5	25.41
4.25	26.60	15.0	26.12
4.50	26.46	15.5	26.74
4.75	26.36	16.0	25.67
5.00	26.22	16.5	24.48
5.25	26.11	17.0	24.33
5.50	25.98	17.5	25.19
5.75	25.90	18.0	26.75

COM-POWER PA-840

MICROWAVE PREAMPLIFIER

S/N: 711013

CALIBRATION DATE: MAY 17, 2012

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	25.81	31.0	25.77
19.0	24.57	31.5	25.36
20.0	23.46	32.0	25.15
21.0	22.51	32.5	25.13
22.0	23.85	33.0	25.52
23.0	23.31	33.5	25.24
24.0	24.44	34.0	25.08
25.0	25.42	34.5	25.27
26.0	25.71	35.0	23.99
26.5	25.66	35.5	24.67
27.0	25.84	36.5	24.80
27.5	25.29	37.0	26.27
28.0	25.46	37.5	24.86
28.5	25.58	38.0	24.64
29.0	26.16	38.5	23.46
29.5	26.14	39.0	21.29
30.0	26.01	39.5	20.83
30.5	25.67	40.0	19.96

FRONT VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – RADIATED EMISSIONS – 10 kHz to 30 MHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – RADIATED EMISSIONS – 10 kHz to 30 MHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – RADIATED EMISSIONS – 30 MHz to 1 GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – RADIATED EMISSIONS – 30 MHz to 1 GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

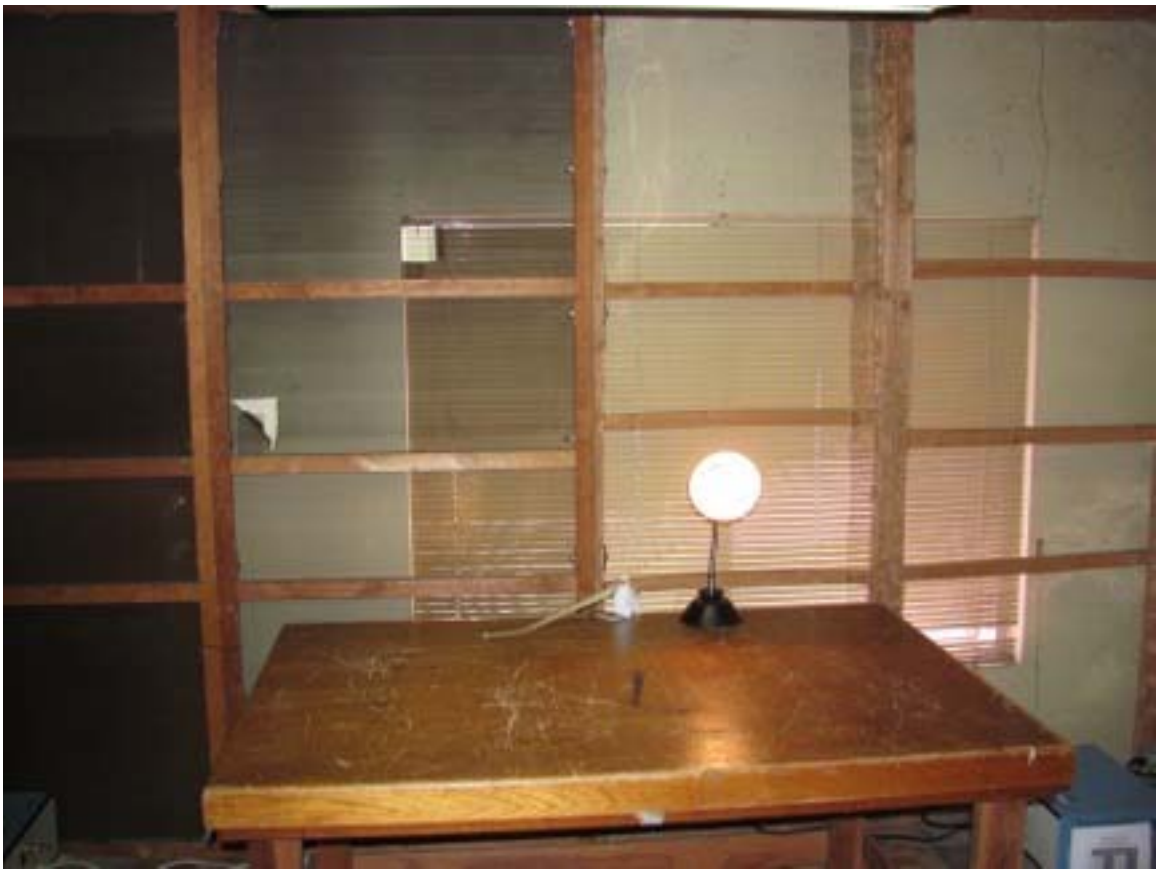
TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – RADIATED EMISSIONS – 1 GHz to 25 GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – RADIATED EMISSIONS – 1 GHz to 25 GHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – CONDUCTED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

TELKONET, INC.
LOAD CONTROL MODULE – DUPLEX RECEPTACLE
MODEL: SS8020
FCC SUBPART B AND C – CONDUCTED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Low Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	93.27	V	114	-20.73	Peak	1.5	135	
2405	73.27	V	94	-20.73	Avg	1.5	135	
4810	51.28	V	74	-22.72	Peak	1.25	155	
4810	31.28	V	54	-22.72	Avg	1.25	155	
7215	48.17	V	74	-25.83	Peak	1.35	165	
7215	28.17	V	54	-25.83	Avg	1.35	165	
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Low Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	98.59	H	114	-15.41	Peak	1.25	180	
2405	78.59	H	94	-15.41	Avg	1.25	180	
4810	54.88	H	74	-19.12	Peak	1.35	165	
4810	34.88	H	54	-19.12	Avg	1.35	165	
7215	45.15	H	74	-28.85	Peak	1.25	175	
7215	25.15	H	54	-28.85	Avg	1.25	175	
9620								No Emission
9620								Detected
12025								No Emission
12025								Detected
14430								No Emission
14430								Detected
16835								No Emission
16835								Detected
19240								No Emission
19240								Detected
21645								No Emission
21645								Detected
24050								No Emission
24050								Detected

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Low Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	101.25	V	114	-12.75	Peak	1	135	
2405	81.25	V	94	-12.75	Avg	1	135	
4810	54.17	V	74	-19.83	Peak	1.25	135	
4810	34.17	V	54	-19.83	Avg	1.25	135	
7215	46.24	V	74	-27.76	Peak	1.25	45	
7215	26.24	V	54	-27.76	Avg	1.5	45	
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Low Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	95.11	H	114	-18.89	Peak	1.25	45	
2405	75.11	H	94	-18.89	Avg	1.25	45	
4810	49.41	H	74	-24.59	Peak	1.35	225	
4810	29.41	H	54	-24.59	Avg	1.35	225	
7215	46.88	H	74	-27.12	Peak	1.25	235	
7215	26.88	H	54	-27.12	Avg	1.25	235	
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2440	89.29	V	114	-24.71	Peak	1.25	180	
2440	69.29	V	94	-24.71	Avg	1.25	180	
4880	51.23	V	74	-22.77	Peak	1.25	165	
4880	31.23	V	54	-22.77	Avg	1.25	165	
7320	45.27	V	74	-28.73	Peak	1.35	175	
7320	25.27	V	54	-28.73	Avg	1.35	175	
9760								**No Emission**
9760								**Detected**
12200								**No Emission**
12200								**Detected**
14640								**No Emission**
14640								**Detected**
17080								**No Emission**
17080								**Detected**
19520								**No Emission**
19520								**Detected**
21960								**No Emission**
21960								**Detected**
24400								**No Emission**
24400								**Detected**

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2440	98.66	H	114	-15.34	Peak	1.25	180	
2440	78.66	H	94	-15.34	Avg	1.25	180	
4880	52.44	H	74	-21.56	Peak	1.25	155	
4880	32.44	H	54	-21.56	Avg	1.25	155	
7320	46.23	H	74	-27.77	Peak	1.35	165	
7320	26.23	H	54	-27.77	Avg	1.35	165	
9760								No Emission
9760								Detected
12200								No Emission
12200								Detected
14640								No Emission
14640								Detected
17080								No Emission
17080								Detected
19520								No Emission
19520								Detected
21960								No Emission
21960								Detected
24400								No Emission
24400								Detected

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2440	96.85	V	114	-17.15	Peak	1.25	180	
2440	76.85	V	94	-17.15	Avg	1.25	180	
4880	50.97	V	74	-23.03	Peak	1.25	165	
4880	30.97	V	54	-23.03	Avg	1.25	165	
7320	45.22	V	74	-28.78	Peak	1.35	175	
7320	25.22	V	54	-28.78	Avg	1.35	175	
9760								No Emission
9760								Detected
12200								No Emission
12200								Detected
14640								No Emission
14640								Detected
17080								No Emission
17080								Detected
19520								No Emission
19520								Detected
21960								No Emission
21960								Detected
24400								No Emission
24400								Detected

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2440	88.88	H	114	-25.12	Peak	1.25	135	
2440	68.88	H	94	-25.12	Avg	1.25	135	
4880	51.15	H	74	-22.85	Peak	1.35	155	
4880	31.15	H	54	-22.85	Avg	1.35	155	
7320	54.07	H	74	-19.93	Peak	1.25	165	
7320	34.07	H	54	-19.93	Avg	1.25	165	
9760								**No Emission**
9760								**Detected**
12200								**No Emission**
12200								**Detected**
14640								**No Emission**
14640								**Detected**
17080								**No Emission**
17080								**Detected**
19520								**No Emission**
19520								**Detected**
21960								**No Emission**
21960								**Detected**
24400								**No Emission**
24400								**Detected**

FCC 15.247
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

High Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	92.81	V	114	-21.19	Peak	1.25	180	
2480	72.81	V	94	-21.19	Avg	1.25	180	
4960	49.62	V	74	-24.38	Peak	1.25	135	
4960	29.62	V	54	-24.38	Avg	1.25	135	
7440	46.11	V	74	-27.89	Peak	1.35	145	
7440	26.11	V	54	-27.89	Avg	1.35	145	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

High Channel
X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	96.21	H	114	-17.79	Peak	1.25	135	
2480	76.21	H	94	-17.79	Avg	1.25	135	
4960	52.49	H	74	-21.51	Peak	1.25	155	
4960	32.49	H	54	-21.51	Avg	1.25	155	
7440	47.01	H	74	-26.99	Peak	1.35	165	
7440	27.01	H	54	-26.99	Avg	1.35	165	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

High Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	97.25	V	114	-16.75	Peak	1	135	
2480	77.25	V	94	-16.75	Avg	1	135	
4960	54.31	V	74	-19.69	Peak	1.25	155	
4960	34.31	V	54	-19.69	Avg	1.25	155	
7440	45.69	V	74	-28.31	Peak	1.25	45	
7440	25.69	V	54	-28.31	Avg	1.25	45	
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

High Channel
Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	96.13	H	114	-17.87	Peak	1.25	225	
2480	76.13	H	94	-17.87	Avg	1.25	225	
4960	51.44	H	74	-22.56	Peak	1.25	165	
4960	31.44	H	54	-22.56	Avg	1.25	165	
7440	47.29	H	74	-26.71	Peak	1.25	45	
7440	27.29	H	54	-26.71	Avg	1.25	45	
9920								No Emission
9920								Detected
12400								No Emission
12400								Detected
14880								No Emission
14880								Detected
17360								No Emission
17360								Detected
19840								No Emission
19840								Detected
22320								No Emission
22320								Detected
24800								No Emission
24800								Detected

FCC 15.249 and FCC Class B
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Dates: 07/16/2013 & 07/17/2013
Lab: B
Tested By: Kyle Fujimoto

Radiated Emissions 10 kHz to 25 GHz
Digital Portion and Non-Harmonic Emissions of the Transmitter

Axis of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Comments
								No Emissions Detected
								from 10 kHz to 25 GHz
								for the Non-Harmonic
								Emissions from the
								EUT for both the Vertical and
								Horizontal Polarizations.
								No Emissions Detected
								from 10 kHz to 25 GHz
								for the Digital Portion
								of the EUT for both the
								Vertical and Horizontal
								Polarizations.
								Tested in both the X-Axis
								and Y-Axis

BAND EDGES

DATA SHEETS

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Band Edges - Vertical Polarization

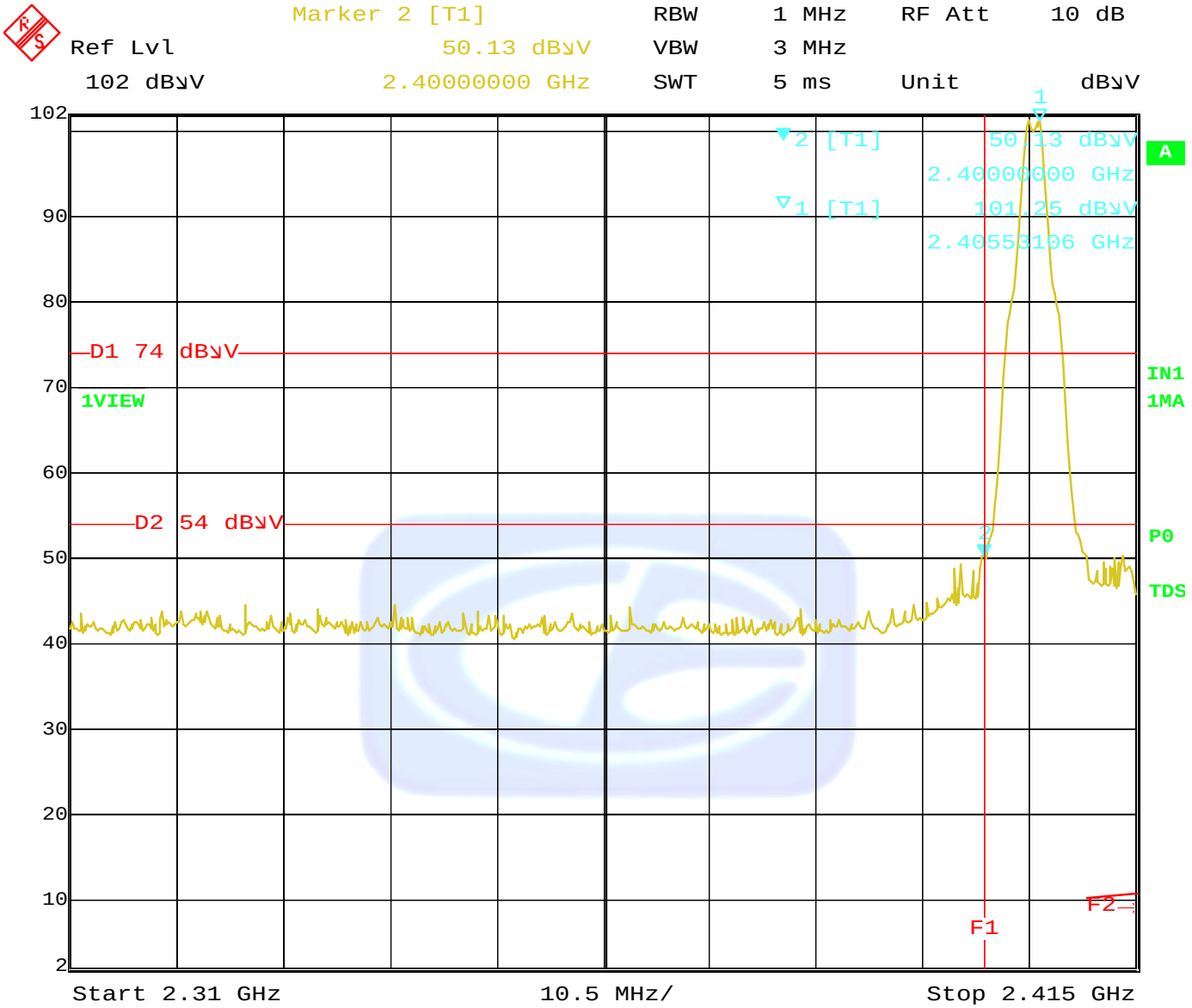
Worst Case Axis of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
Y-Axis	2405	101.25	V	114	-12.75	Peak	1	135	**Fundamental of**
Y-Axis	2405	81.25	V	94	-12.75	Avg	1	135	**Low Channel @ 3 Meters**
Y-Axis	2400	50.13	V	74	-23.87	Peak	1	1.35	**Band Edge of**
Y-Axis	2400	30.13	V	54	-23.87	Avg	1	1.35	**Low Channel @ 3 Meters**
Y-Axis	2480	97.25	V	114	-16.75	Peak	1	135	**Fundamental of**
Y-Axis	2480	77.25	V	94	-16.75	Avg	1	135	**High Channel @ 3 Meters**
Y-Axis	2483.5	58.19	V	74	-15.81	Peak	1	135	**Band Edge of**
Y-Axis	2483.5	38.19	V	54	-15.81	Avg	1	135	**High Channel @ 3 Meters**

FCC 15.249
Telkonet, Inc.
Load Control Module - Duplex Receptacle
Model: SS8020

Date: 07/16/2013
Lab: B
Tested By: Kyle Fujimoto

Band Edges - Horizontal Polarization

Worst Case Axis of EUT	Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
X-Axis	2405	98.59	H	114	-15.41	Peak	1.25	180	Fundamental of
X-Axis	2405	78.59	H	94	-15.41	Avg	1.25	180	Low Channel @ 3 Meters
X-Axis	2400	47.93	H	74	-26.07	Peak	1.25	180	Band Edge of
X-Axis	2400	27.93	H	54	-26.07	Avg	1.25	180	Low Channel @ 3 Meters
X-Axis	2480	96.21	H	114	-17.79	Peak	1.25	135	Fundamental of
X-Axis	2480	76.21	H	94	-17.79	Avg	1.25	135	High Channel @ 3 Meters
X-Axis	2483.5	57.15	H	74	-16.85	Peak	1.25	135	Band Edge of
X-Axis	2483.5	37.15	H	54	-16.85	Avg	1.25	135	High Channel @ 3 Meters



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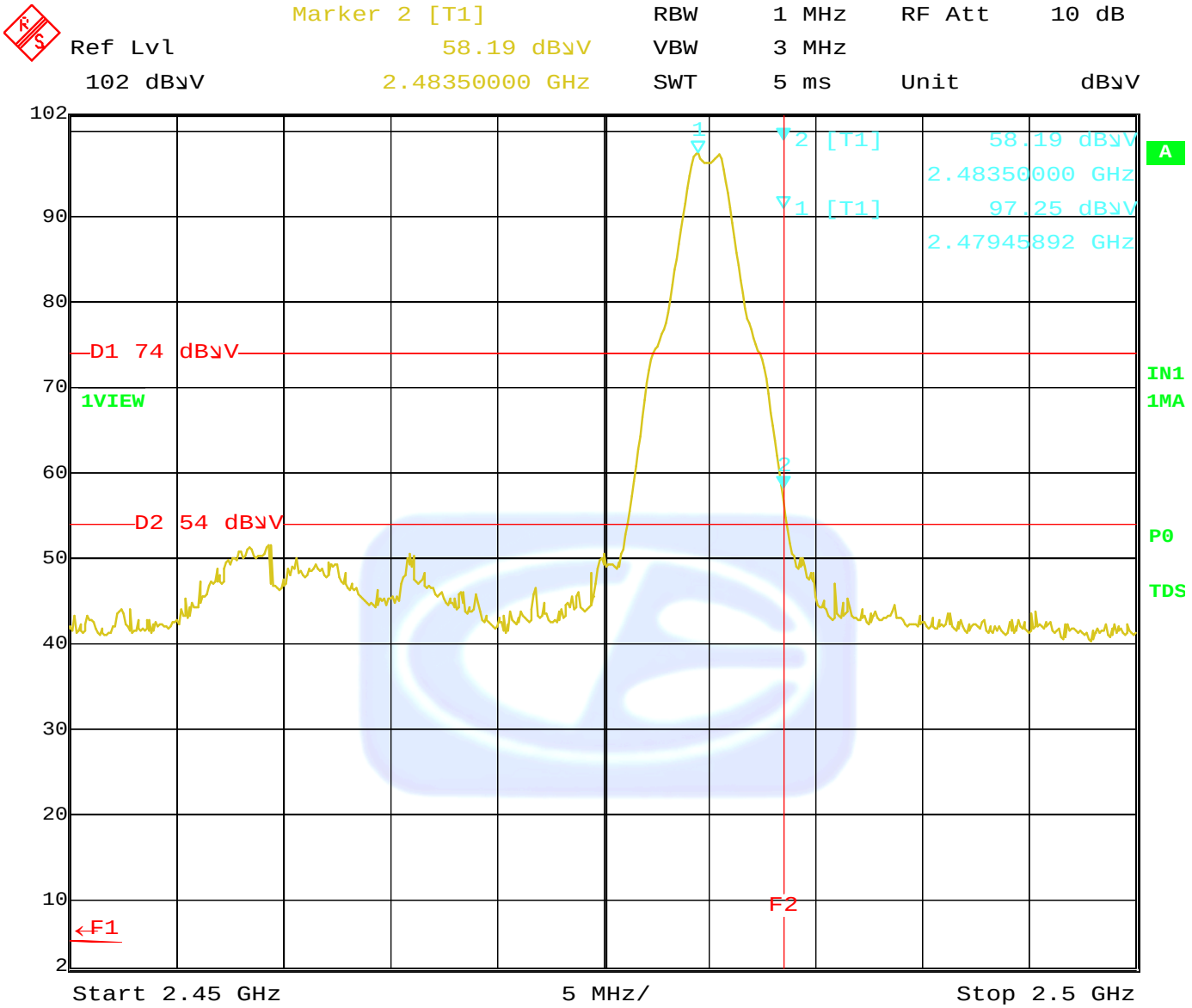
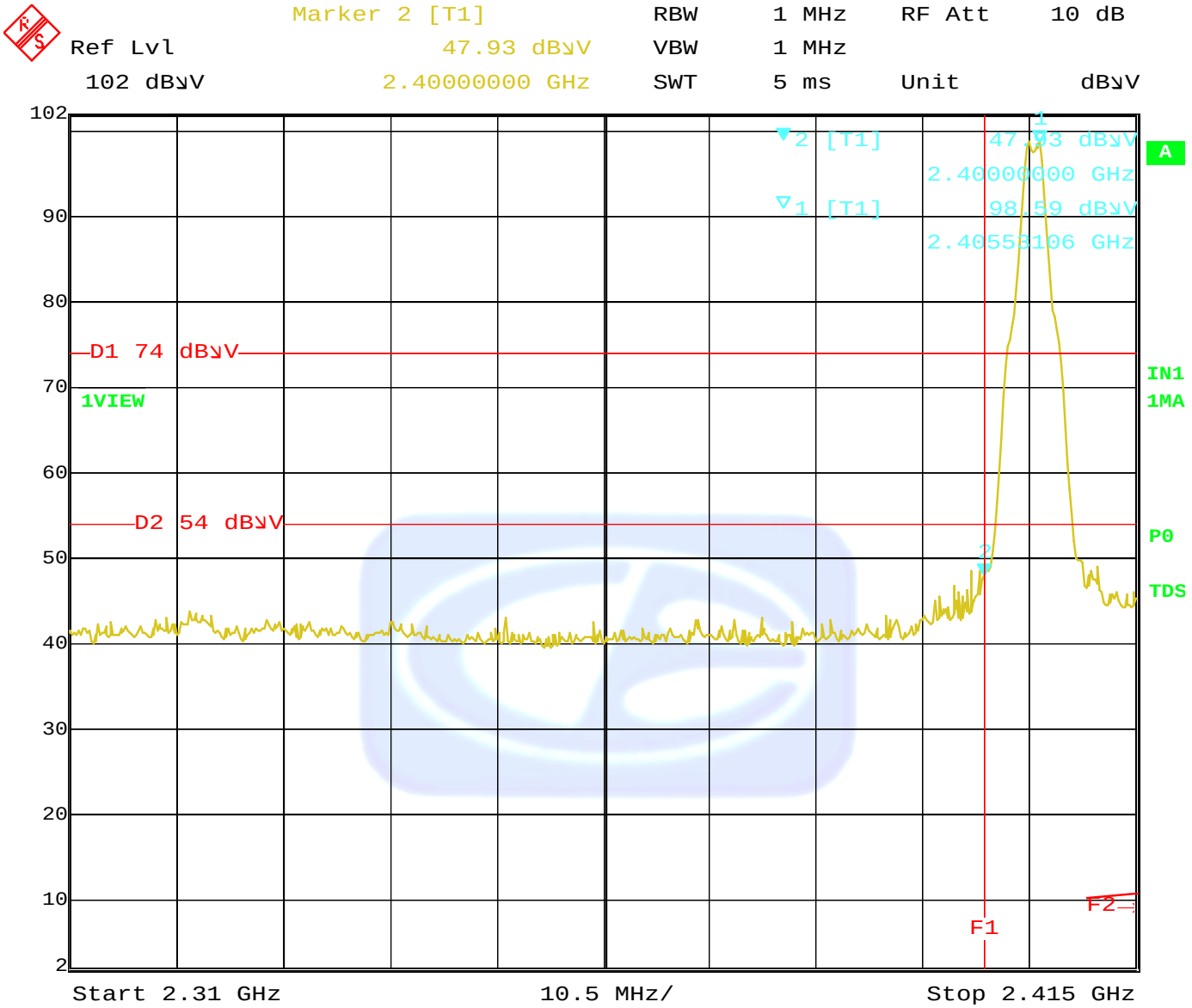
Band Edge – Low Channel – Vertical Polarization – Y-Axis Worst Case



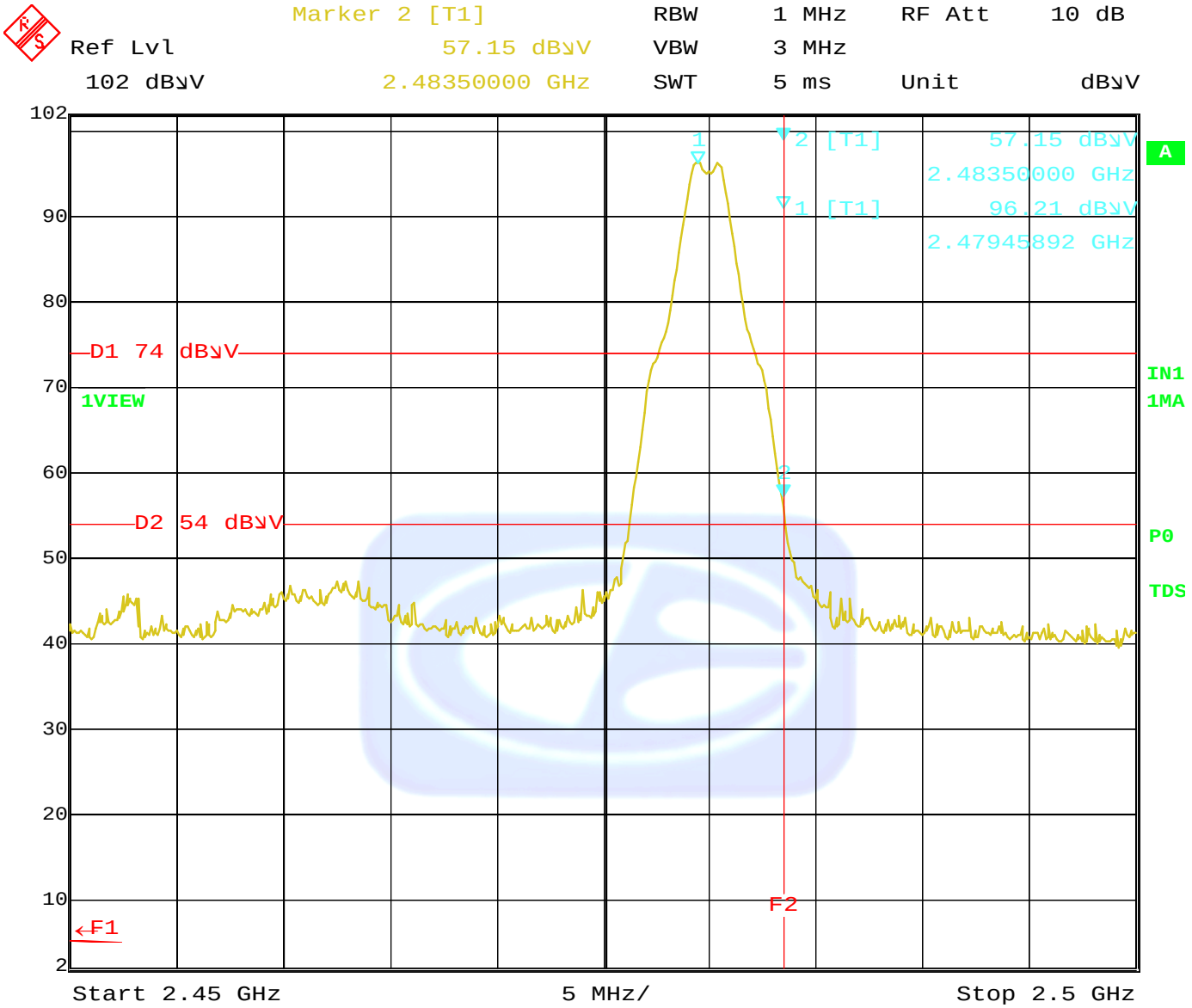
Date: 16.JUL.2013 13:35:28

Band Edge – High Channel – Vertical Polarization – Y-Axis Worst Case



Date: 16.JUL.2013 08:57:14

Band Edge – Low Channel – Horizontal Polarization – X-Axis Worst Case

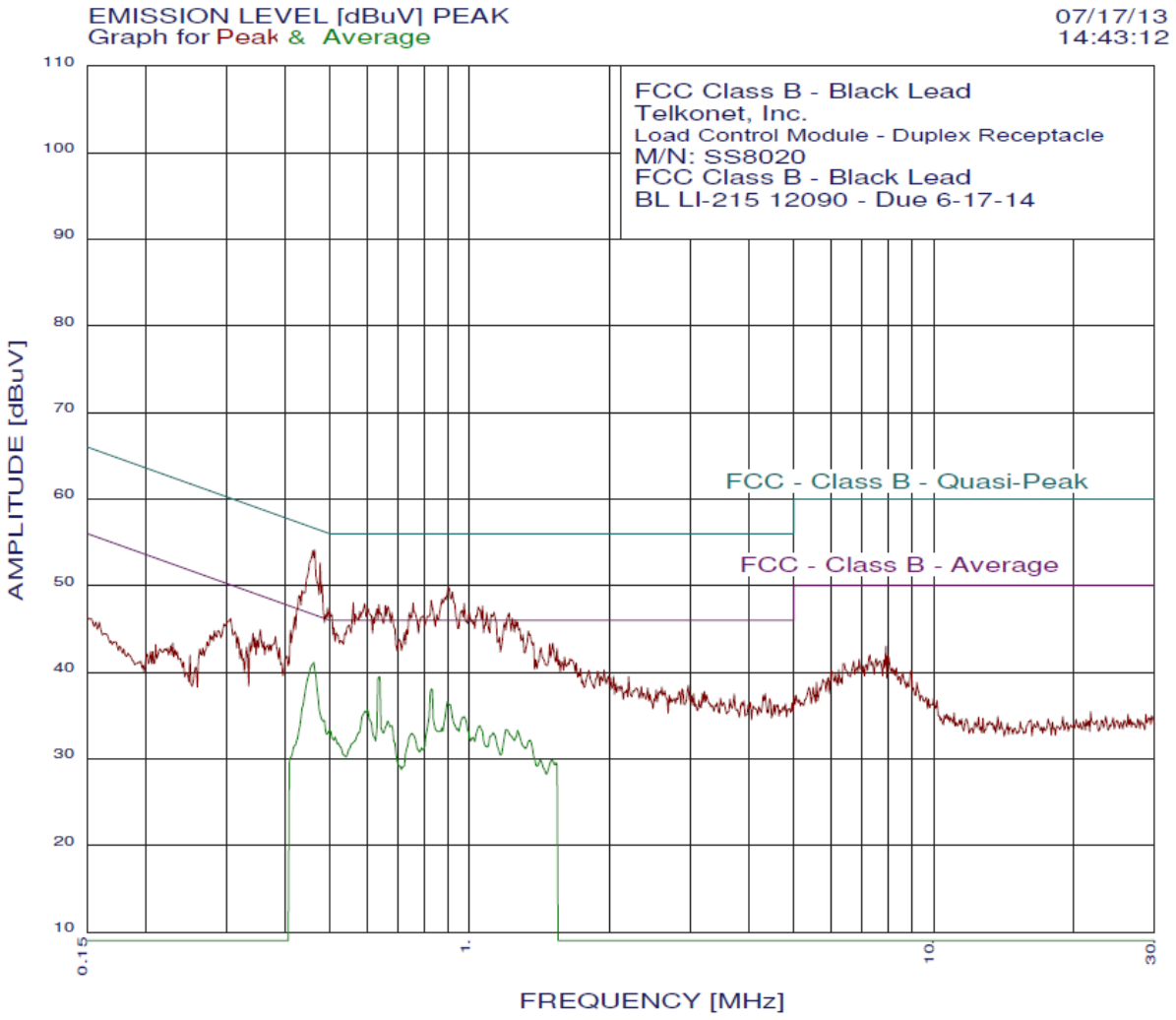


Date: 16.JUL.2013 14:40:26

Band Edge – High Channel – Horizontal Polarization – X-Axis Worst Case

CONDUCTED EMISSIONS

DATA SHEETS


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
07/17/13
14:43:12
FCC Class B - Black Lead
Telkonet, Inc.
Load Control Module - Duplex Receptacle
M/N: SS8020
FCC Class B - Black Lead
BL LI-215 12090 - Due 6-17-14
FCC - Class B - Quasi-Peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1.
10.
30.
FREQUENCY [MHz]

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07/17/13 14:43:12

FCC Class B - Black Lead
Telkonet, Inc.
Load Control Module - Duplex Receptacle
M/N: SS8020
FCC Class B - Black Lead
BL LI-215 12090 - Due 6-17-14
Test Engineer : Kyle Fujimoto

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39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.464	54.13	46.62	7.51**
2	0.476	52.64	46.40	6.23**
3	0.899	49.86	46.00	3.86**
4	0.826	48.27	46.00	2.27**
5	0.561	48.02	46.00	2.02**
6	0.755	47.99	46.00	1.99**
7	0.974	47.94	46.00	1.94**
8	0.595	47.91	46.00	1.91**
9	0.637	47.80	46.00	1.80**
10	0.658	47.69	46.00	1.69**
11	1.066	47.63	46.00	1.63**
12	0.665	47.59	46.00	1.59**
13	0.431	48.82	47.24	1.59**
14	1.043	47.53	46.00	1.53**
15	0.494	47.44	46.09	1.34**
16	0.631	47.30	46.00	1.30**
17	1.089	46.93	46.00	0.93**
18	1.130	46.93	46.00	0.93**
19	0.679	46.88	46.00	0.88**
20	1.000	46.83	46.00	0.83**
21	1.217	46.83	46.00	0.83**
22	0.796	46.58	46.00	0.58**
23	1.236	46.24	46.00	0.24**
24	1.256	46.04	46.00	0.04**
25	0.419	46.42	47.46	-1.04**
26	1.338	44.74	46.00	-1.26**
27	0.724	44.59	46.00	-1.41**
28	0.705	43.79	46.00	-2.21**
29	1.512	43.34	46.00	-2.66**
30	1.488	43.24	46.00	-2.76**
31	0.411	44.81	47.63	-2.82**
32	1.426	42.84	46.00	-3.16**
33	1.544	42.74	46.00	-3.26**
34	0.305	46.18	50.10	-3.92
35	0.354	44.90	48.87	-3.97
36	0.381	44.10	48.25	-4.15
37	1.603	41.74	46.00	-4.26
38	0.341	44.49	49.18	-4.68
39	0.345	44.00	49.09	-5.09

**Please See the Average Readings on the Next Page and on the Plot

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FCC Class B - Black Lead
Telkonet, Inc.
Load Control Module - Duplex Receptacle
M/N: SS8030
FCC Class B - Black Lead
BL LI-215 12090 - Due 6-17-14
Test Engineer : Kyle Fujimoto

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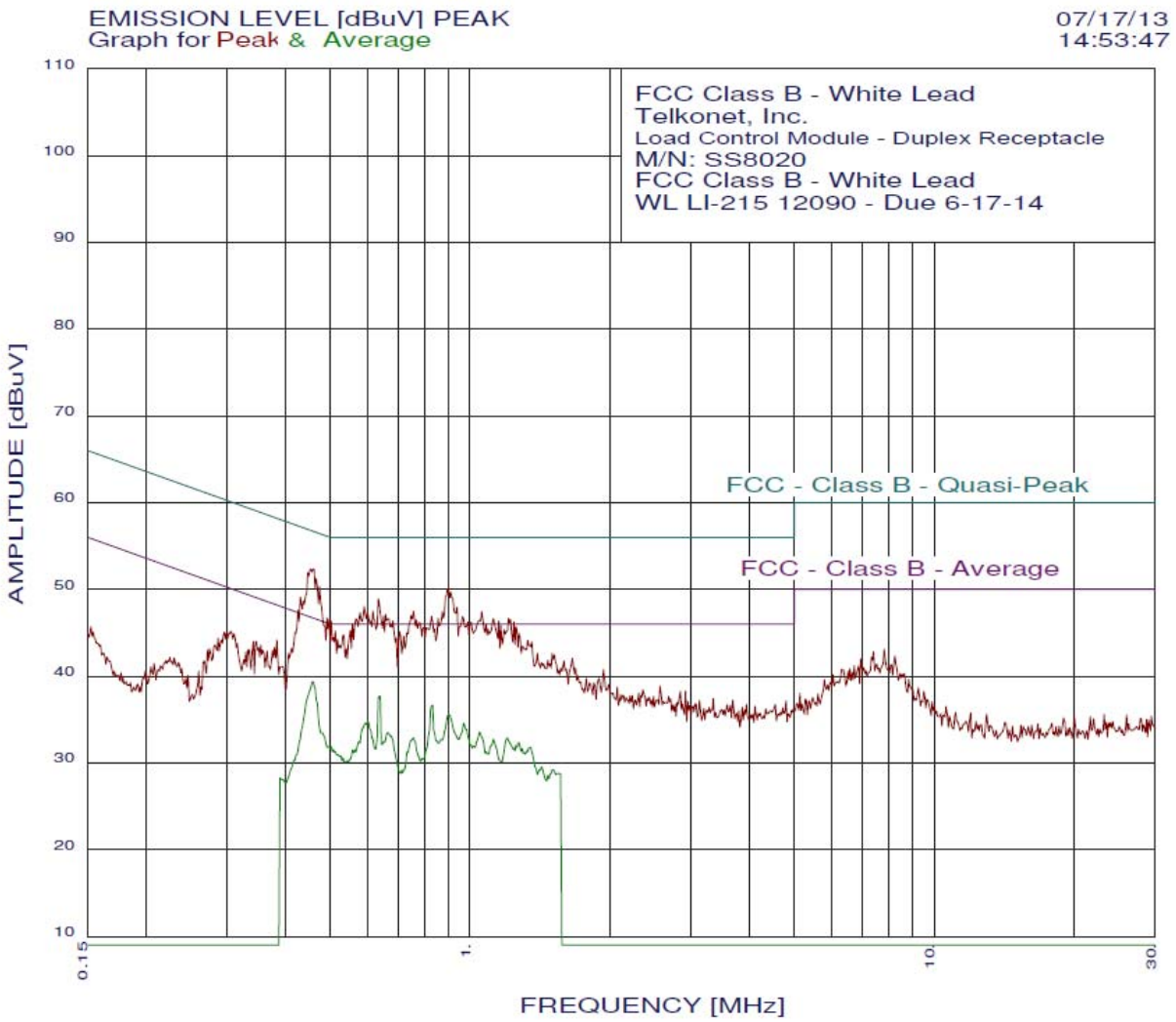
30 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.461	41.12	46.67	-5.54
2	0.637	39.47	46.00	-6.53
3	0.826	38.05	46.00	-7.95
4	0.895	36.55	46.00	-9.45
5	0.909	36.25	46.00	-9.75
6	0.601	35.62	46.00	-10.38
7	0.595	35.49	46.00	-10.51
8	0.974	34.86	46.00	-11.14
9	0.963	34.74	46.00	-11.26
10	0.665	34.38	46.00	-11.62
11	0.486	34.42	46.23	-11.81
12	0.679	33.82	46.00	-12.18
13	1.049	33.79	46.00	-12.21
14	0.872	33.61	46.00	-12.39
15	0.944	33.46	46.00	-12.54
16	1.197	33.37	46.00	-12.63
17	1.269	33.29	46.00	-12.71
18	0.497	33.23	46.05	-12.82
19	0.502	33.16	46.00	-12.84
20	1.124	32.98	46.00	-13.02
21	0.751	32.94	46.00	-13.06
22	0.513	32.51	46.00	-13.49
23	1.016	32.44	46.00	-13.56
24	1.352	32.14	46.00	-13.86
25	0.521	31.82	46.00	-14.18
26	0.788	31.26	46.00	-14.74
27	1.504	29.87	46.00	-16.13
28	1.419	29.84	46.00	-16.16
29	1.536	29.56	46.00	-16.44
30	0.709	29.14	46.00	-16.86


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
07/17/13
14:53:47
FCC Class B - White Lead
Telkonet, Inc.
Load Control Module - Duplex Receptacle
M/N: SS8020
FCC Class B - White Lead
WL LI-215 12090 - Due 6-17-14
FCC - Class B - Quasi-Peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1.
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30.
FREQUENCY [MHz]

page 1/1

07/17/13 14:53:47

FCC Class B - White Lead
Telkonet, Inc.
Load Control Module - Duplex Receptacle
M/N: SS8020
FCC Class B - White Lead
WL LI-215 12090 - Due 6-17-14
Test Engineer : Kyle Fujimoto

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39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.461	52.33	46.67	5.66**
2	0.466	51.23	46.58	4.65**
3	0.895	50.05	46.00	4.05**
4	0.474	50.33	46.45	3.88**
5	0.634	48.90	46.00	2.90**
6	0.592	48.01	46.00	2.01**
7	0.431	49.12	47.24	1.88**
8	0.618	47.51	46.00	1.51**
9	0.755	47.48	46.00	1.48**
10	1.060	47.43	46.00	1.43**
11	0.580	47.31	46.00	1.31**
12	0.658	47.10	46.00	1.10**
13	0.651	46.90	46.00	0.90**
14	0.826	46.86	46.00	0.86**
15	0.963	46.84	46.00	0.84**
16	1.210	46.63	46.00	0.63**
17	1.124	46.63	46.00	0.63**
18	0.492	46.74	46.14	0.60**
19	0.497	46.54	46.05	0.49**
20	0.502	46.34	46.00	0.34**
21	1.154	46.33	46.00	0.33**
22	0.426	47.62	47.33	0.29**
23	1.243	46.24	46.00	0.24**
24	1.006	46.23	46.00	0.23**
25	0.558	46.02	46.00	0.02**
26	1.166	45.83	46.00	-0.17**
27	1.256	45.74	46.00	-0.26**
28	0.552	45.32	46.00	-0.68**
29	0.513	45.23	46.00	-0.77**
30	0.705	45.09	46.00	-0.91**
31	1.276	44.94	46.00	-1.06**
32	0.532	44.73	46.00	-1.27**
33	0.720	44.59	46.00	-1.41**
34	0.518	44.23	46.00	-1.77**
35	1.331	44.14	46.00	-1.86**
36	1.397	42.63	46.00	-3.37**
37	1.504	42.63	46.00	-3.37**
38	1.663	42.03	46.00	-3.97
39	0.383	44.20	48.21	-4.01

**Please See the Average Readings on the Next Page and on the Plot

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07/17/13 14:53:47

FCC Class B - White Lead
Telkonet, Inc.
Load Control Module - Duplex Receptacle
M/N: SS8020
FCC Class B - White Lead
WL LI-215 12090 - Due 6-17-14
Test Engineer : Kyle Fujimoto

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39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.459	39.33	46.71	-7.38
2	0.637	37.68	46.00	-8.32
3	0.831	36.63	46.00	-9.37
4	0.899	35.59	46.00	-10.41
5	0.601	34.78	46.00	-11.22
6	0.969	34.59	46.00	-11.41
7	0.595	34.58	46.00	-11.42
8	1.049	33.57	46.00	-12.43
9	0.665	33.49	46.00	-12.51
10	0.481	33.43	46.32	-12.88
11	0.676	33.11	46.00	-12.89
12	1.204	32.86	46.00	-13.14
13	0.755	32.86	46.00	-13.14
14	1.124	32.73	46.00	-13.27
15	0.867	32.69	46.00	-13.31
16	0.651	32.48	46.00	-13.52
17	0.577	32.44	46.00	-13.56
18	1.276	32.34	46.00	-13.66
19	1.256	31.98	46.00	-14.02
20	1.016	31.91	46.00	-14.09
21	0.502	31.86	46.00	-14.14
22	1.352	31.79	46.00	-14.21
23	0.494	31.86	46.09	-14.24
24	1.243	31.71	46.00	-14.29
25	1.297	31.62	46.00	-14.38
26	0.508	31.55	46.00	-14.45
27	0.564	31.53	46.00	-14.47
28	0.558	31.45	46.00	-14.55
29	1.325	31.37	46.00	-14.63
30	0.513	31.31	46.00	-14.69
31	1.083	31.30	46.00	-14.70
32	0.731	31.21	46.00	-14.79
33	1.311	31.19	46.00	-14.81
34	0.518	30.96	46.00	-15.04
35	0.527	30.80	46.00	-15.20
36	0.532	30.58	46.00	-15.42
37	0.788	30.52	46.00	-15.48
38	0.544	30.22	46.00	-15.78
39	1.426	29.55	46.00	-16.45