



NVLAP LAB CODE 100396-0

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**EMC QUALIFICATION
TEST REPORT**

**ELECTRONIC SOLUTIONS, INC.
A HUNTER DOUGLAS COMPANY**

**REMOTE CONTROL,
SUITE Arc & SUITE Step**

FCC ID# P7RSTE1

TESTED TO CONFORM WITH:

EMISSIONS STANDARDS

FOR

INDUSTRIAL, SCIENTIFIC AND MEDICAL (ISM)

Test Report Number: 110211-1669FCC
Date of Test Completion: June 28, 2011
Manufacturer's Address: 1355 Horizon Ave
Lafayette, CO 80026
Phone: (303) 469-9322

Approved by:

Laboratory Director

DOCUMENT REVISION HISTORY

REVISION #	REPORT NUMBER	DESCRIPTION OF REVISION	DATE OF REVISION
0	110211-1669FCC	ORIGINAL REPORT	2011-08-22
1	110211-1669FCC	ADDED ADDITIONAL TESTING INFORMATION AND DATA	2011-11-23
2	110211-1669FCC	ADDED ADDITIONAL TESTING INFORMATION AND DATA	2011-12-21

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Criterion Technology reports apply only to the specific Equipment Under Test (EUT) sample(s) tested under the test conditions described in this report. If the manufacturer intends to use this report as a document demonstrating compliance of this model, additional models of this product must have electrical and mechanical characteristics identical to the device tested for this report. Criterion Technology shall have no liability for any deductions, inferences, or generalizations drawn by the client or others from Criterion Technology issued reports.

Total liability is limited to the amount invoiced for the testing of this EUT and the contents of this report are not warranted.

Compliance with the appropriate governmental standards is the responsibility of the manufacturer.

Any questions regarding this report should be directed to:

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EMC QUALIFICATION TEST REPORT

REMOTE CONTROL, SUITE Arc & SUITE Step

1.0 EXECUTIVE SUMMARY

1.1 PURPOSE

The purpose of this report is to present EMC test data and demonstrate conformity to the requirements of the prescribed standards for Emissions and/or Immunity.

1.2 CONFORMITY

The test article was tested to the standards listed in Table I with the indicated conformity status. All test methods were performed in accordance to with the standards listed.

TABLE I. EMISSIONS CONFORMITY SUMMARY

TEST TYPE	COMPLIANCE STANDARD	TESTING TECHNIQUE	TEST DESCRIPTION	PRODUCT CLASSIFICATION	CONFORMITY STATUS
EMISSIONS	FCC Part 15	<input checked="" type="checkbox"/> Publication 558074 <input checked="" type="checkbox"/> FCC Part 15.31 <input checked="" type="checkbox"/> FCC Part 15.32 <input checked="" type="checkbox"/> FCC Part 15.33 <input checked="" type="checkbox"/> FCC Part 15.35	Unintentional Radiated Emissions	Class B	PASSED
			Intentional Radiated Emissions		PASSED

1.3 EQUIPMENT UNDER TEST (EUT)

EUT NAME(S): **Remote Control**

EUT NAME(S): **SUITE Arc & SUITE Step**

2.0 EMISSIONS TEST STANDARDS

FCC Part 15

Class B

2.1 RECEIVER SPURIOUS & UNINTENTIONAL RADIATED EMISSIONS – 30 MHZ TO 1000 MHZ

Measurements for *Radiated Emissions* were performed with the transceiver in receive mode over the frequency range of 30 MHz to 1000 MHz in the horizontal and vertical antenna polarities to the requirements of:

FCC Part 15.109Testing Conditions

Date of Test: June 14, 2011
 Temperature: 17° C
 Relative Humidity: 33%
 Test Voltage: Battery
 Test Operator: SP

Test Location**Criterion Technology Open Area Test Site**Test DistanceAntenna Distance: **10 meter(s)** **Final Measurement(s)**Test Equipment

<input checked="" type="checkbox"/> Rohde and Schwarz Receiver, ESVS-30	<input checked="" type="checkbox"/> Hewlett-Packard Quasi-Peak Detector, HP 85650A
Detector	Resolution Bandwidth Video Bandwidth
Quasi Peak	BW = 120kHz na

Mini Circuits Pre-Amp #2
 Chase BiLog Antenna, Model 1121

Test Accessories: See Appendix C for support equipment detailsTest Results of Radiated EmissionsTest Status: **PASSED** Frequency Range: **30 MHz to 1000 MHz**Minimum Margin to Limit **-10.71** dB at **49.2000** MHz

Uncertainty Horizontal under 200 MHz: **4.56** dB
 Uncertainty Horizontal over 200 MHz: **3.92** dB
 Uncertainty Vertical under 200 MHz: **4.77** dB
 Uncertainty Vertical over 200 MHz: **4.52** dB

Remarks

See: **APPENDIX A** for EUT Photographs
APPENDIX B for Data Sheets
APPENDIX D for Test Equipment Calibration Status

2.2 **RECEIVER SPURIOUS & UNINTENTIONAL RADIATED EMISSIONS**

Measurements for *Radiated Emissions* were performed with transceiver in receive mode over the frequency range of 1 GHz to 12.5 GHz with horizontal and vertical antenna polarities to the requirements of:

FCC Part 15.109Testing Conditions

Date of Test: June 14, 2011
 Temperature: 19° C
 Relative Humidity: 33 %
 Test Voltage: Battery
 Test Operator: LWS

Test Location**Criterion Technology Open Area Test Site**Test Distance

Antenna Distance: **3 meter(s)** **Final Measurement(s)**

Test Equipment

HP8566B Spectrum Analyzer Hewlett-Packard Quasi-Peak Adapter, HP 85650A

Detector	Resolution Bandwidth	Video Bandwidth
Average	RBW = 1MHz	1MHz

Mini Circuits Pre-Amp #2 Veratech Pre-Amp #3
 Chase BiLog Antenna, Model 1121 Antenna Research, Horn Antenna, Model DRG118/A

Test Results of Radiated Emissions

Test Status: **PASSED** Frequency Range: **1 GHz to 12.5 GHz**

Minimum Margin to Limit **-16.09** dB at **4809.0972** MHz

Emissions in DSSSRemarks

See: **APPENDIX A** for EUT Photographs
APPENDIX B for Data Sheets
APPENDIX D for Test Equipment Calibration Status

2.3 **INTENTIONAL RADIATOR – RADIATED EMISSIONS**

Measurements for *Radiated Emissions* were performed over the frequency range of 1 GHz to 24 GHz with horizontal and vertical antenna polarities to the requirements of:

FCC Part 15.205

FCC Part 15.209

FCC Part 15.247

Testing Conditions

Date of Test: June 13, 2011
 Temperature: 17° C
 Relative Humidity: 33 %
 Test Voltage: Battery
 Test Operator: LWS

Test Location

Criterion Technology Open Area Test Site

Test Distance

Antenna Distance: **3 meter(s)** **Final Measurement(s)**

Test Equipment

- Hewlett-Packard Spectrum Analyzer, HP 8566B
- Hewlett-Packard Quasi-Peak Adapter, HP 85650A
- Veratech Pre-Amp #3
- Antenna Research, Horn Antenna, Model DRG118/A

Test Results of Radiated Emissions

Test Status: **PASSED** Frequency Range: **1 GHz to 24 GHz**

Fundamental Minimum Margin to Limit: **-30.6** dB at **2404.5486000** GHz

Detector	Resolution Bandwidth	Video Bandwidth
Peak	RBW = corrected to 2.7MHz	3MHz

Spurious & Harmonics Minimum Margin to Limit: **-2.13** dB at **7213.6458** GHz

Detector	Resolution Bandwidth	Video Bandwidth
Average	RBW = 1MHz	1MHz

Remarks

See: **APPENDIX A** for EUT Photographs
APPENDIX B for Data Sheets
APPENDIX D for Test Equipment Calibration Status

2.4 FREQUENCY LIMITS

Measurements for bandwidth, band edges, number of channels were performed in accordance with the Operations to the Requirements of:

FCC Part 15.205
FCC Part 15.209
FCC Part 15.247

Testing Conditions

Date of Test: June 15, 2011
Temperature: 17° C
Relative Humidity: 33 %
Test Voltage: Battery
Test Operator: SP

Test Location

Criterion Technology Open Area Test Site

Test Equipment

Hewlett-Packard Spectrum Analyzer, HP 8566B Hewlett-Packard Quasi-Peak Adapter, HP 85650A

Detector	Resolution Bandwidth	Video Bandwidth
Average	RBW = 1MHz	1MHz

Test Results of Occupied Bandwidth and 20 dB / 6dB Bandedges

Test Status: **PASSED**

Low Channel:

20 dB lower Bandedge:	<u>2.40377 GHz</u>
20 dB upper Bandedge:	<u>2.40645 GHz</u>
20 dB Occupied Channel Bandwidth:	<u>2.68 MHz</u>

Low Channel:

6 dB lower Bandedge:	<u>2.40431GHz</u>
6 dB upper Bandedge:	<u>2.40590 GHz</u>
6 dB Occupied Channel Bandwidth:	<u>1.59 MHz</u>

Mid Channel:

20 dB lower Bandedge:	<u>2.44374 GHz</u>
20 dB upper Bandedge:	<u>2.44644 GHz</u>
20 dB Occupied Channel Bandwidth:	<u>2.70 MHz</u>

Mid Channel:

6 dB lower Bandedge:	<u>2.44426 GHz</u>
6 dB upper Bandedge:	<u>2.44589 GHz</u>
6 dB Occupied Channel Bandwidth:	<u>1.63 MHz</u>

High Channel:

20 dB lower Bandedge:	<u>2.47872 GHz</u>
20 dB upper Bandedge:	<u>2.48142 GHz</u>
20 dB Occupied Channel Bandwidth:	<u>2.70 MHz</u>

High Channel:

6 dB lower Bandedge:	<u>2.47926 GHz</u>
6 dB upper Bandedge:	<u>2.48089 GHz</u>
6 dB Occupied Channel Bandwidth:	<u>1.63 MHz</u>

Remarks

See: **APPENDIX A** for EUT Photographs
APPENDIX B for Data Sheets
APPENDIX D for Test Equipment Calibration Status

2.5 POWER SPECTRAL DENSITY

Measurements for Power Spectrum Density were performed with the transceiver in the transmit modulated mode in accordance with the Operations to the Requirements of:

FCC Part 15.247

Testing Conditions

Date of Test: June 28, 2011
Temperature: 17° C
Relative Humidity: 35 %
Test Voltage: Battery
Test Operator: SP

Test Location

Criterion Technology Open Area Test Site

Test Equipment

Hewlett-Packard Spectrum Analyzer, HP 8566B Hewlett-Packard Quasi-Peak Adapter, HP 85650A

Detector	Resolution Bandwidth	Video Bandwidth
Peak	RBW =3kHz	10kHz

Test Results of 3 kHz Power Spectrum Density

Test Status: **PASSED**

Low Channel:

Minimum Margin to Limit: **-37.5** dB at **2445.564** MHz

Mid Channel:

Minimum Margin to Limit: **-37.45** dB at **2405.22** MHz

High Channel:

Minimum Margin to Limit: **-38.8** dB at **2479.626** MHz

Remarks

See: **APPENDIX A** for EUT Photographs
APPENDIX B for Data Sheets
APPENDIX D for Test Equipment Calibration Status

3.0 APPENDIX A: EUT PHOTOGRAPHS

3.1 UNINTENTIONAL RADIATED EMISSIONS



4.0 APPENDIX B: DATA SHEETS

4.1 UNINTENTIONAL RADIATED EMISSIONS PLOT – 30 MHZ TO 1 GHZ

Criterion Technology

Date: June 15, 2011

EUT: Remote Control, SUITE Arc & SUITE Step

Manufacturer: Electronic Solutions, Inc. A Hunter Douglas Company

Tester: SP

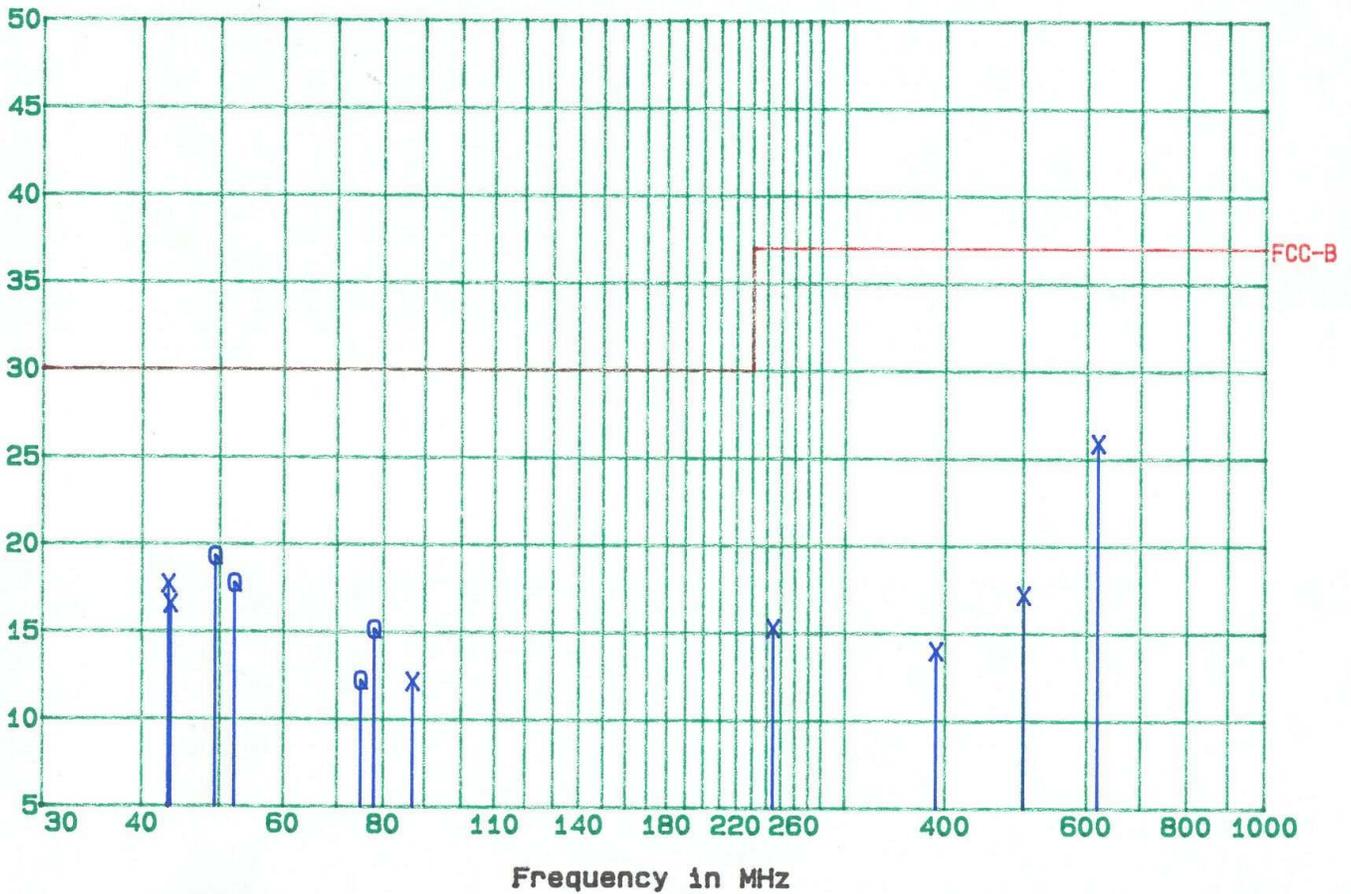
SpiD: 110211-1669

Test Information: 10 meters, Battery, FCC Part 15 Class B

Test Cond: Temp: 17°C

Humidity: 33 %

Test Results (in dBuV/m)



4.2 UNINTENTIONAL RADIATED EMISSIONS TABLE – 30 MHZ TO 1 GHZ

Notes:

Fval = Ival + AF + Cable + Pads – Amp

Where:

Fval is the final electric field in dbuv/m

Ival is the initial reading from the EMC receiver or spec an in dbuv.

AF is the antenna factor, a + value is loss

Cable is the cable attenuation in db, a + value is loss

Pads is the total attenuator loss in db, a + value is loss

Amp is the preamplifier gain in db, a + value is amplifier gain

A Sample calculation with Ival, AF, Cable, Pads, & Amp values of 50 dbuv, 18, 4, 3, 32 respectively is:

Fval = 50 + 18 + 4 + 3 – 32 = 43 dbuv/m

Minimum Margin to Limit: **-10.71** dB at **49.2000** MHz

Criterion Technology Wed Jun 15 11:28:45 2011

EUT: Remote Control, SUITE Arc & SUITE Step

Manufacturer: Electronic Solutions, Inc. A Hunter Douglas Company

Tester: sp

Special ID: 110211-1669

EUT Level: Production Unit, table top

EUT Information: Handheld unit Receive only

Test information: FCC Part 15, Class B, 10m, Battery Operation

Table 1: Scan List, sorted by margin to limit FCC-B, -40.0dB filter

<u>Freq, MHz</u>	<u>Value</u> <u>dBuV/m</u>	<u>Sts</u>	<u>Margin to</u> <u>FCC-B</u> <u>limits (dB)</u>	<u>TT</u>	<u>Hght</u>	<u>Az</u>	<u>Comment</u>
49.2000	19.29	q	-10.71	0	250	V	.
618.2800	25.85	m	-11.15	45	102	V	.
52.0000	17.74	q	-12.26	0	250	V	.
43.0000	17.67	m	-12.33	0	100	V	.
43.2700	16.53	m	-13.47	8	100	V	.
77.7700	15.13	q	-14.87	0	400	V	.
74.8300	12.21	q	-17.79	0	400	V	.
86.8400	12.15	m	-17.85	3	100	V	.
500.0892	17.16	m	-19.84	25	150	V	noise to fill list
243.9438	15.26	m	-21.74	25	370	V	.
389.0000	13.97	m	-23.03	25	150	V	Noise to fill list

Table 2: Scan List for FCC-B, sorted by Frequency, -40.0dB filter

<u>Freq, MHz</u>	<u>Final Value</u> <u>dBuV/m</u>	<u>Sts</u>	<u>Margin to FCC-B</u> <u>limits (dB)</u>	<u>TT</u>	<u>Hght</u>	<u>Az</u>	<u>Comment</u>
43.0000	17.67	m	-12.33	0	100	V	.
43.2700	16.53	m	-13.47	8	100	V	.
49.2000	19.29	q	-10.71	0	250	V	.
52.0000	17.74	q	-12.26	0	250	V	.
74.8300	12.21	q	-17.79	0	400	V	.
77.7700	15.13	q	-14.87	0	400	V	.
86.8400	12.15	m	-17.85	3	100	V	.
243.9438	15.26	m	-21.74	25	370	V	.
389.0000	13.97	m	-23.03	25	150	V	Noise to fill list
500.0892	17.16	m	-19.84	25	150	V	noise to fill list
618.2800	25.85	m	-11.15	45	102	V	.

Table 3: Complete Scan List Sorted by Frequency

<u>Freq, MHz</u>	<u>I-val before</u> <u>xducr factors</u> <u>dBuV</u>	<u>Final Value</u> <u>dBuV/m</u>	<u>Sts</u>	<u>TT</u>	<u>Hght</u>	<u>Az</u>	<u>Time</u>	<u>Comment</u>
43.0000	28.35	17.67	m	0	100	V	Wed Jun 15 10:43:32 2011	.
43.2700	27.36	16.53	m	8	100	V	Wed Jun 15 10:47:56 2011	.
49.2000	32.95	19.29	q	0	250	V	Tue Jun 14 17:28:01 2011	.
52.0000	32.83	17.74	q	0	250	V	Tue Jun 14 17:28:05 2011	.
74.8300	27.56	12.21	q	0	400	V	Tue Jun 14 17:29:36 2011	.
77.7700	30.28	15.13	q	0	400	V	Tue Jun 14 17:29:38 2011	.
86.8400	25.81	12.15	m	3	100	V	Wed Jun 15 11:01:59 2011	.
243.9438	24.45	15.26	m	25	370	V	Wed Jun 15 11:12:01 2011	.
389.0000	19.08	13.97	m	25	150	V	Wed Jun 15 11:24:29 2011	Noise to fill list
500.0892	19.01	17.16	m	25	150	V	Wed Jun 15 11:23:57 2011	noise to fill list
618.2800	25.81	25.85	m	45	102	V	Wed Jun 15 10:53:42 2011	.

Emissions were maximized per Criterion procedure CT0457 Sec. 5.6.4 which details turntable rotation 0-360° raising the antenna 1-4 meters horizontal and vertical polariaty, and cable movement to maximize readings.

4.3 RECEIVER SPURIOUS & UNINTENTIONAL RADIATED EMISSIONS PLOT – ABOVE 1 GHZ

Criterion Technology

Date: June 14, 2011

EUT: Remote Control, SUITE Arc & SUITE Step

Manufacturer: Electronic Solutions, Inc. A Hunter Douglas Company

Tester: LWS

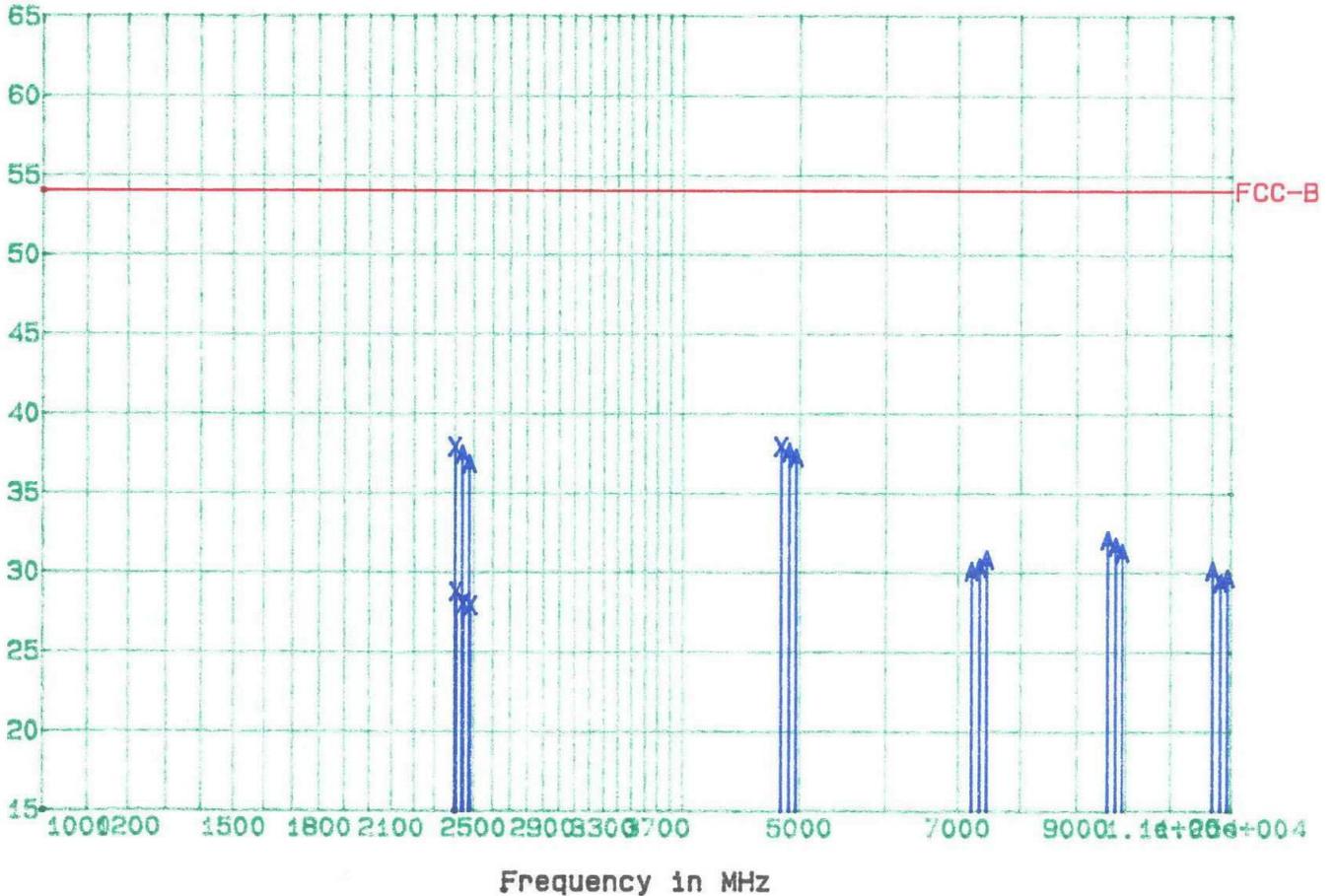
SpiD: 110211-1669FCC

Test Information: 3 meters, Battery, FCC Part 15 Class B

Test Cond: Temp: 19°C

Humidity: 45 %

Test Results (in dBuV/m)



4.4 RECEIVER SPURIOUS & UNINTENTIONAL RADIATED EMISSIONS TABLE – ABOVE 1 GHZ**Notes:**

Fval = Ival + AF + Cable + Pads – Amp

Where:

Fval is the final electric field in dbuv/m

Ival is the initial reading from the EMC receiver or spec an in dbuv.

AF is the antenna factor, a + value is loss

Cable is the cable attenuation in db, a + value is loss

Pads is the total attenuator loss in db, a + value is loss

Amp is the preamplifier gain in db, a + value is amplifier gain

A Sample calculation with Ival, AF, Cable, Pads, & Amp values of

50 dbuv, 18, 4, 3, 32 respectively is:

Fval = 50 + 18 + 4 + 3 – 32 = 43 dbuv/m

Minimum Margin to Limit: **-16.43** dB at **4889.0982** MHz

Criterion Technology Tue Jun 14 16:50:05 2011

EUT: Remote Control, SUITE Arc & SUITE Step

Manufacturer: Electronic Solutions, Inc. A Hunter Douglas Company

Tester: LWS

Special ID: 110211-1669

EUT Level: Production Unit

EUT Information: Handheld unit Receive only

Test information: FCC Part 15, Class B, 3m, Battery Operation

Table 1: Scan List, sorted by margin to limit FCC-B, -30.0dB filter

<u>Freq, MHz</u>	<u>Final Value</u> <u>dBuV/M</u>	<u>Sts</u>	<u>Margin to FCC-B</u> <u>limits (dB)</u>	<u>TT</u>	<u>Hght</u>	<u>Az</u>	<u>Comment</u>
4809.097	37.89	p	-16.09	0	150	V	2404.5486 MHz clk
2398.049	37.85	m	-16.13	91	149	V	LO
4889.098	37.55	p	-16.43	0	150	V	2.444.5491 MHz clk
2438.05	37.41	m	-16.57	91	149	V	LO
4961.099	37.21	p	-16.77	0	150	V	2480.5496 MHz clk
2474.052	36.8	m	-17.18	91	149	V	LO
12491	33.41	m	<20	0	97	H	noise floor
9618.194	32.05	m	<20	59	149	V	2404.5486 MHz clk
9778.196	31.63	m	<20	59	149	V	2.444.5491 MHz clk
9922.198	31.23	m	<20	59	149	V	2480.5496 MHz clk
7441.649	30.79	m	<20	100	149	H	2480.5496 MHz clk
7333.647	30.28	m	<20	100	149	H	2.444.5491 MHz clk
12022.74	30.11	m	<20	59	149	V	2404.5486 MHz clk
7213.646	30.06	m	<20	100	149	H	2404.5486 MHz clk
12402.75	29.65	m	<20	59	149	V	2480.5496 MHz clk
12222.75	29.36	m	<20	59	149	V	2.444.5491 MHz clk
2404.549	28.73	p	<20	0	100	H	2404.5486 MHz clk
2444.549	28.02	p	<20	0	100	H	2.444.5491 MHz clk
2480.55	27.86	p	<20	0	100	H	2480.5496 MHz clk

<u>Freq, MHz</u>	<u>Final Value dBuV/M</u>	<u>Sts</u>	<u>Margin to FCC-B limits (dB)</u>	<u>TT</u>	<u>Hght</u>	<u>Az</u>	<u>Comment</u>
2398.049	37.85	m	-16.13	91	149	V	LO
2438.05	37.41	m	-16.57	91	149	V	LO
2474.052	36.8	m	-17.18	91	149	V	LO
2404.5486	28.73	p	<20	0	100	H	2404.5486 MHz clk
2444.5491	28.02	p	<20	0	100	H	2.444.5491 MHz clk
2480.5496	27.86	p	<20	0	100	H	2480.5496 MHz clk
4809.0972	37.89	p	-16.09	0	150	V	2404.5486 MHz clk
4889.0982	37.55	p	-16.43	0	150	V	2.444.5491 MHz clk
4961.0992	37.21	p	-16.77	0	150	V	2480.5496 MHz clk
7213.6458	30.06	m	<20	100	149	H	2404.5486 MHz clk
7333.6473	30.28	m	<20	100	149	H	2.444.5491 MHz clk
7441.6488	30.79	m	<20	100	149	H	2480.5496 MHz clk
9618.1944	32.05	m	<20	59	149	V	2404.5486 MHz clk
9778.1964	31.63	m	<20	59	149	V	2.444.5491 MHz clk
9922.1984	31.23	m	<20	59	149	V	2480.5496 MHz clk
12022.743	30.11	m	<20	59	149	V	2404.5486 MHz clk
12222.746	29.36	m	<20	59	149	V	2.444.5491 MHz clk
12402.748	29.65	m	<20	59	149	V	2480.5496 MHz clk
12491	33.41	m	<20	0	97	H	noise floor

Emissions were maximized per Criterion procedure CT0457 Sec. 5.6.4 which details turntable rotation 0-360° raising the antenna 1-4 meters horizontal and verticle polarity, and cable movement to maximize readings.

4.5 INTENTIONAL RADIATED EMISSIONS TABLE

Fundamental Freq (GHz) (bold=>max config)	EUT Pk 1 MHz EIRP dBuV/m	1 MHz to 2.7 MHz BW correction (db)	EUT Pk EIRP dBuV/m	AZ	Elev	Pol	Axis of Orientation	Radiated Power (EIRP)per RSS-Gen (mw)	Radiated power (ERIP) dBm	FCC Limit dBm	Margin to Limit (dB)
2404.5486000	95	4.3	99.3	163.0	100.0	H	X				
2444.5491000	95.4	4.3	99.7	163.0	100.0	H	X				
2480.5496000	93.63	4.3	97.93	162.0	100.0	H	X				
2404.5486000	96.4	4.3	100.7	267.0	102.0	V	Y	3.48	5.4	36	-30.6
2444.5491000	95.9	4.3	100.1	264.0	100.0	V	Y	3.13	4.9	36	-31.1
2480.5496000	95.1	4.3	99.4	265.0	100.0	V	Y	2.6	4.15	36	-31.85
2404.5486000	93.56	4.3	97.86	175.0	110.0	V	Z				
2444.5491000	93.69	4.3	98.0	204.0	105.0	V	Z				
2480.5496000	90.97	4.3	95.27	163.0	103.0	V	Z				

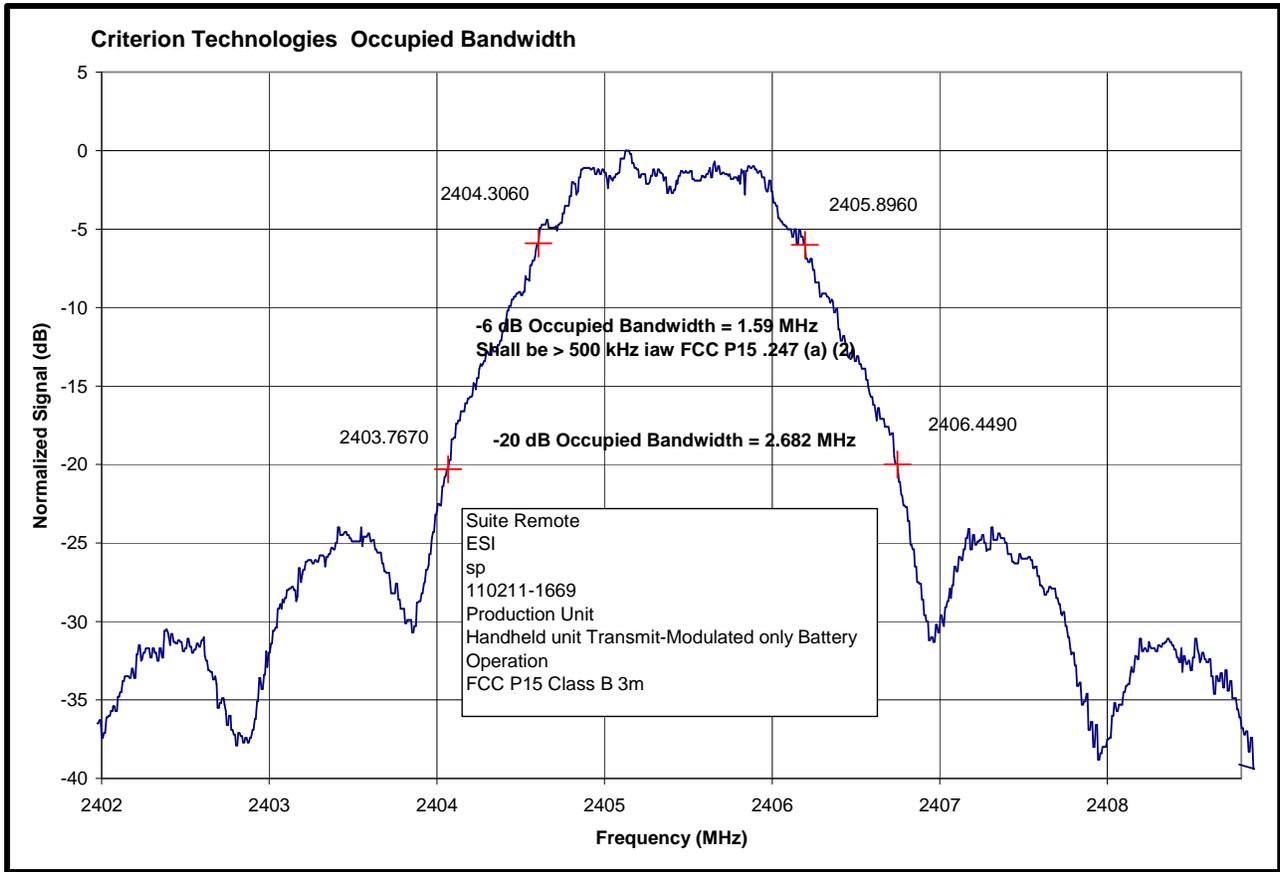
Harmonic Number	Frequency (Bold => restricted band)	Average F val (dBuV)	FCC part 15.247(d) limit, 54 restricted band or -20dB (dBuV)	Margin to Limit (db)	Elev	AZ	Pol	Comments	Antennas
2	4809.0972	46.7	54	-7.29	104	274	V	Y orientation	DRG 118A
2	4889.0982	40.7	54	-13.3	41	111	V	Y orientation	DRG 118A
2	4961.0992	44.0	54	-10.0	102	276	V	Y orientation	DRG 118A
3	7213.6458	45.66	54	-8.34	103	272	V	Y orientation	DRG 118A
3	7333.6473	51.87	54	-2.13	85	123	V	Y orientation	DRG 118A
3	7441.6488	45.34	54	-8.66	101	278	V	Y orientation	DRG 118A
4	9618.1944	45.69	75.88	<-20db below limit*	*	*	*	Y orientation	DRG 118A
4	9778.1964	45.85	75.88	<-20db below limit*	*	*	*	Y orientation	DRG 118A
4	9922.1984	47.14	75.88	<-20db below limit*	*	*	*	Y orientation	DRG 118A
5	12022.743	35.72	54	-18.28	*	*	*	Y orientation	DRG 118A
5	12222.7445	36.78	54	-17.22	*	*	*	Y orientation	DRG 118A
5	12402.748	37.11	54	-16.89	*	*	*	Y orientation	DRG 118A
6	14427.2916	41.47	75.88	<-20db	*	*	*	Y orientation	3160 horn

6	14667.2946	38.87	75.88	<-20db	*	*	*	Y orientation	3160 horn
6	14883.2976	39.4	75.88	<-20db	*	*	*	Y orientation	3160 horn
7	16831.8402	46.0	75.88	<-20db	*	*	*	Y orientation	3160 horn
7	17111.8437	45.41	75.88	<-20db	*	*	*	Y orientation	3160 horn
7	17363.8472	45.83	75.88	<-20db	*	*	*	Y orientation	3160 horn
8	19236.3888	26.5	54	<-20db	*	*	*	Y orientation	SA 12A-18
8	19556.3928	26.5	54	<-20db	*	*	*	Y orientation	SA 12A-18
8	19844.3968	26.5	54	<-20db	*	*	*	Y orientation	SA 12A-18
9	21640.9374	26.6	75.88	<-20db	*	*	*	Y orientation	SA 12A-18
9	22000.9419	26.6	75.88	<-20db	*	*	*	Y orientation	SA 12A-18
9	22324.9464	26.6	75.88	<-20db	*	*	*	Y orientation	SA 12A-18
10	24045.486	27	75.88	<-20db	*	*	*	Y orientation	SA 12A-18
10	24445.491	27	75.88	<-20db	*	*	*	Y orientation	SA 12A-18
10	24805.496	27	75.88	<-20db	*	*	*	Y orientation	SA 12A-18

* indicates noise floor measurement

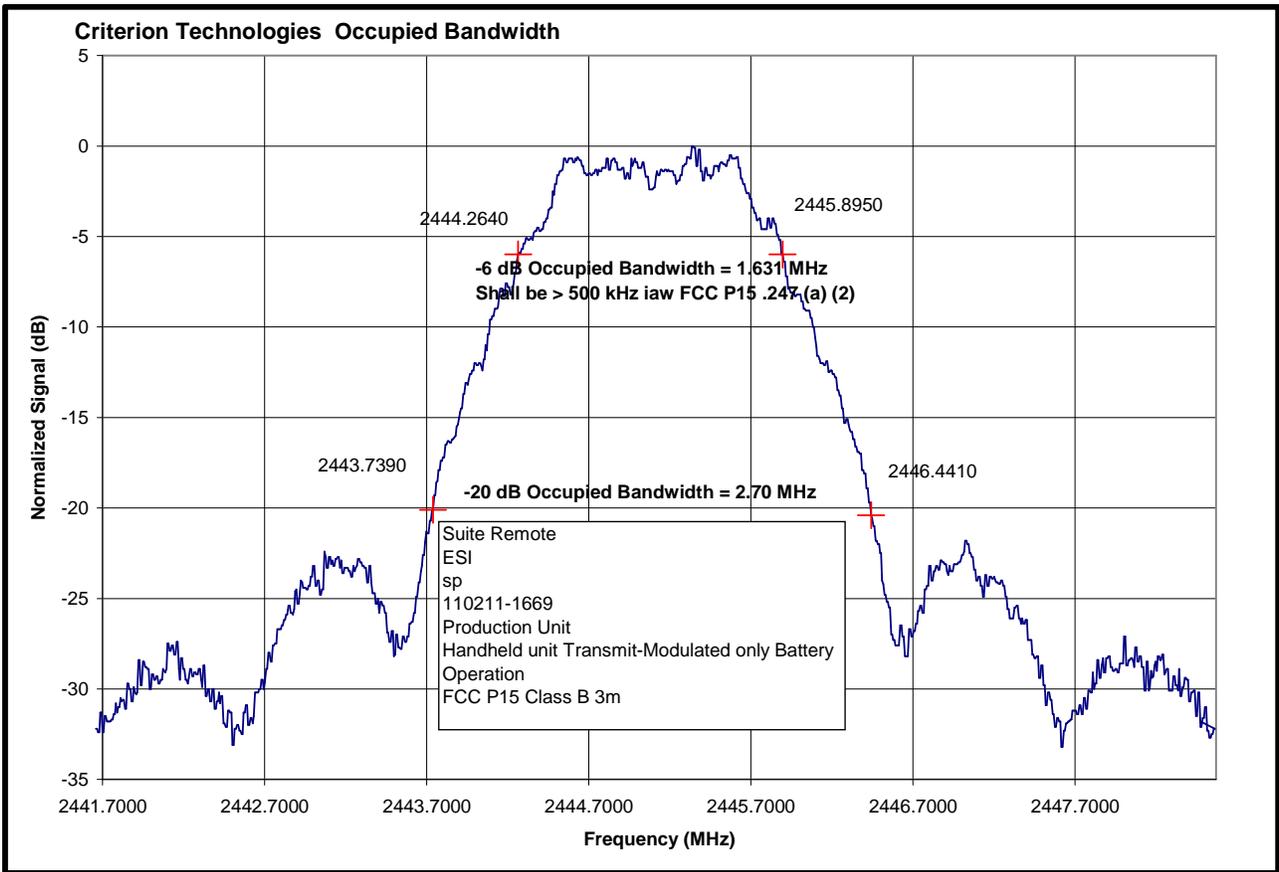
4.6 FREQUENCY LIMITS

Criterion Technology
EUT: Remote Control, SUITE Arc & SUITE Step
Manufacturer: Electronic Solutions, Inc. A Hunter Douglas Company
Tester: SP
SpiD: 110211-1669FCC



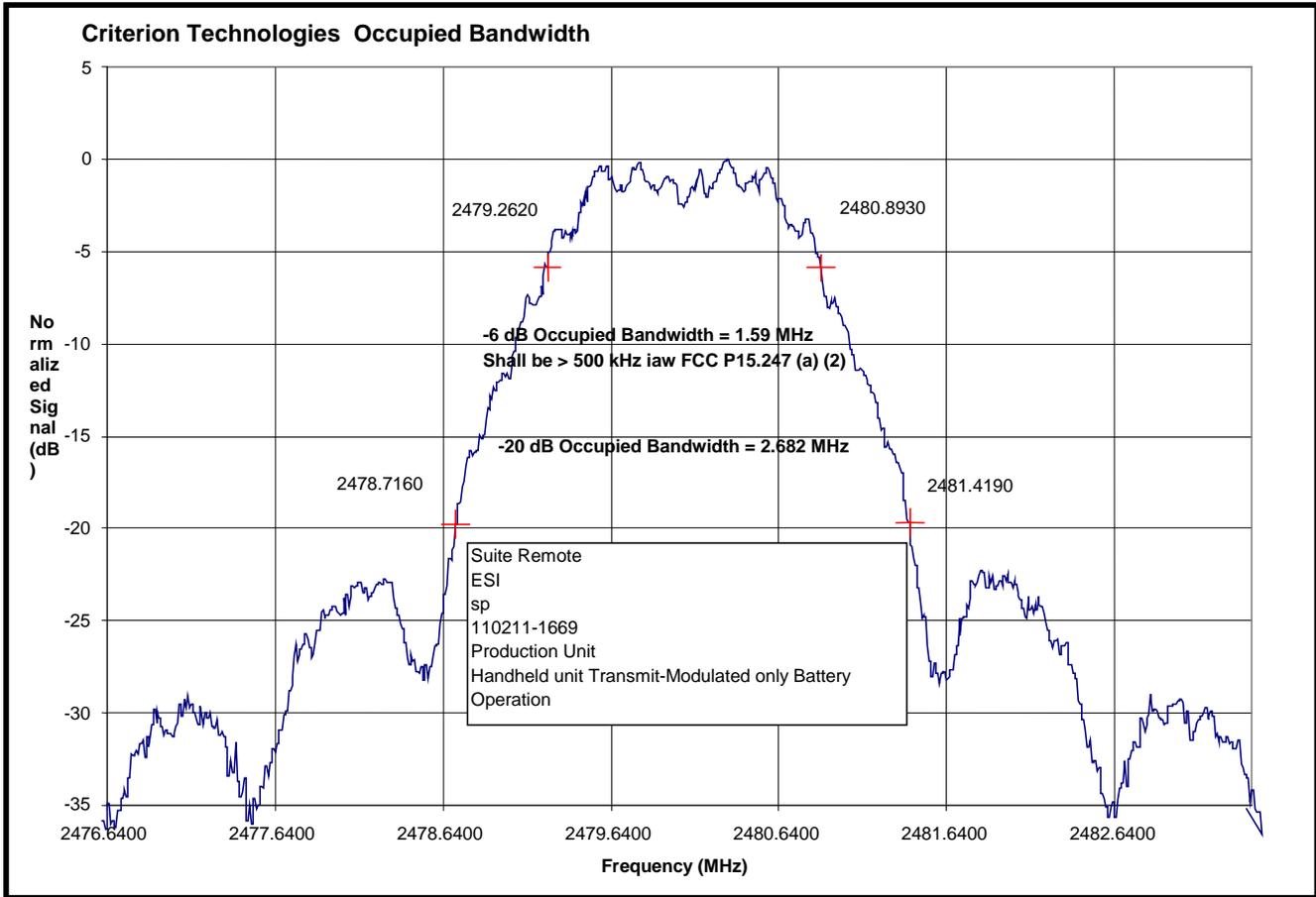
Low Channel

-6db & -20db occupied bandwidth automatically caculated by data acquisition software.



Middle Channel

-6db & -20db occupied bandwidth automatically caculated by data acquisition software.



High Channel

-6db & -20db occupied bandwidth automatically caculated by data acquisition software.

4.7 POWER SPECTRAL DENSITY

Criterion Technology

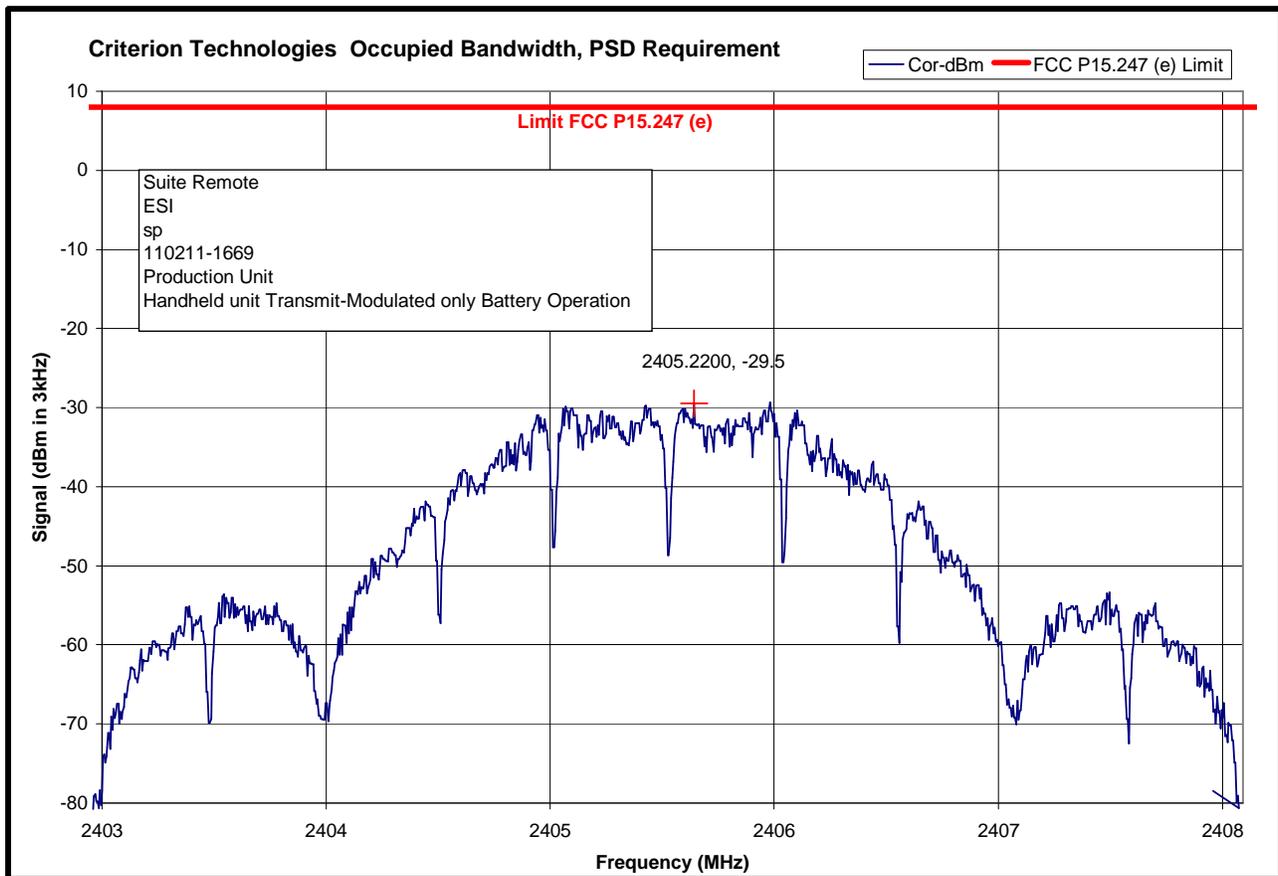
EUT: Remote Control. SUITE Arc & SUITE Step

Manufacturer: Electronic Solutions, Inc. A Hunter Douglas Company

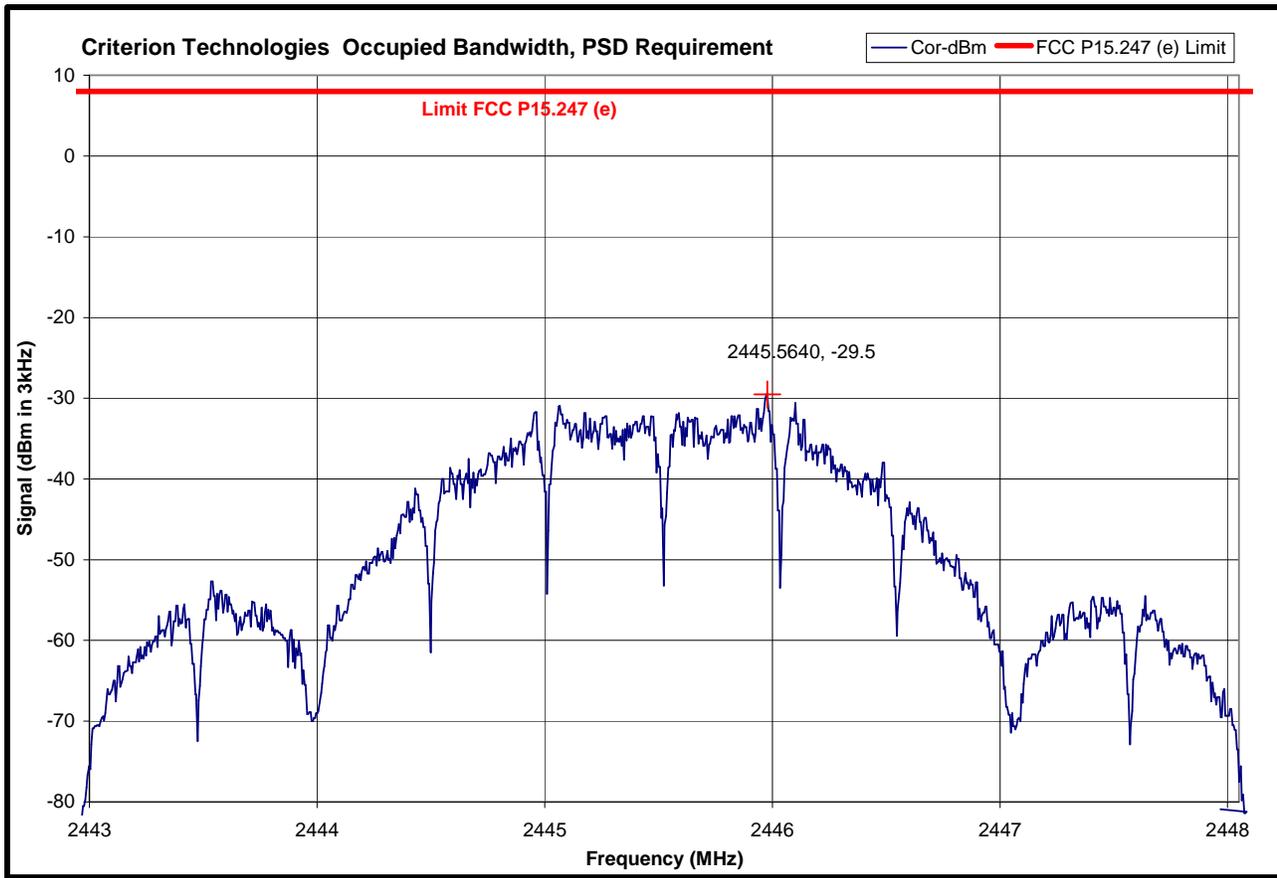
Tester: SP

SpiD: 110211-1669FCC

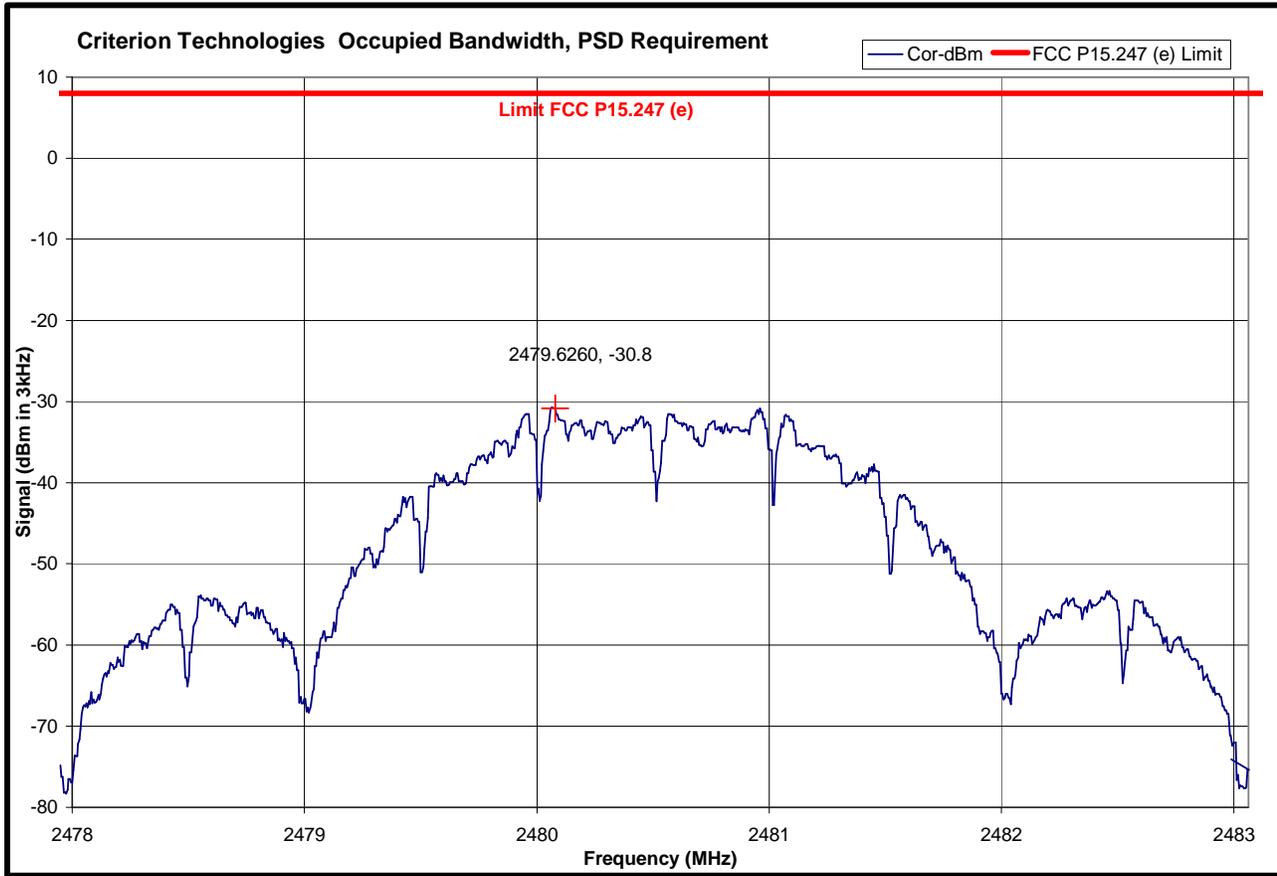
Fundamental Freq (MHz) (bold=>max config)	Orientation	Conducted or Substitution CW Power to duplicate EIRP (dBm)	Substitution antenna, DRG 118A, gain (dB)	Equivalent CW Power (dBm at 0 dBi)	Limit (dBm)	Margin to Limit (dB)
2445.564	Y	-39.4	9.9	-25.5	8.0	-37.5
2405.22	Y	-39.35	9.8	-29.55	8.0	-37.45
2479.626	Y	-40.75	9.95	-30.8	8.0	-18.2



Low Channel



Mid Cahnnel



High Channel

5.0 APPENDIX C: PRODUCT INFORMATION FORM**General Information****Date:** 6-16-10Company Name: Electronic Solutions Inc,
A Hunter Douglas CompanyCompany Address: 1355 Horizon Ave
Lafayette, CO 80026

Contacts:

Compliance Engineer: Douglas Barnes Phone: 303 663 3396 Email: doug@compliance-more.com**Market Information (Check all that Apply)**USA Canada Euro. Union Taiwan Japan New Zealand Australia
Other FCC 15.107, 15.109, 15.205, 15.209, 15.247**Product Information**Model Name: Remote ControlModel Number: SUITE Arc & SUITE StepProduct Dimensions: 50 mm x 10 mmWeight: 6 oz**Product Power Source:**Battery: Yes

AC Supply:

of cords under 10 meters: 0Voltage of cords: N/A**Emissions Testing:**Is this equipment to be used in a residence: No (Class A) Yes (Class B)Does this have a transmitter or Transceiver: No YesHighest oscillator/Clock frequency (including internal clocks only to the microprocessor): 16 Mz 2.4 GHz

To be compliant with C63.4-2003 test methodology, for the emissions testing, the equipment must be exercising all of the functionality within the capability of the Equipment under test. In addition, the equipment must be equipped in the configuration of maximum capability, which will be offered to customers. The test software installed in the Equipment Under Test (EUT) must exercise all of the modules in this maximum capability configuration.

Description of the maximum capability configuration: 1Name and revision # of the test software used for the emissions test: N/A61000-3-2 Harmonics: No

Max. Steady State Power Consumed by Product: _____ Watts

61000-3-3 Flicker Meter: No

6.0 APPENDIX D: TEST EQUIPMENT AND CALIBRATION STATUS

Manufacturer	Name/Description	Model Number	Serial Number	Cal. Due Date	Intervals
Haefely Trench	Test Mag	Mag 100	80162	7/26/2011	24 months
Haefely Trench	Surge Generator	PSURGE 6.1	083-906-07	7/26/2011	24 months
Haefely Trench	EFT Tester	PEFT Junior	583-333-51	7/26/2011	24 months
Haefely Trench	Surge Coupler	FP-Surge 32.1	083-925-05	7/26/2011	24 months
EMCO	Active Loop	6502	2626	7/28/2011	24 months
Veratech	Preamp (AMP2)	unknown	N/A	9/6/2011	24 months
Amplifier Research	E-Field Probe	FP2080	20236	10/16/2011	24 months
Amplifier Research	E-Field Probe	FP2000	19682	10/19/2011	24 months
FCC	EM Clamp	F2031	309	12/1/2011	24 months
Schaffner	ESD Simulator	NSG438	767	12/2/2011	24 months
Microwave Technologies	Standard Gain Horn & Harmonic Mixer	12A-18 & HP1197OK	19527JE & 2332A01314	1/19/2012	24 months
EMCO	Horn	3160-08	1147	1/19/2012	24 months
Hewlett Packard	Signal Generator	HP 8648D	3642000145	3/9/2012	24 months
Hewlett Packard	Quasi Peak Adapter	85650A	3014A18942	5/3/2012	24 months
Hewlett Packard	Spectrum Analyzer Display	HP 85662A	3014A18942	5/21/2012	24 months
Hewlett Packard	Spectrum Analyzer	HP 8566B	2240A01951	5/21/2012	24 months
Haefely Trench	ESD Gun	PESD 1600	H605100	6/2/2012	24 months
FCC	CDN	FCC-801-M3-25	9714	11/22/2012	24 months
Rohde/ Schwarz	LISN	ESH2-Z5	828739-001	11/29/2012	24 months
Gigatronics	Power Sensor	80301A-410	1831996	11/30/2012	24 months
Gigatronics	Power Meter	8541C	1830945	11/30/2012	24 months
Hewlett Packard	Tracking Generator	HP85645A	3210A00124	11/30/2012	24 months
Rohde/ Schwarz	VHF/UHF Receiver	ESVS-30	863342014	11/30/2012	24 months
Rohde/ Schwarz	HF Receiver	ESHS-30	826003/011	11/30/2012	24 months
Solar Electronics	LISN	8610-50-TS-100N	13690	3/15/2013	24 months
Solar Electronics	LISN	8610-50-TS-100N	13691	3/15/2013	24 months
Solar Electronics	LISN	8610-50-TS-100N	13692	3/15/2013	24 months
Solar Electronics	LISN	8610-50-TS-100N	13693	3/15/2013	24 months
Californina Instruments	AC Power Source Pacs-1	5001iX-CTS-411	55637/ 72242	6/11/2013	24 months

7.0 PPENDIX E: TEST DIRECTIVES, STANDARDS AND METHODS

7.1.1 EUROPEAN DIRECTIVES, STANDARDS AND METHODS

89/336/EEC: Council Directive of 03 May 1989 on the Approximation of the Laws of the Member States Relating to Electromagnetic Compatibility, OJEC No. L 139/19-26, Aug 1993.

BS DD ENV 50204 (CENELEC): Testing and Measurement Techniques; Radiated Electromagnetic Field from Digital Radio Telephones - Immunity Test, 1996.

EN 55011 (CENELEC): ISM Radio-Frequency Equipment Radio Disturbance Characteristics - Limits and Methods of Measurement, 2007.

EN 55014-1 (CENELEC): Part 1. Electromagnetic Compatibility Requirements for Household Appliances, Electric Tools and Similar Apparatus - Part 1. Emission - Product Family Standard, 2007.

EN 55022 (CENELEC): ITE - Radio-Frequency Equipment Radio Disturbance Characteristics - Limits and Methods of Measurement, 2008.

CISPR 11: Industrial Scientific and Medical Equipment – Radio-frequency Disturbance Characteristics - Limits and Methods of Measurement, 2007.

CISPR 22: Information Technology Equipment – Radio Disturbance Characteristics - Limits and Methods of Measurement, 2009.

EN 55024 (CENELEC): ITE - Immunity Characteristics - Limits and Methods of Measurement, 2008.

EN 55103-1: Product Family standard for audio, video, audio - visual and entertainment lighting control apparatus for professional use. Part 1: Emissions, April 1997.

EN 55103-2: Product Family standard for audio, video, audio - visual and entertainment lighting control apparatus for professional use. Part 2: Immunity, April 1997.

EN 60601-1-2 (CENELEC): Medical Electrical Equipment. Part 1. General Requirements for Safety - Section 1.2. Collateral Standard: Electromagnetic Compatibility - Requirements and Tests, Third Edition 2007.

EN 61000-6-1: EMC- Part 6-1. Generic Standard-Immunity for residential, commercial and light-industrial Environments 2007.

EN 61000-6-2: EMC- Part 6-2. Generic Standard-Immunity for Industrial Environments, 2005.

EN 61000-6-3: EMC- Part 6-3. Generic Standard-Emissions for residential, commercial and light-industrial Environments 2007.

EN61000-6-4 (CENELEC): EMC - Generic Emission Standard, Part 6-4: Industrial Environment, 2007.

EN 61000-3-2 (CENELEC): EMC - Part 2. Limits for Harmonic Current Emissions (Equipment Input Current ≤ 16 A per phase), with Amendment 14, 2006.

EN 61000-3-3 (CENELEC): EMC - Part 3. Limitation of Voltage Fluctuation and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current ≤ 16 A, 2008.

EN 61000-4-2 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 2. Electrostatic Discharge Immunity Test, 2009.

EN 61000-4-3 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 3. Radiated, Radio-Frequency, Electromagnetic Field Immunity, 2008.

EN 61000-4-4 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 4. Electrical Fast Transient/Burst Immunity Test, 2008.

EN 61000-4-5 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 5. Surge Immunity Test, 2006.

EN 61000-4-6 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 6. Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields, 2009.

EN 61000-4-8 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 8. Power Frequency Magnetic Field Immunity Test, 1993 with the incorporation of amendment A1:2001.

EN 61000-4-11 (CENELEC): EMC - Part 4. Testing and Measurement Techniques; Section 11. Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests, 2004

ETSI EN 300 220-1 V2.1.1 – Electromagnetic Compatibility and Radio spectrum Matters (ERM); Short range devices (SRD); radio equipment to be used in the 25MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods; 2006.

ETSI EN 300 220-2 V2.1.1 – Electromagnetic Compatibility and Radio spectrum Matters (ERM); Short range devices (SRD); radio equipment to be used in the 25MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive, 2006

ETSI EN 300 220-3 V1.1.1 – Electromagnetic Compatibility and Radio spectrum Matters (ERM); Short range devices (SRD); radio equipment to be used in the 25MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 3: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

ETSI EN 300 683 –Radio Equipment and Systems (RES); ElectroMagnetic Compatibility (EMC) Standard for Short Range Devices (SRD) Operating on Frequencies between 9 kHz and 25kHz, 1997

EN 300 328 v1.7.1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive, 2006.

EN 301 489-1 v1.8.1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements, 2008.

EN 301 489-3 v1.4.1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Rangr Devices (SRD) operating on frequencies between 9kHz and 40 GHz, 2002.

EN 301 489-17 v2.1.1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems, 2008.

EN 61326 (CENELEC): Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements, 2005.

EN 61326-1 Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements, - Part 1: General Requirments, 2008

7.1.2 47 CFR FCC PART 15 RADIO FREQUENCY DEVICES: OCT 2010

Subpart A General.

Subpart B Unintentional Radiators.

Subpart C Intentional Radiators.

Subpart D Unlicensed Personal Communications Service Devices.

7.1.3 47 CFR FCC PART 22 PUBLIC MOBILE SERVICES: OCT 2010

7.1.4 47 CFR FCC PART 24 PERSONAL COMMUNICATIONS SERVICES: OCT 2010

7.1.5 JAPAN

VCCI V-3

7.1.6 CANADA

ICES-001: Interference-Causing Equipment Standard - ISM RF Generators, 2006.

ICES-003: Interference-Causing Equipment Standard - Digital Apparatus, 2004.

7.1.7 AUSTRALIA/NEW ZEALAND

SAA AS/NZ 3548: Limits and Methods of Measurement of Radio Disturbance Characteristics of ITE, 1997.

AS/NZS 4268:2008: Radio Equipment and systems-Short range devices-Limits and methods of measurement.

AS/NZS CISPR22

7.1.8 TAIWAN

CNS13438, 2006.

7.1.9 KOREA

KN22, September 29, 2005

KN 24, 1998

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