



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

FCC Rules and Regulations / Intentional Radiators

Operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands

Part 15, Subpart C, Section 15.247

THE FOLLOWING MEETS THE RF CONDUCTED SPURIOUS EMISSIONS (30 MHz – 26 GHz) REQUIREMENTS AND THE RADIATED SPURIOUS EMISSIONS FROM 7 GHz – 25 GHz OF THE ABOVE TEST SPECIFICATION

This test report is intended only to supplement the test report provided by Accurate Technology Company LTD, by providing test data for frequencies above 7 GHz.

Formal Name: Klipsch RoomGroove

Kind of Equipment: Audio Speaker System with 2.4 GHz Spread Spectrum wireless transmitter/receiver

Test Configuration: This products primary input is via the 30 pin iPOD dock located in the front drawer mechanism. (Tested at 120 vac, 60 Hz)

Model Number(s): RoomGroove

Model(s) Tested: RoomGroove

Serial Number(s): 100660208020054

Date of Tests: March 24 & 25, 2008

Test Conducted For: Klipsch L.L.C.
3502 Woodview Trace
Indianapolis, IN 46268

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

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Model Tested: RoomGroove
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SIGNATURE PAGE

Report By:

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OATS Manager

Approved By:

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General Manager



Company: Klipsch L.L.C.
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United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.
Wheeling, IL

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

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



2007-10-01 through 2008-09-30

Effective dates

Jelly S. Buses
For the National Institute of Standards and Technology

NVI AP-01C (REV. 2006-09-13)



Company: Klipsch L.L.C.
Model Tested: RoomGroove
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1.0 SUMMARY OF TEST REPORT

It was found that the Klipsch RoomGroove, Model Number(s) RoomGroove, **meets** the radio interference RF Conducted and Radiated emission (7 GHz – 25 GHz) requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands. Testing and submittal for this product has been done for this product based on test data from Accurate Technology Company LTD. That laboratory was unable to provide data for emissions above 7 GHz. D.L.S. Electronic Systems, Inc. performed only measurements from 30 MHz to 26 GHz (conducted at the antenna terminals) and from 7 GHz to 25 GHz (radiated spurious emissions). See test report written by Accurate Technology Company LTD for all additional data.

2.0 INTRODUCTION

On March 24 & 25, 2008, a series of radio frequency interference measurements was performed on Klipsch RoomGroove, Model Number(s) RoomGroove, Serial Number: 100660208020054. The tests were performed according to the procedures of the FCC as stated in the "Methods of Measurement of Radio-Noise Emissions for Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" found in the American National Standards Institute, ANSI C63.4-2003. Tests were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

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

Main Test Facility:

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

O.A.T.S. Test Facility:

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

3.0 OBJECT

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



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4.0 TEST SET-UP

All emission tests were performed at D.L.S. Electronic Systems, Inc. and set up according to the ANSI C63.4-2003, Annex H.

All radiated emissions tests were performed with the test item placed on a 80 cm high rotating non-conductive table, located in the test room. Equipment normally operated on the floor was placed on a metal covered turntable which is flush with the surrounding conducting ground plane. The ground plane has an electrical isolation layer over its surface approximately 7 mm thick. The EUT is separated from the turntable ground plane by a non-conductive layer. The equipment under test was set up according to ANSI C63.4-2003, Sections 6 and 8.

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

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

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

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

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

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



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6.0 AMBIENT MEASUREMENTS

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

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



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

7.1 Description:

The Klipsch RoomGroove is an iPod docking audio system. It utilizes the Apple 30 pin iPod connector. It also includes a 2.4Ghz Spread Spectrum wireless transmitter/receiver, that allows the transmission of digital audio signals to and from additional RoomGroove systems.

7.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 4.5" x Width: 15" x Height: 6.5"

7.3 LINE FILTER USED:

N/A

7.4 INTERNAL CLOCK FREQUENCIES:

Switching Power Supply Frequencies:

N/A

Clock Frequencies:

3285.33 (LO), 3250.67 (LO), 3216 (LO), 2464 (Tx), 2438 (Tx), 2412 (Tx), 22, 11.2896, 9.8304 MHz

7.5 DESCRIPTION OF ALL CIRCUIT BOARDS:

- | | |
|------------------------------------|---------------------|
| 1. Digital to Digital Transceiver | PN: 3104 133 3040.6 |
| 2. RoomGroove Main Board | PN: 1008-0000257 |
| 3. RoomGroove Amplifier Board | PN: 1008-0000255 |
| 4. RoomGroove iPod Interface Board | PN: RKG2062A |
| 5. RoomGroove Motor Drive Board | PN: RKA4527A |
| 6. IR Board | PN: 1000321 |
| 7. DC In Board | PN: 1008-0000258 |



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

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

NOTE:

Tested low, mid, and high channels.

Tested while transmitting from antenna A, and tested while transmitting from antenna B.

9.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 Klipsch RoomGroove

Model Number: RoomGroove Serial Number: 100660208020054

Item 1 Klipsch Power Supply

Model Number: ADS-48R-12-2 1545

Item 2 Apple iPod

Model Number: A1137, Serial Number: YM6057CQUPR

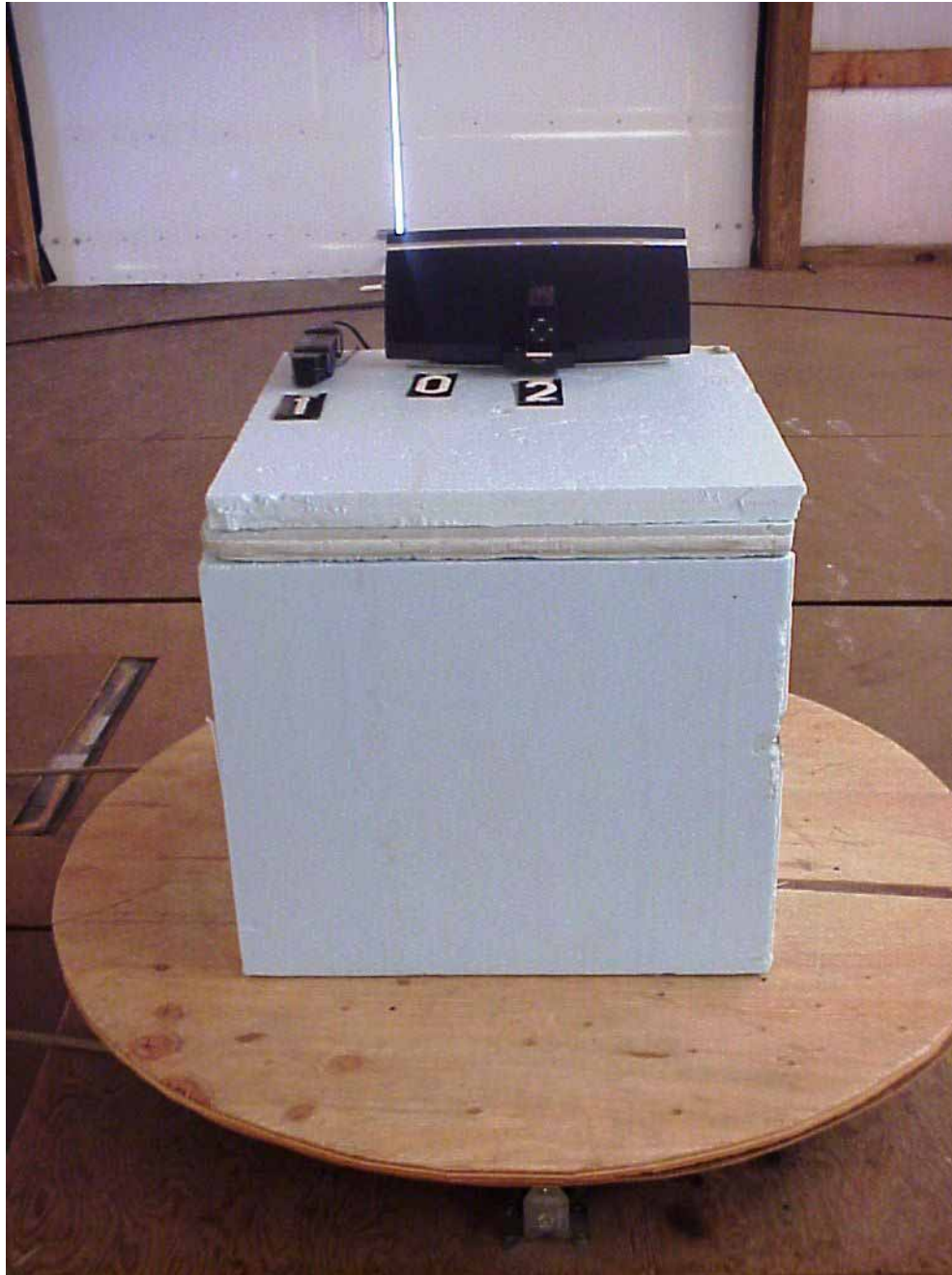
Item 3 Non-shielded Audio Input Cable with Plastic Shells. 2.5m



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10.0 RADIATED PHOTOS TAKEN DURING TESTING

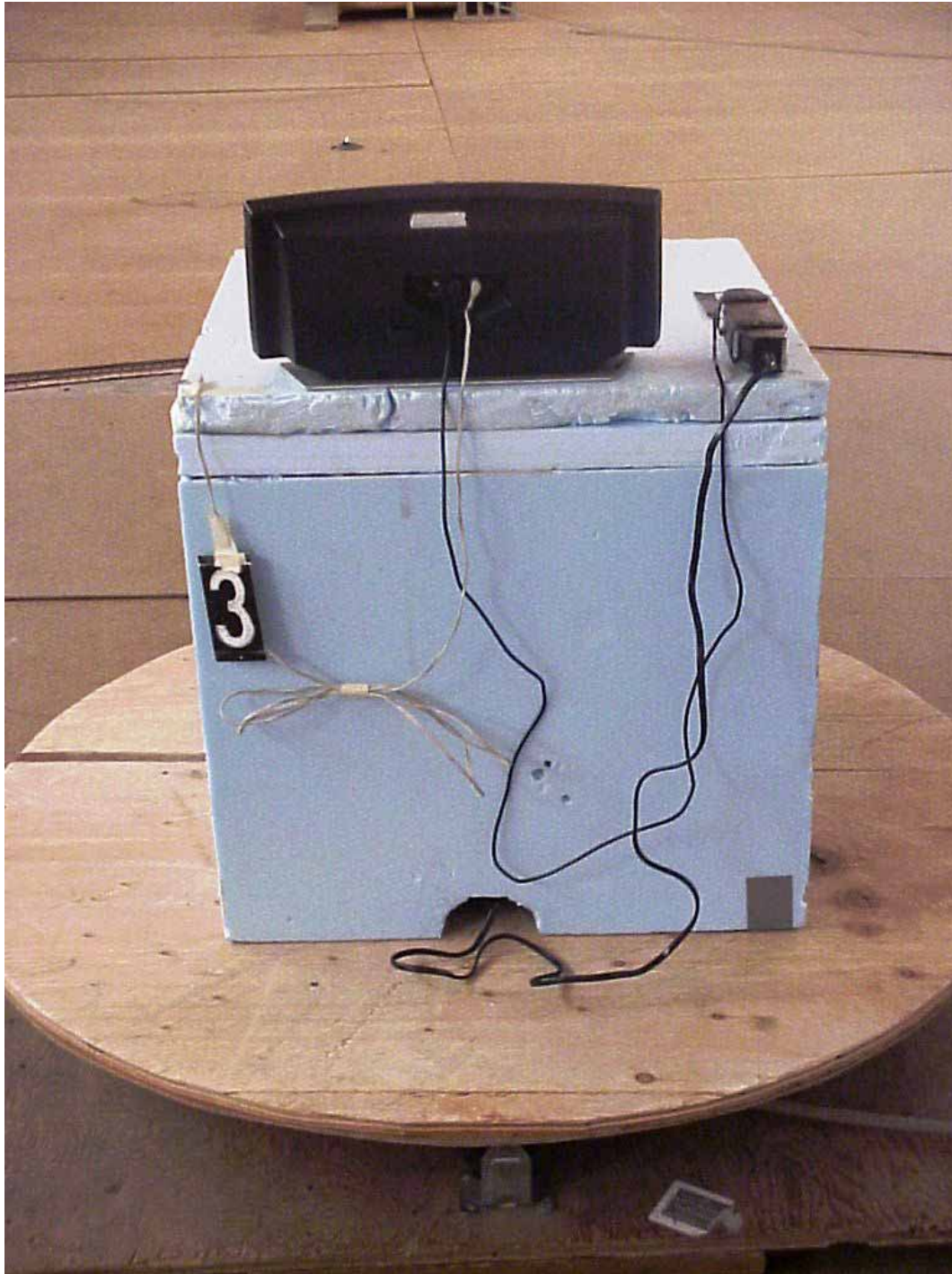




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10.0 RADIATED PHOTOS TAKEN DURING TESTING





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10.0 CONDUCTED PHOTOS TAKEN DURING TESTING

See test report written by Accurate Technology Company LTD for the AC Power Line Conducted Photos.

11.0 RESULTS OF TESTS

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

12.0 CONCLUSION

It was found that the Klipsch RoomGroove, SN: 100660208020054 **meets** the radio interference RF Conducted (30 MHz – 26 GHz) and Radiated emission (7 GHz – 25 GHz) requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.247 for operational in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz, Bands. See test report written by Accurate Technology Company LTD for additional data.



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TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	12/08
Preamp	Ciao	CA118-4010	-----	1 GHz-18 GHz	1/09
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	-----	18 GHz-26 GHz	9/08
Horn Antenna	EMCO	3115	4451	1-18 GHz	5/08
Horn Antenna	EMCO	3116	2549	18 – 40 GHz	5/08

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



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APPENDIX A

TEST PROCEDURE

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

OPERATION WITHIN THE BAND 902-928 MHz,

2400-2483.5 MHz AND 5725-5857 MHz



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APPENDIX A

1.0 AC POWER LINE CONDUCTED EMISSION MEASUREMENTS

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

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

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

The AC Line Conducted emissions was performed by Accurate Technology Company LTD and provided in their test report. See test report written by Accurate Technology Company LTD for additional data.



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APPENDIX A

2.0 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – PART 15.247(c)

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

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

NOTE: See the following pages for the data and graphs of the measurements made by D.L.S. Electronic Systems, Inc. See test report written by Accurate Technology Company LTD for additional data.



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APPENDIX A

CONDUCTED EMISSION DATA AND GRAPH(S)

TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

AT THE ANTENNA TERMINALS

PART 15.247(c)

ANTENNA PORT A



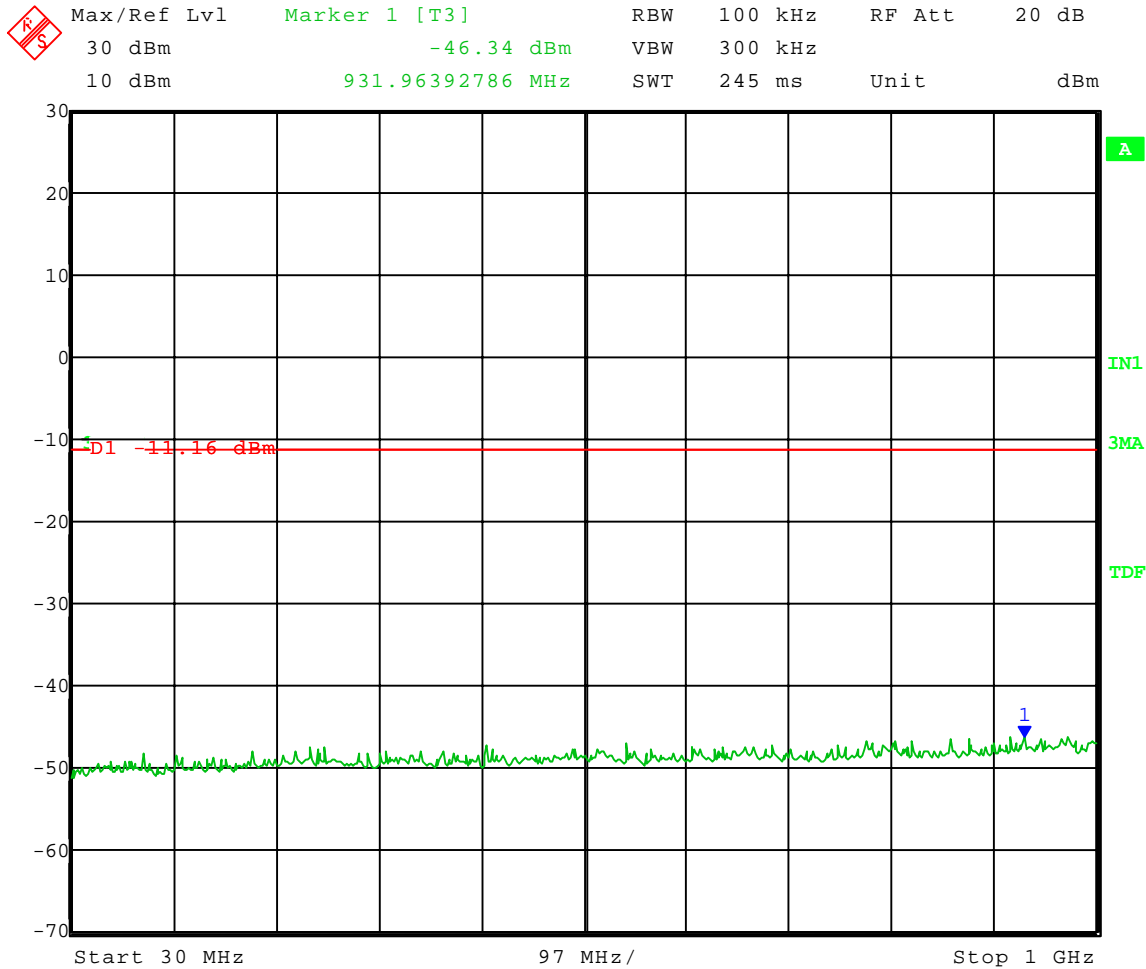
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Low Channel Transmit = 2.412 GHz
Antenna Port A
Frequency Range: 30 to 1000 MHz
Limit = -11.16 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:45:02



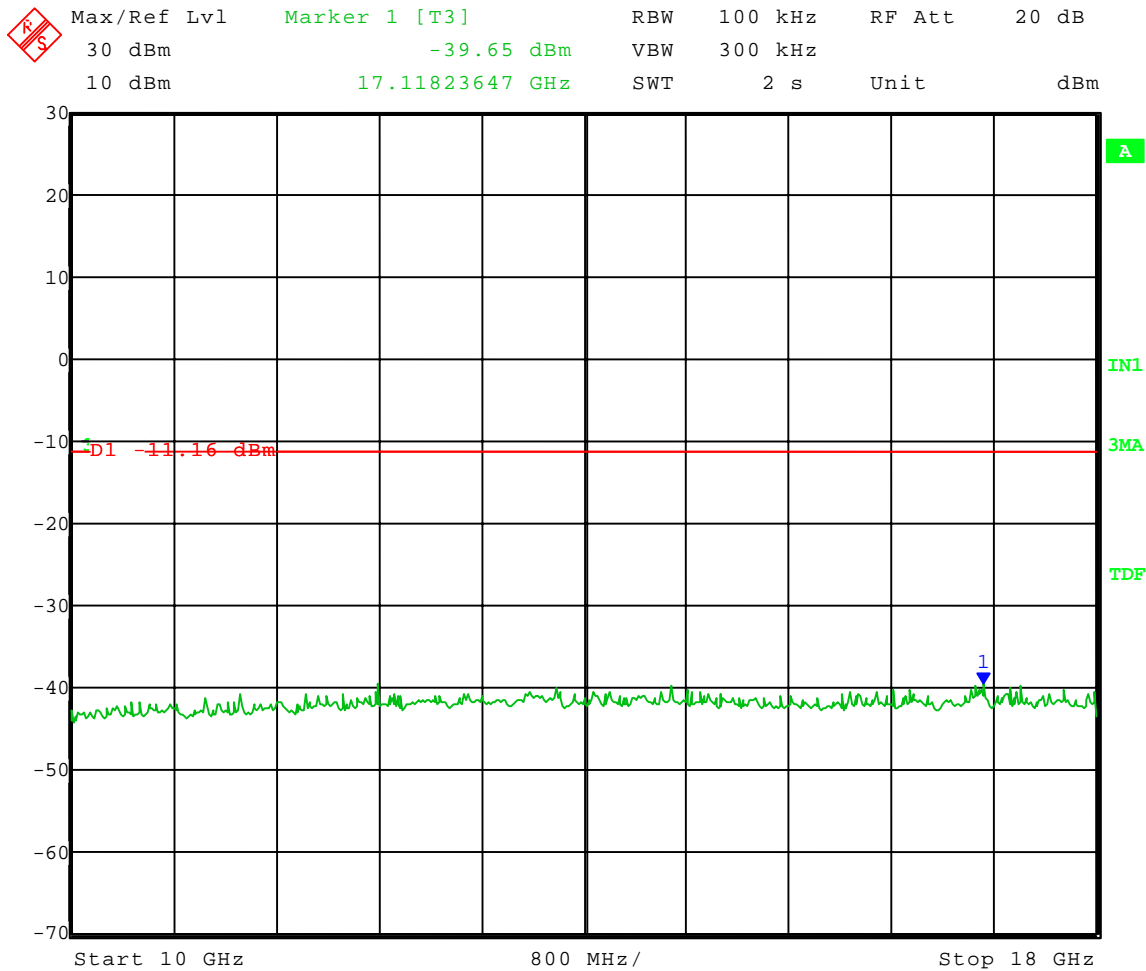
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Low Channel Transmit = 2.412 GHz
Antenna Port A
Frequency Range: 10 to 18 GHz
Limit = -11.16 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





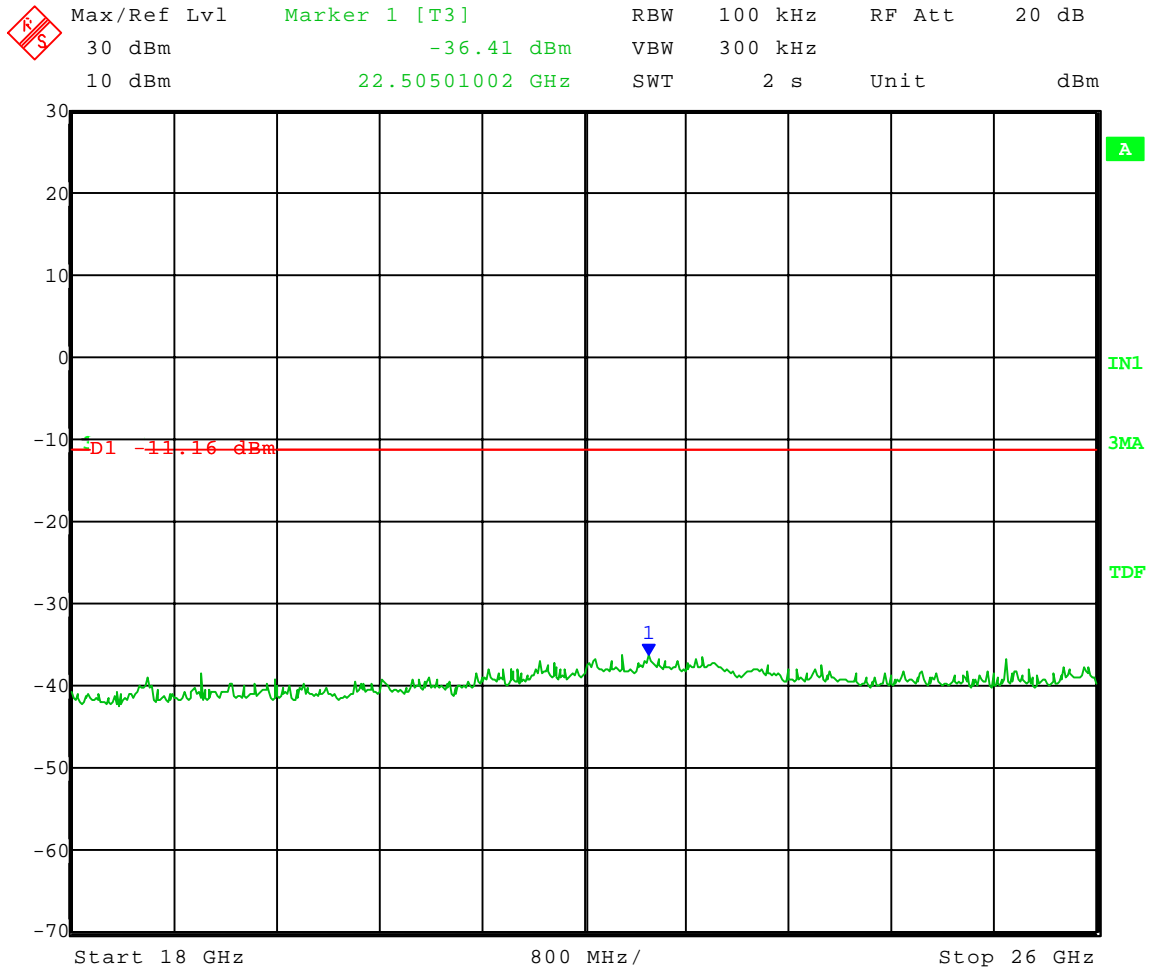
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Low Channel Transmit = 2.412 GHz
Antenna Port A
Frequency Range: 18 to 26 GHz
Limit = -11.16 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:44:04



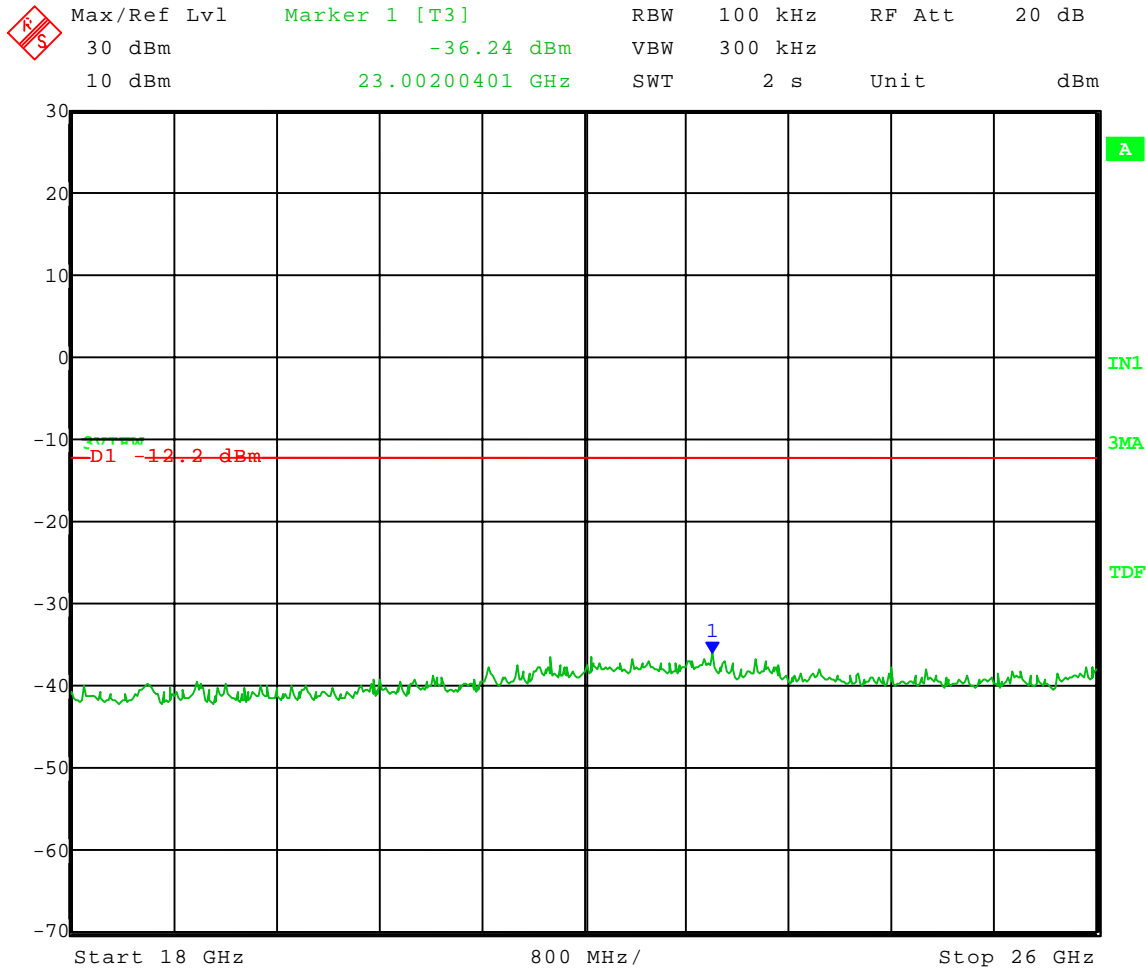
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Middle Channel Transmit = 2.438 GHz
Antenna Port A
Frequency Range: 18 to 26 GHz
Limit = -12.20 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:50:22



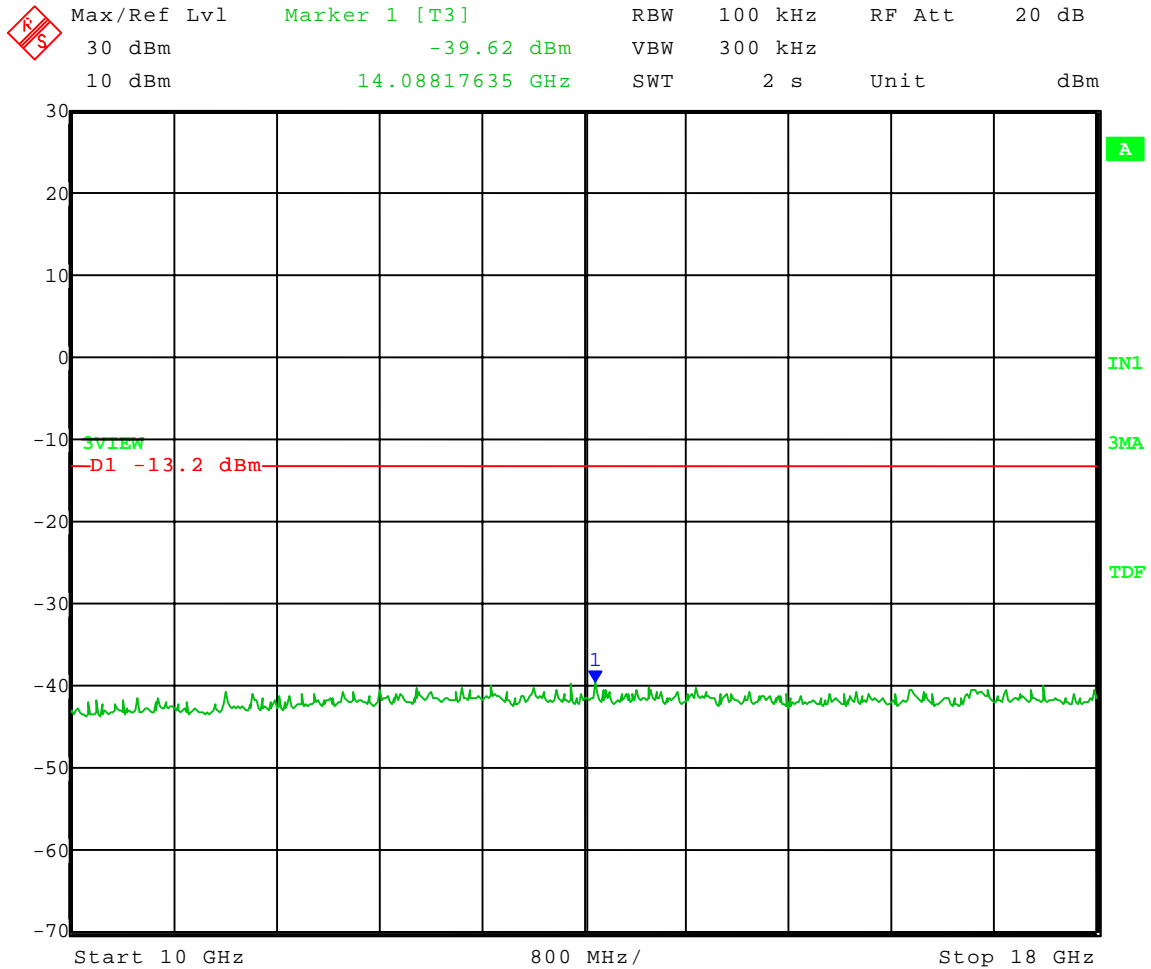
Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
 Company: Klipsch Audio Technologies
 EUT: Klipsch RoomGroove
 Test: Spurious Emissions - Conducted
 Operator: Craig B
 Comment: High Channel Transmit = 2.464 GHz
 Antenna Port A
 Frequency Range: 10 to 18 GHz
 Limit = -13.20 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:54:15



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Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

APPENDIX A

CONDUCTED EMISSION DATA AND GRAPH(S)

TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

AT THE ANTENNA TERMINALS

PART 15.247(c)

ANTENNA PORT B



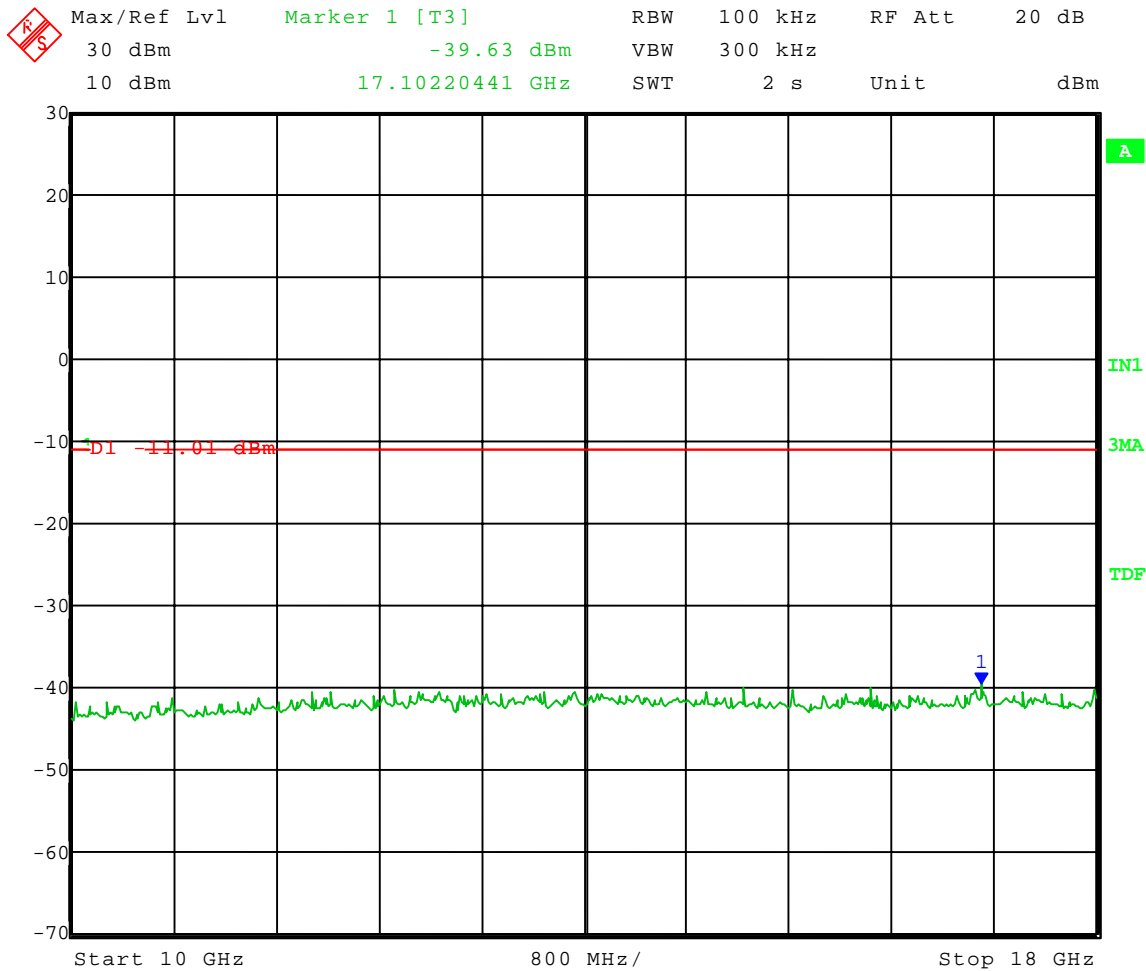
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Low Channel Transmit = 2.412 GHz
Antenna Port B
Frequency Range: 10 to 18 GHz
Limit = -11.01 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency





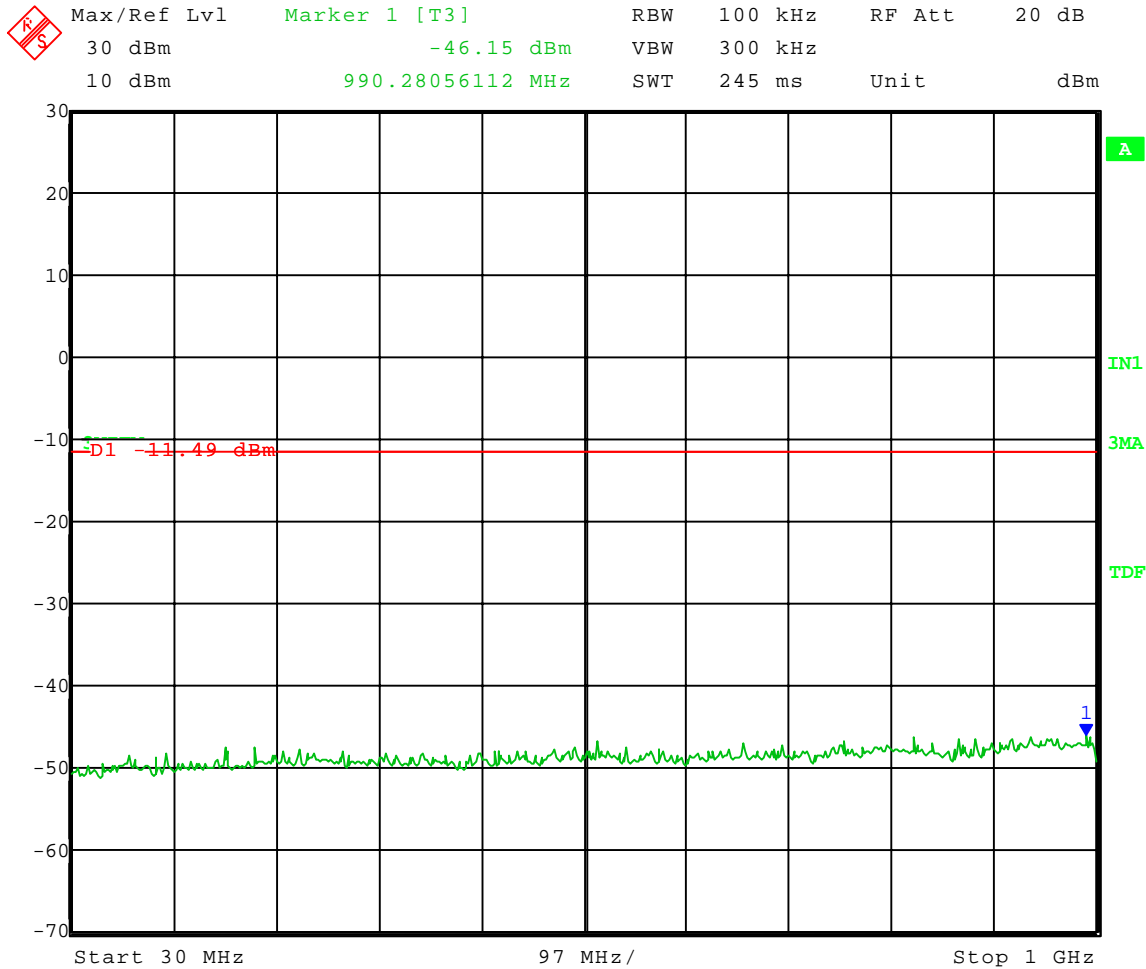
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Middle Channel Transmit = 2.438 GHz
Antenna Port B
Frequency Range: 30 to 1000 MHz
Limit = -11.49 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:25:30



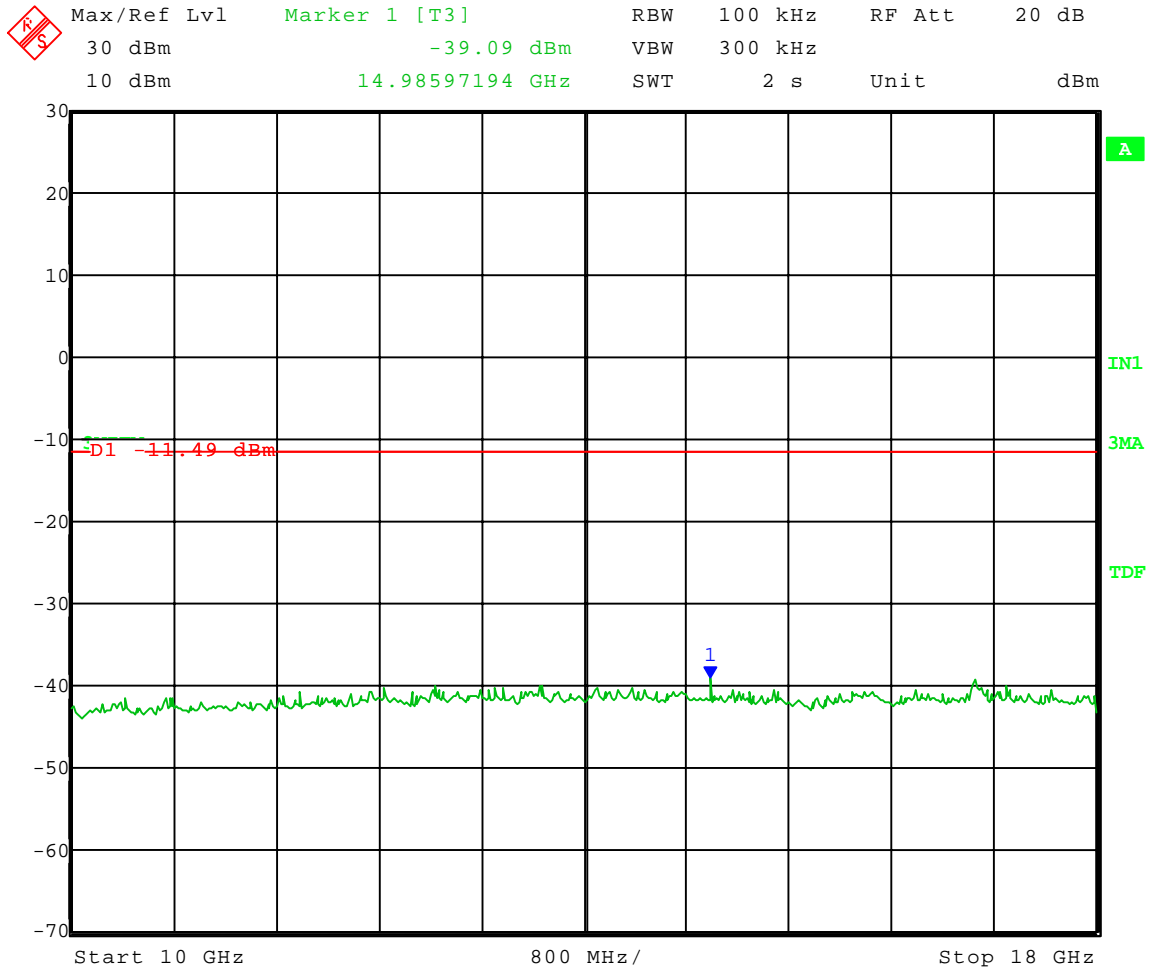
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: Middle Channel Transmit = 2.438 GHz
Antenna Port B
Frequency Range: 10 to 18 GHz
Limit = -11.49 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:22:01



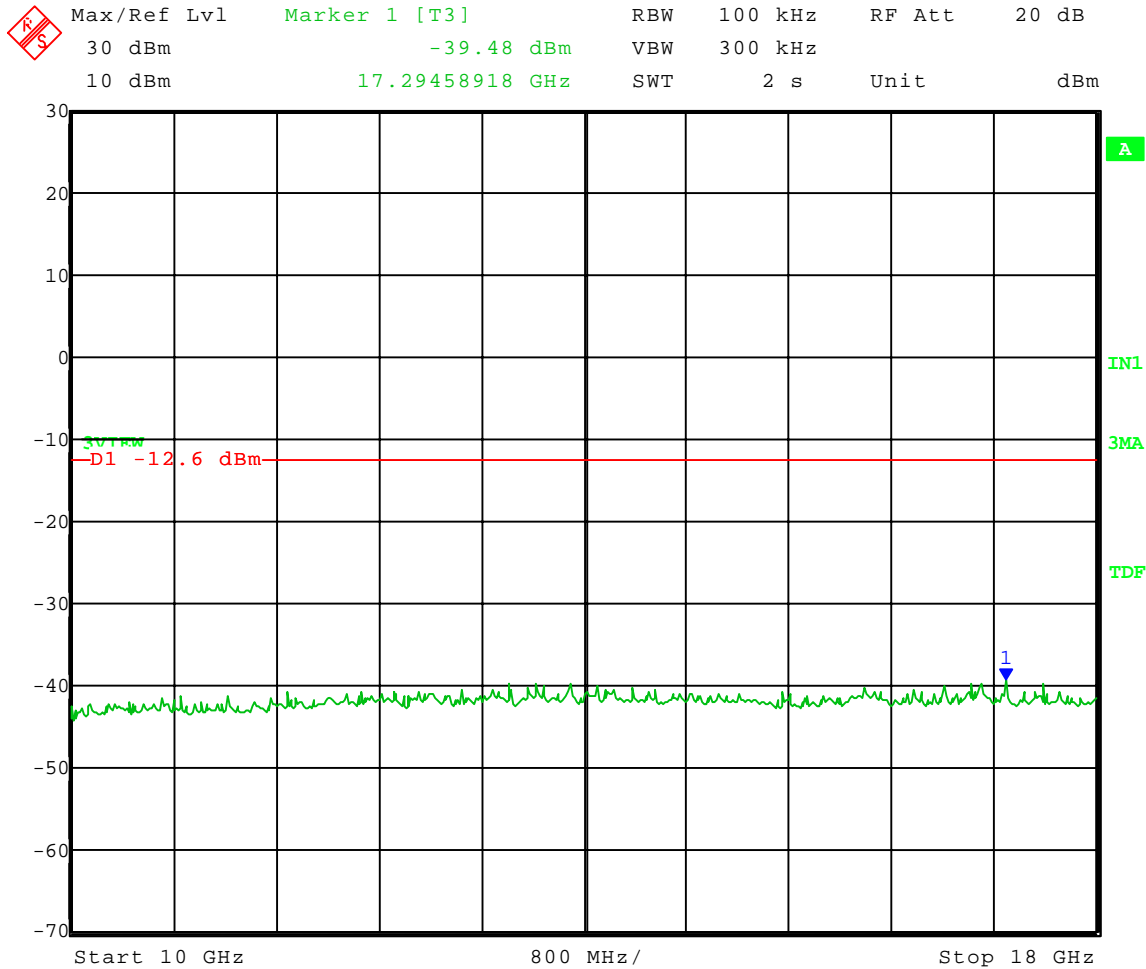
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

Test Date: 03-25-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Spurious Emissions - Conducted
Operator: Craig B
Comment: High Channel Transmit = 2.464 GHz
Antenna Port B
Frequency Range: 10 to 18 GHz
Limit = -12.60 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 25.MAR.2008 13:30:08

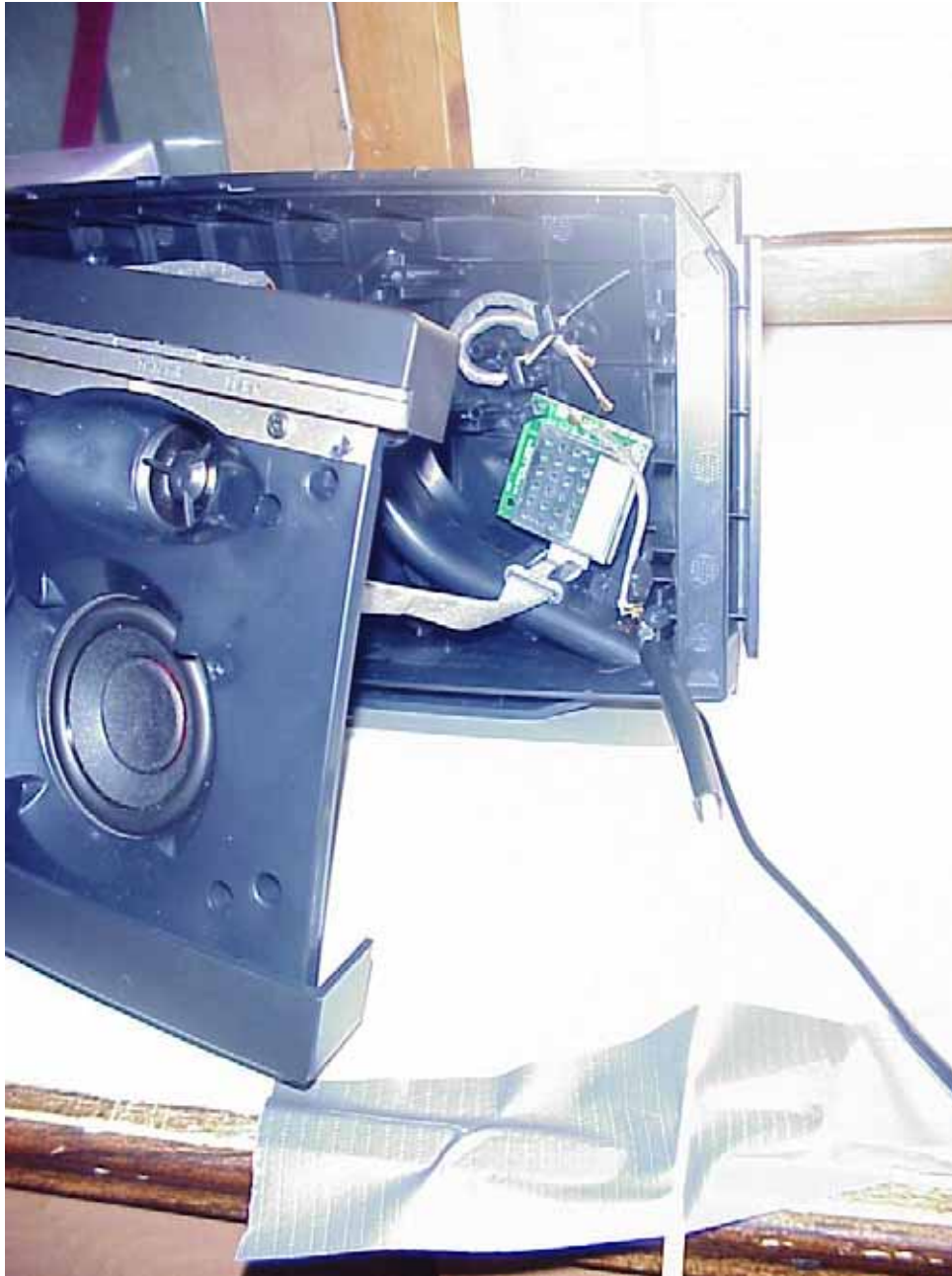


Company: Klipsch L.L.C.
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APPENDIX A

3.0 CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING



RF CONDUCTED PORT A

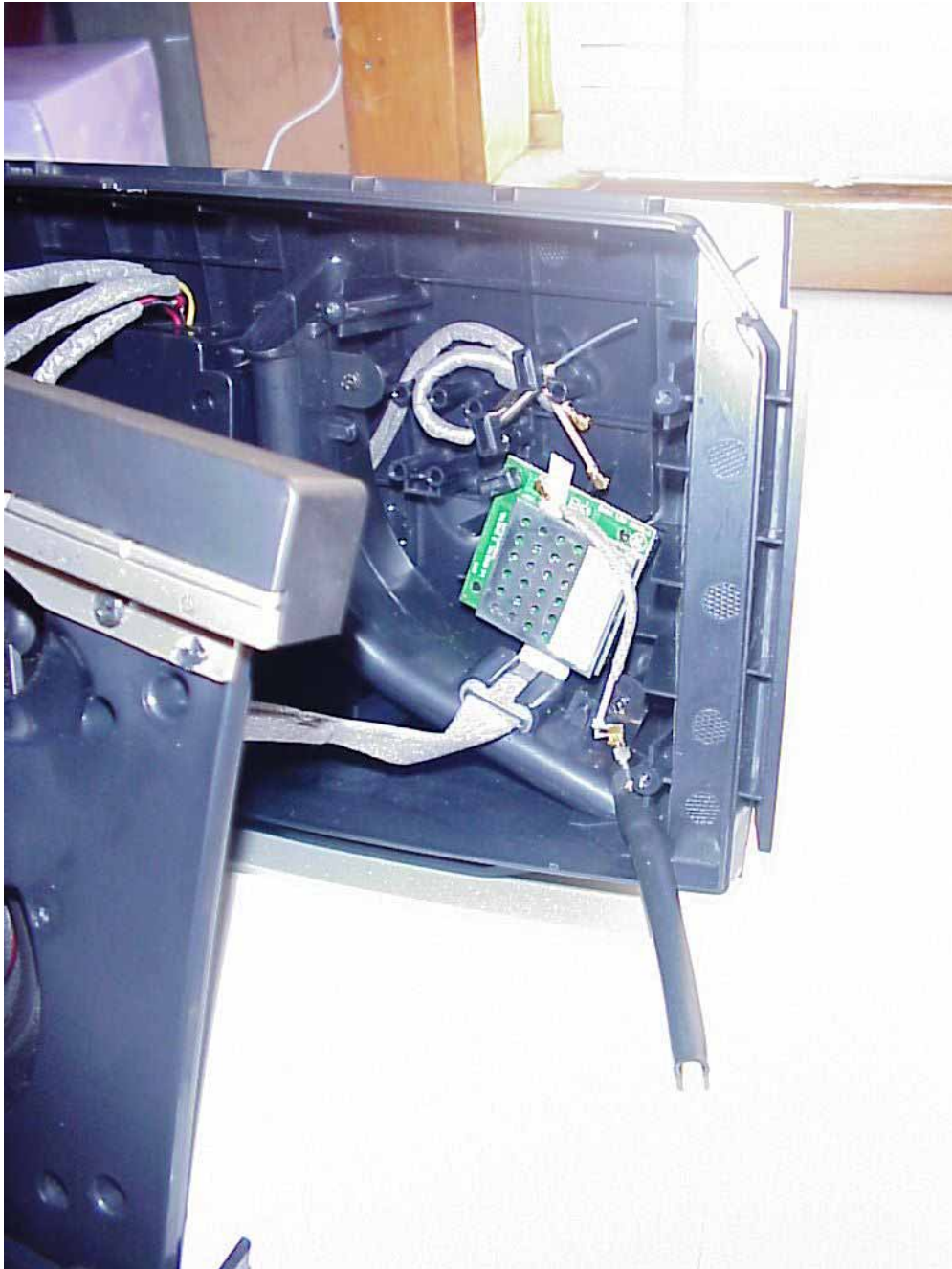


Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

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APPENDIX A

3.0 CONDUCTED EMISSIONS (ANTENNA TERMINAL) PHOTOS TAKEN DURING TESTING



RF CONDUCTED PORT B



Company: Klipsch L.L.C.
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APPENDIX A

4.0 RESTRICTED BANDS

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

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

NOTE:

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

5.0 RESTRICTED BAND COMPLIANCE

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

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

NOTE: See the Section 6 for the data made showing compliance for Restricted Band Compliance from 7GHz to 26 GHz. Data below 6GHz can be found in the test report by Accurate Technology Company LTD. See the following page(s) for the graph(s) made showing compliance for Band Edge Compliance:



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

APPENDIX A

DATA AND GRAPH(S) TAKEN SHOWING
THE BAND EDGE CONDUCTED COMPLIANCE

PART 15.247(c)



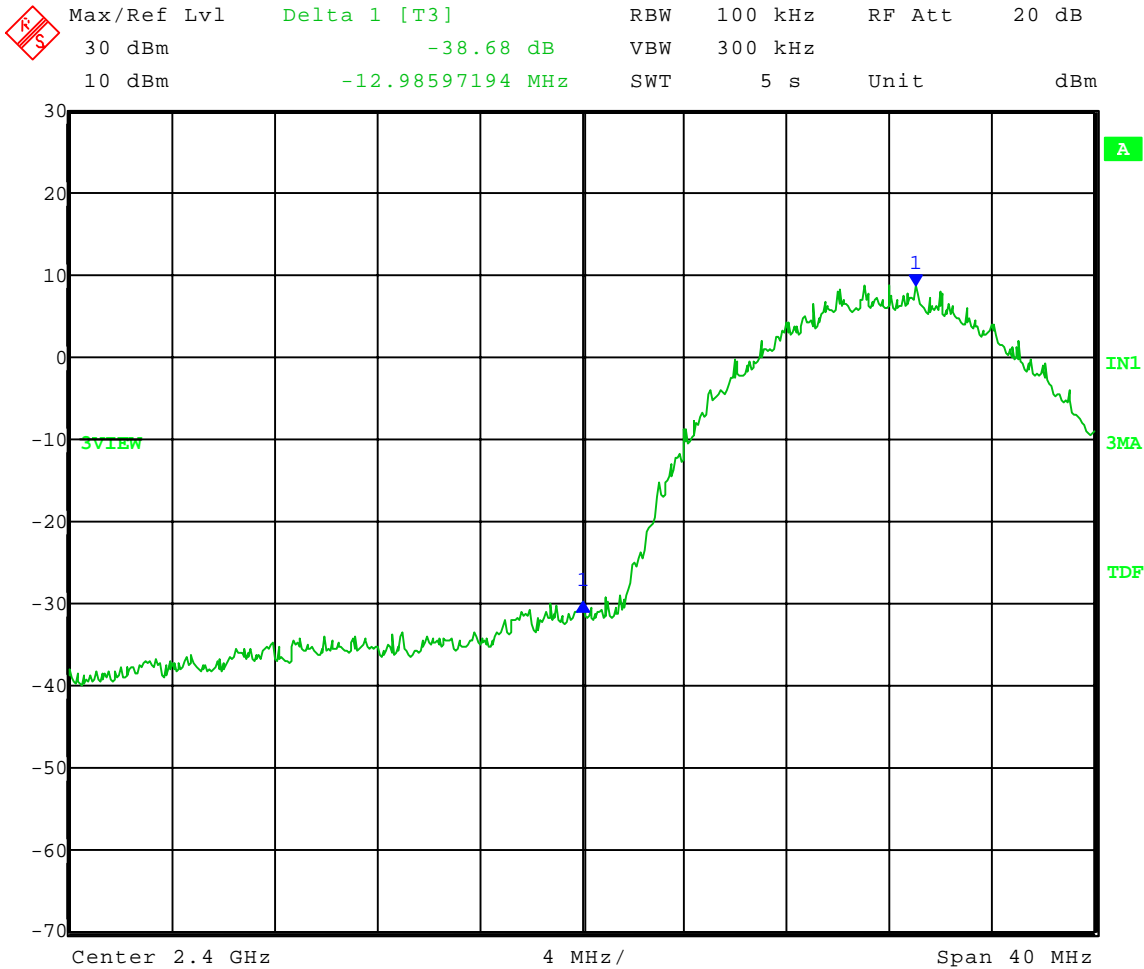
Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 06-04-2008
 Company: Klipsch Audio Technologies
 EUT: RoomGroove
 Test: Low Band-Edge Compliance - Conducted
 Operator: Craig B
 Comment: Low Channel: Frequency - 2.412 GHz
 Antenna Port A

Band-Edge Frequency = 2.4 GHz
 Band-Edge > 20 dB Below Peak In-Band Emission



Date: 4.JUN.2008 10:20:04



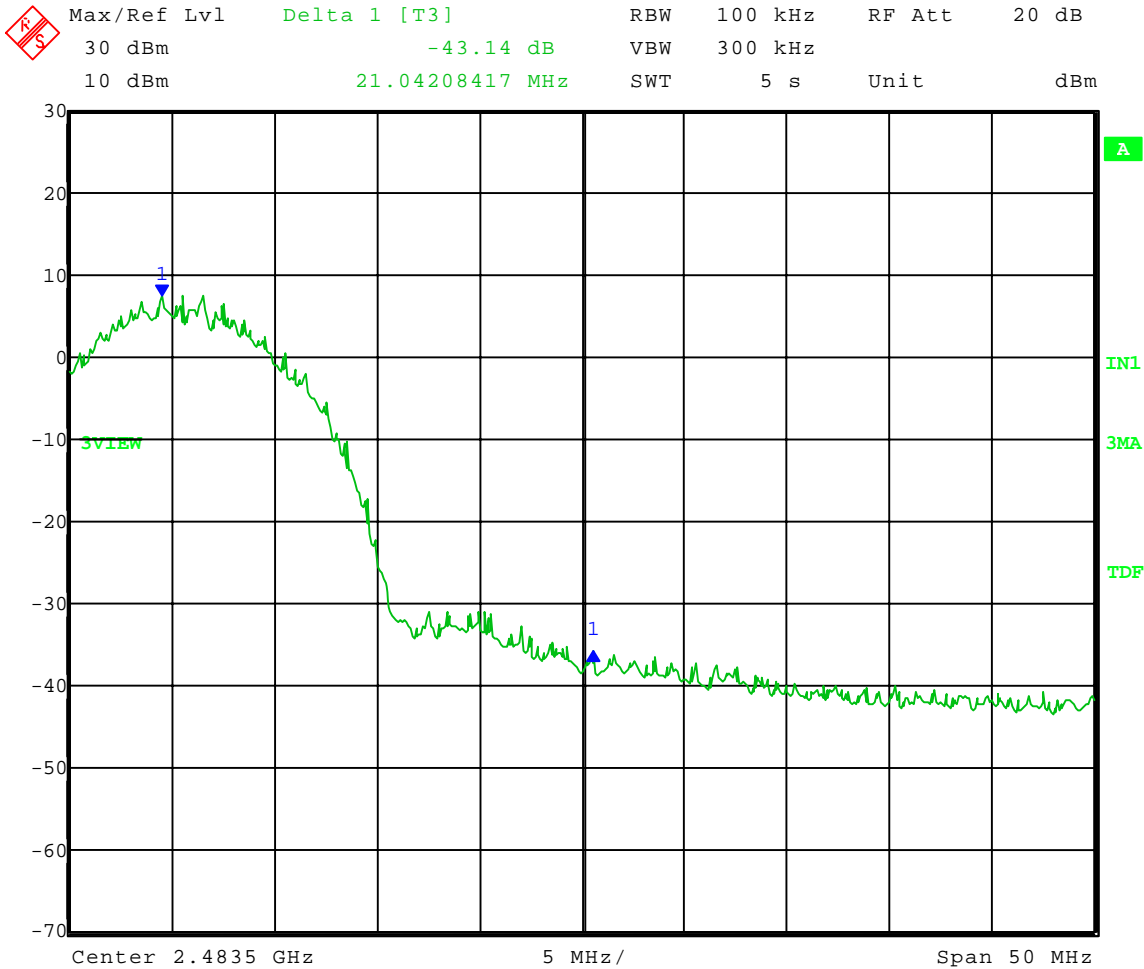
Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 06-04-2008
 Company: Klipsch Audio Technologies
 EUT: RoomGroove
 Test: Low Band-Edge Compliance - Conducted
 Operator: Craig B
 Comment: High Channel: Frequency – 2.464 GHz
 Antenna Port A

Band-Edge Frequency = 2.4835 GHz
 Band-Edge > 20 dB Below Peak In-Band Emission



Date: 4.JUN.2008 10:22:01



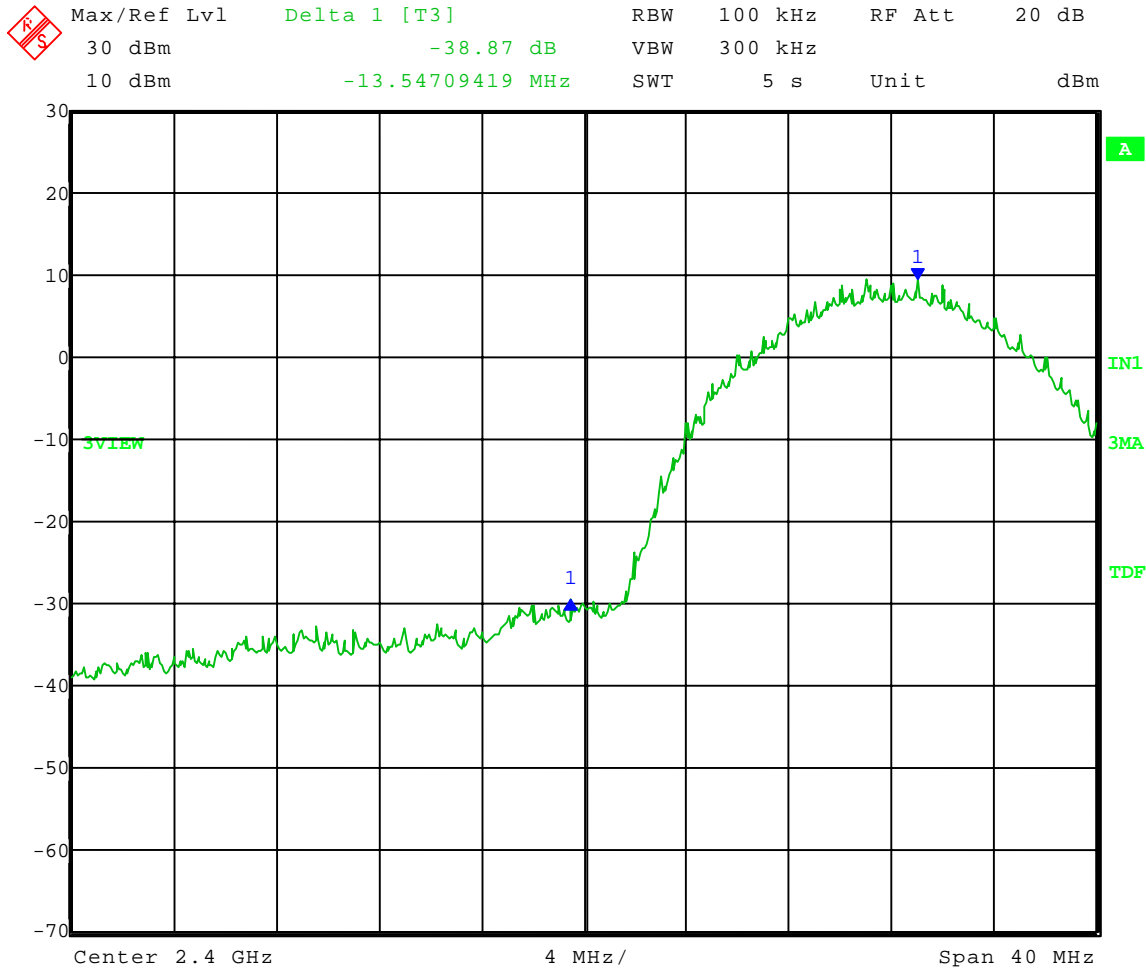
Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 06-04-2008
 Company: Klipsch Audio Technologies
 EUT: RoomGroove
 Test: Low Band-Edge Compliance - Conducted
 Operator: Craig B
 Comment: Low Channel: Frequency - 2.412 GHz
 Antenna Port B

Band-Edge Frequency = 2.4 GHz
 Band-Edge > 20 dB Below Peak In-Band Emission



Date: 4.JUN.2008 10:26:06



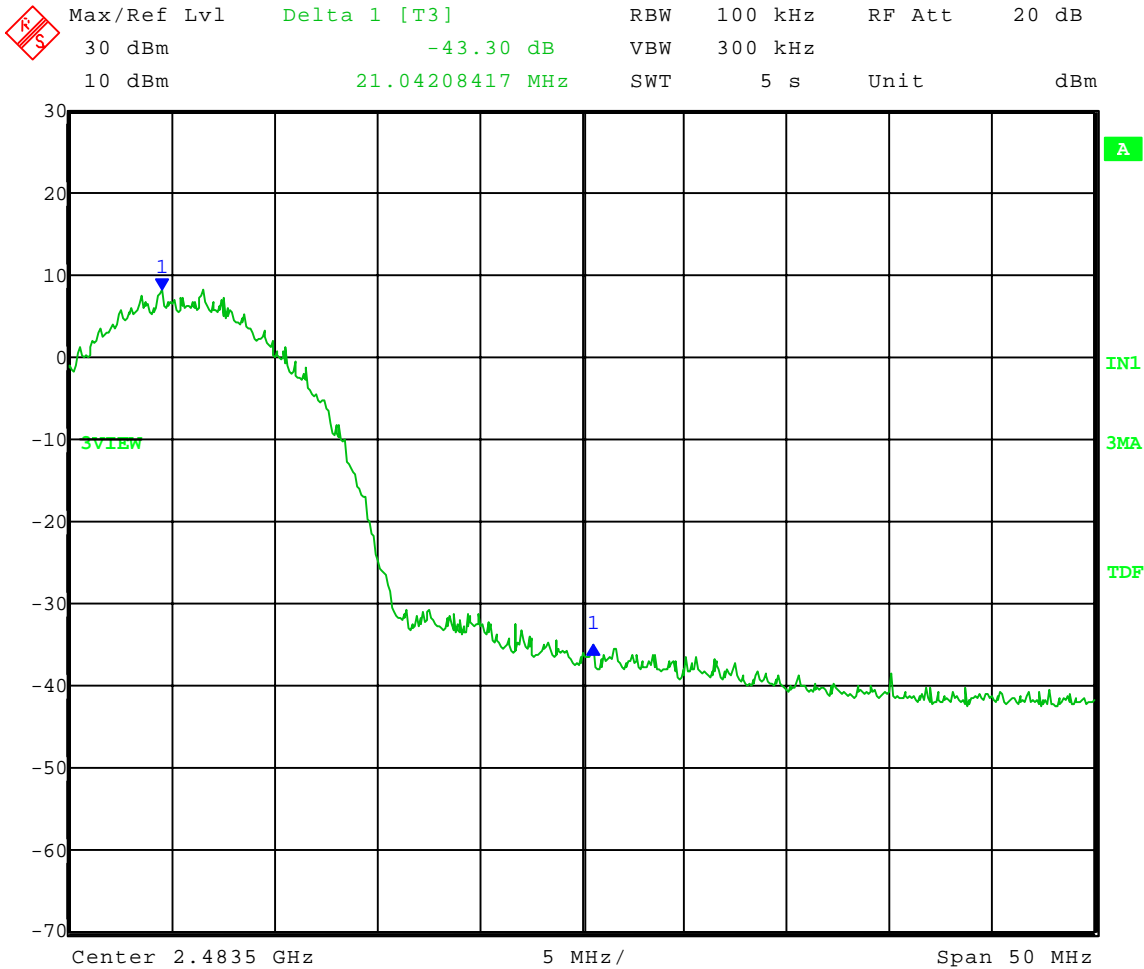
Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 06-04-2008
 Company: Klipsch Audio Technologies
 EUT: RoomGroove
 Test: Low Band-Edge Compliance - Conducted
 Operator: Craig B
 Comment: High Channel: Frequency – 2.464 GHz
 Antenna Port B

Band-Edge Frequency = 2.4835 GHz
 Band-Edge > 20 dB Below Peak In-Band Emission



Date: 4.JUN.2008 10:28:20



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

APPENDIX A

DATA AND GRAPH(S) TAKEN SHOWING

THE UPPER BAND EDGE

PART 15.247(c)

BAND EDGE FALLS ON THE RESTRICTED

FREQUENCY BAND



Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Radiated Upper Band-Edge measurement

Test Procedure: “Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

The EUT was investigated at the low and high channels of operation to determine band-edge compliance. Because the upper band-edge coincides with a restricted band, bandedge compliance for the upper band-edge was determined using the radiated mark-delta method. The radiated field strength of the fundamental emission was first determined and then the mark-delta method was used to determine the field strength of the band-edge emissions.

The lower band-edge compliance was determined using the marker-delta method in which the radio frequency power that is produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

Upper Band-Edge Marker Delta Method

Antenna A

Frequency (MHz)	Antenna Polarity (H/V)	Fundamental Field Strength (dBμV/m)	Duty Cycle Correction (dB)	Delta-Marker (dB)	Band-Edge Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2464 (Peak)	H	116.15	N/A	-43.61	72.54	74	1.46
2464 (Avg)	H	71.73	---	-43.61	28.12	54	25.88

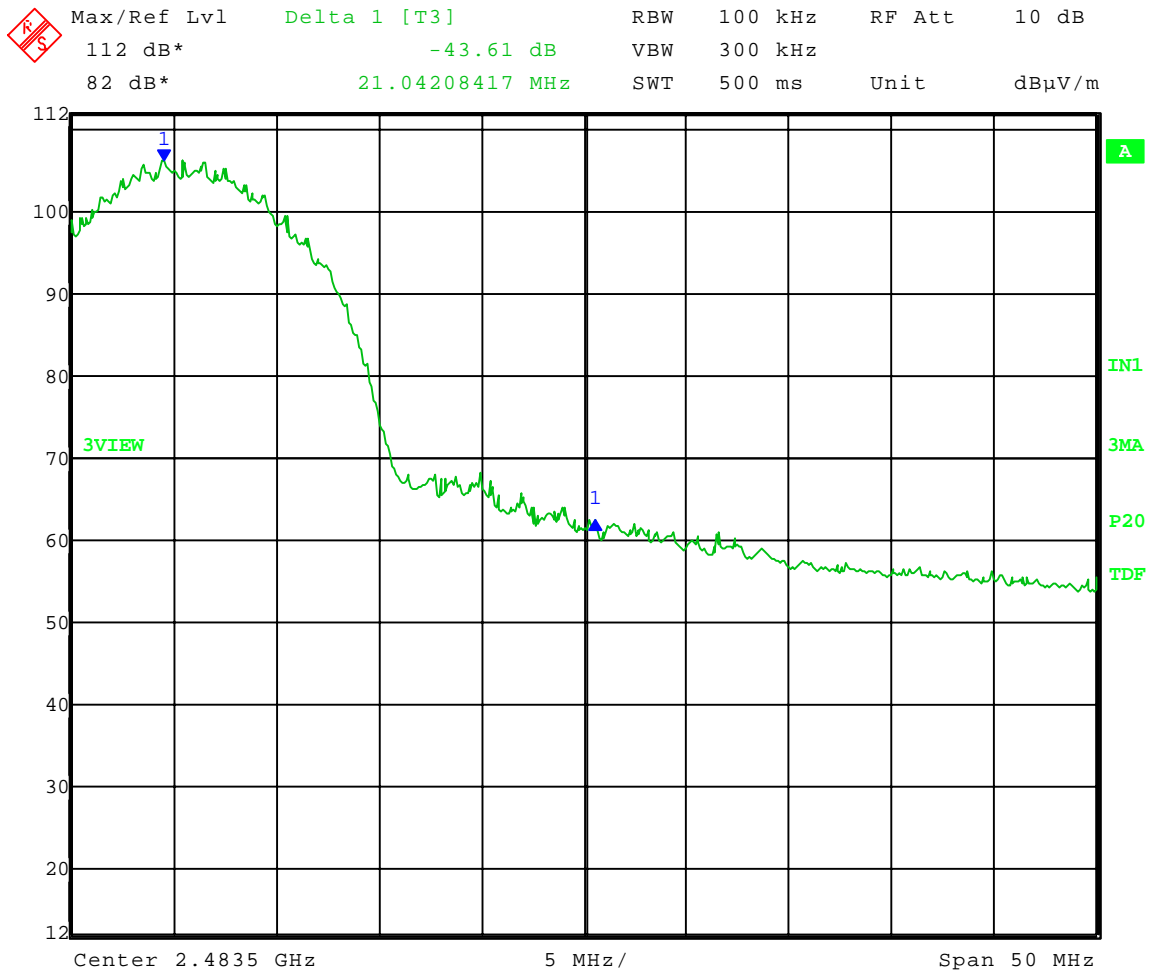


Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Upper Band-Edge Radiated – Marker Delta Method
Operator: Craig B
Comment: High Channel: Frequency – 2.464 GHz
Transmit from Antenna A



Date: 3.JUN.2008 11:12:35



Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Radiated Upper Band-Edge measurement

Test Procedure: “Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

The EUT was investigated at the low and high channels of operation to determine band-edge compliance. Because the upper band-edge coincides with a restricted band, bandedge compliance for the upper band-edge was determined using the radiated mark-delta method. The radiated field strength of the fundamental emission was first determined and then the mark-delta method was used to determine the field strength of the band-edge emissions.

The lower band-edge compliance was determined using the marker-delta method in which the radio frequency power that is produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

Upper Band-Edge Marker Delta Method

Antenna B

Frequency (MHz)	Antenna Polarity (H/V)	Fundamental Field Strength (dB μ V/m)	Duty Cycle Correction (dB)	Delta-Marker (dB)	Band-Edge Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
2464 (Peak)	H	116.92	N/A	-44.68	72.24	74	1.76
2464 (Avg)	H	72.52	---	-44.68	27.84	54	26.16

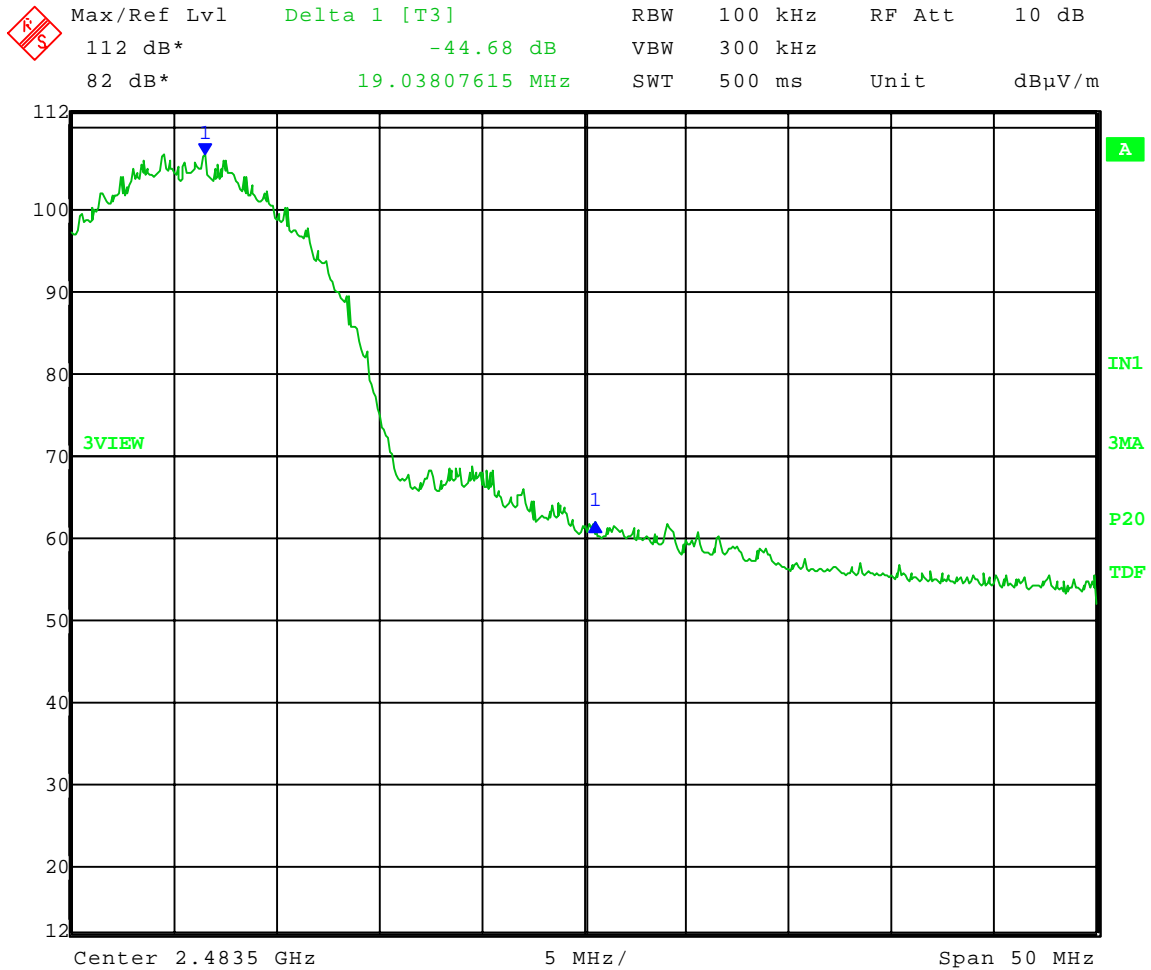


Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

Test Date: 06-03-2008
 Company: Klipsch Audio Technologies
 EUT: Klipsch RoomGroove
 Test: Upper Band-Edge Radiated – Marker Delta Method
 Operator: Craig B
 Comment: High Channel: Frequency – 2.464 GHz
 Transmit from Antenna B



Date: 3.JUN.2008 11:04:48



Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

6.0 FIELD STRENGTH OF FUNDAMENTAL AND SPURIOUS EMISSION MEASUREMENTS

The radiated measurements made from 6 GHz to 26 GHz at D.L.S. Electronic Systems, Inc., for the Klipsch RoomGroove, Model Number: RoomGroove, are shown in tabulated and graph form. Preliminary radiation measurements were performed at a 3 meter test distance with the limits adjusted linearly when required. The frequency range from 30 MHz to over 960 MHz, depending upon the fundamental frequency as stated in Part 15.33a, was automatically scanned and plotted at various angles.

Measurements for the Klipsch RoomGroove were made at D.L.S. Electronic Systems, Inc from 6 GHz – 25 GHz, in accordance with Section 15.33a for Intentional Radiators with a fundamental frequency of 2464 MHz. Data for emissions below 6 GHz is provided by Accurate Technology Company LTD. For intentional radiators, the frequency range to be investigated is determined by the lowest radio frequency generated by the device without going below 30 MHz, up to at least the tenth harmonic of the highest fundamental frequency or 10 GHz, whichever is lower. At those frequencies where significant signals were detected, measurements were made over the entire frequency range specified in FCC Part 15, Subpart C, Section 15.247 at the open field test site, located at Genoa City, Wisconsin, FCC file number **31040/SIT**. When required, limits were extrapolated using a linear extrapolation.

From 6 GHz to 25 GHz Horn Antennas were used. During the test the equipment was rotated and the antenna was raised and lowered from 1 meter to 4 meters to find the maximum level of emissions. In order to find maximum emissions, the cables were moved through all the positions the equipment would be expected to experience in the field. The EUT, peripheral equipment and cables were configured to meet the conditions in ANSI C63.4-2003, Clauses 6 & 8. Tests were made with the receive antenna(s) in both the horizontal and vertical planes of polarization. In each case, the table was rotated to find the maximum emissions.



Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

1250 Peterson Dr., Wheeling, IL 60090

APPENDIX A

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

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

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

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

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

NOTE:

All fundamental & spurious radiated emissions up to 7 GHz were provided by Accurate Technology Company LTD.

All radiated emissions measurements were made at a test room temperature of 70°F at 24% relative humidity.



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

APPENDIX A

RADIATED DATA TAKEN FOR
FIELD STRENGTH OF FUNDAMENTAL AND
SPURIOUS EMISSION MEASUREMENTS
PART 15.247
ANTENNA PORT A



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

**Radiated Spurious Emissions in Restricted Bands 7 GHz to 25 GHz
 Tested at a 1 meter distance**

EUT: Klipsch RoomGroove
Manufacturer: Klipsch Audio Technologies
Operating Condition: 70 deg F; 24% R.H.
Test Site: Site 2
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit
 Transmit using antenna A
Date: 03/25/2008

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel: 2.412 GHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBUV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBUV/m)	Duty Cycle Correction (dB)	Final Corrected (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Comment
12.060	Average	Vert	Noise Floor						63.5		Res. Band
12.060	Max Peak	Vert	Noise Floor						83.5		Res. Band
12.060	Average	Horz	36.99	39.05	-28.9	47.2	---	47.2	63.5	16.3	Res. Band
12.060	Max Peak	Horz	54.40	39.05	-28.9	64.6	---	64.6	83.5	18.9	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

**Radiated Spurious Emissions in Restricted Bands 7 GHz to 25 GHz
 Tested at a 1 meter distance**

EUT: Klipsch RoomGroove
Manufacturer: Klipsch Audio Technologies
Operating Condition: 70 deg F; 24% R.H.
Test Site: Site 2
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit
 Transmit using antenna A
Date: 03/25/2008

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel: 2.438 GHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBUV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBUV/m)	Duty Cycle Correction (dB)	Final Corrected (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Comment
7.314	Average	Vert	39.61	36.28	-30.8	45.1	---	45.1	63.5	18.4	Res. Band
7.314	Max Peak	Vert	64.61	36.28	-30.8	70.1	---	70.1	83.5	13.4	Res. Band
7.314	Average	Horz	39.61	36.28	-30.8	45.1	---	45.1	63.5	18.4	Res. Band
7.314	Max Peak	Horz	64.11	36.28	-30.8	69.6	---	69.6	83.5	13.9	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

RADIATED DATA TAKEN FOR

FIELD STRENGTH OF FUNDAMENTAL AND

SPURIOUS EMISSION MEASUREMENTS

PART 15.247

ANTENNA PORT B



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

**Radiated Spurious Emissions in Restricted Bands 7 GHz to 25 GHz
 Tested at a 1 meter distance**

EUT: Klipsch RoomGroove
Manufacturer: Klipsch Audio Technologies
Operating Condition: 70 deg F; 24% R.H.
Test Site: Site 2
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit
 Transmit using antenna B
Date: 03/25/2008

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel: 2.412 GHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBUV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBUV/m)	Duty Cycle Correction (dB)	Final Corrected (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Comment
12.060	Average	Vert	Noise Floor						63.5		Res. Band
12.060	Max Peak	Vert	Noise Floor						83.5		Res. Band
12.060	Average	Horz	36.60	39.05	-28.9	46.8	---	46.8	63.5	16.7	Res. Band
12.060	Max Peak	Horz	51.37	39.05	-28.9	61.5	---	61.5	83.5	22.0	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

**Radiated Spurious Emissions in Restricted Bands 7 GHz to 25 GHz
 Tested at a 1 meter distance**

EUT: Klipsch RoomGroove
Manufacturer: Klipsch Audio Technologies
Operating Condition: 70 deg F; 24% R.H.
Test Site: Site 2
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit
 Transmit using antenna B
Date: 03/25/2008

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel: 2.438 GHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBUV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBUV/m)	Duty Cycle Correction (dB)	Final Corrected (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Comment
7.314	Average	Vert	38.93	36.28	-30.8	44.4	---	44.4	63.5	19.1	Res. Band
7.314	Max Peak	Vert	61.00	36.28	-30.8	66.5	---	66.5	83.5	17.0	Res. Band
7.314	Average	Horz	39.16	36.28	-30.8	44.7	---	44.7	63.5	18.8	Res. Band
7.314	Max Peak	Horz	63.44	36.28	-30.8	68.9	---	68.9	83.5	14.6	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
 Model Tested: RoomGroove
 Report Number: 14001

**Radiated Spurious Emissions in Restricted Bands 7 GHz to 25 GHz
 Tested at a 1 meter distance**

EUT: Klipsch RoomGroove
Manufacturer: Klipsch Audio Technologies
Operating Condition: 70 deg F; 24% R.H.
Test Site: Site 2
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: Continuous transmit
 Transmit using antenna B
Date: 03/25/2008

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 1 MHz
 (2) Average measurements were taken with RBW = 1 MHz, VBW = 10 Hz
 (3) All other restricted band emissions at least 20 dB under the limit.

Channel: 2.464 GHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBUV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBUV/m)	Duty Cycle Correction (dB)	Final Corrected (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Comment
7.392	Average	Vert	37.85	36.5	-30.3	44.1	---	44.1	63.5	19.4	Res. Band
7.392	Max Peak	Vert	57.62	36.5	-30.3	63.8	---	63.8	83.5	19.7	Res. Band
7.392	Average	Horz	37.99	36.5	-30.3	44.2	---	44.2	63.5	19.3	Res. Band
7.392	Max Peak	Horz	57.93	36.5	-30.3	64.1	---	64.1	83.5	19.4	Res. Band



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

6 dB BANDWIDTH GRAPHS

PART 15.247

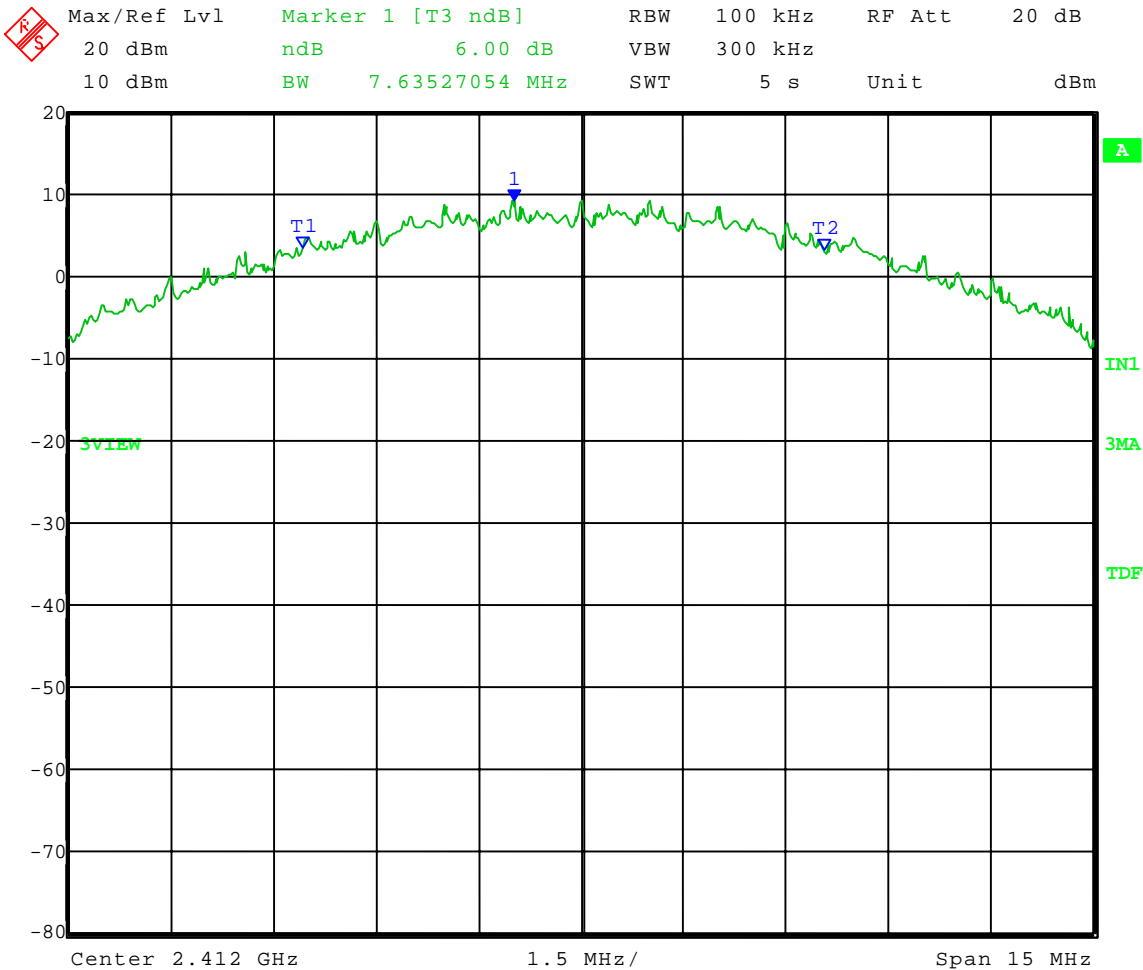


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: 6 dB Bandwidth - Conducted
Operator: Craig B
Comment: Low Channel: Frequency – 2.412 GHz
Antenna Port A

6 dB Bandwidth = 7.6 MHz



Date: 3.JUN.2008 11:56:19

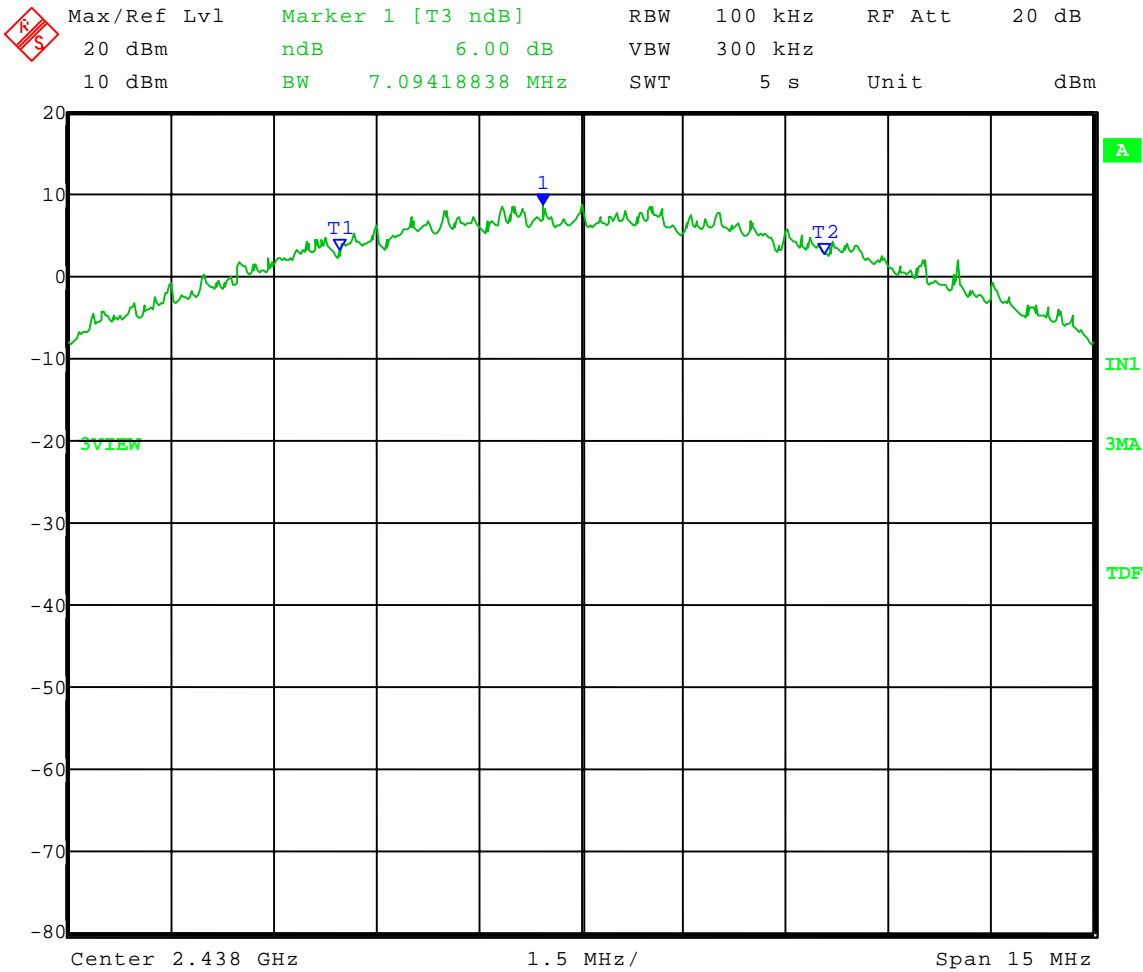


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: 6 dB Bandwidth - Conducted
Operator: Craig B
Comment: Mid Channel: Frequency – 2.438 GHz
Antenna Port A

6 dB Bandwidth = 7.1 MHz



Date: 3.JUN.2008 12:03:42

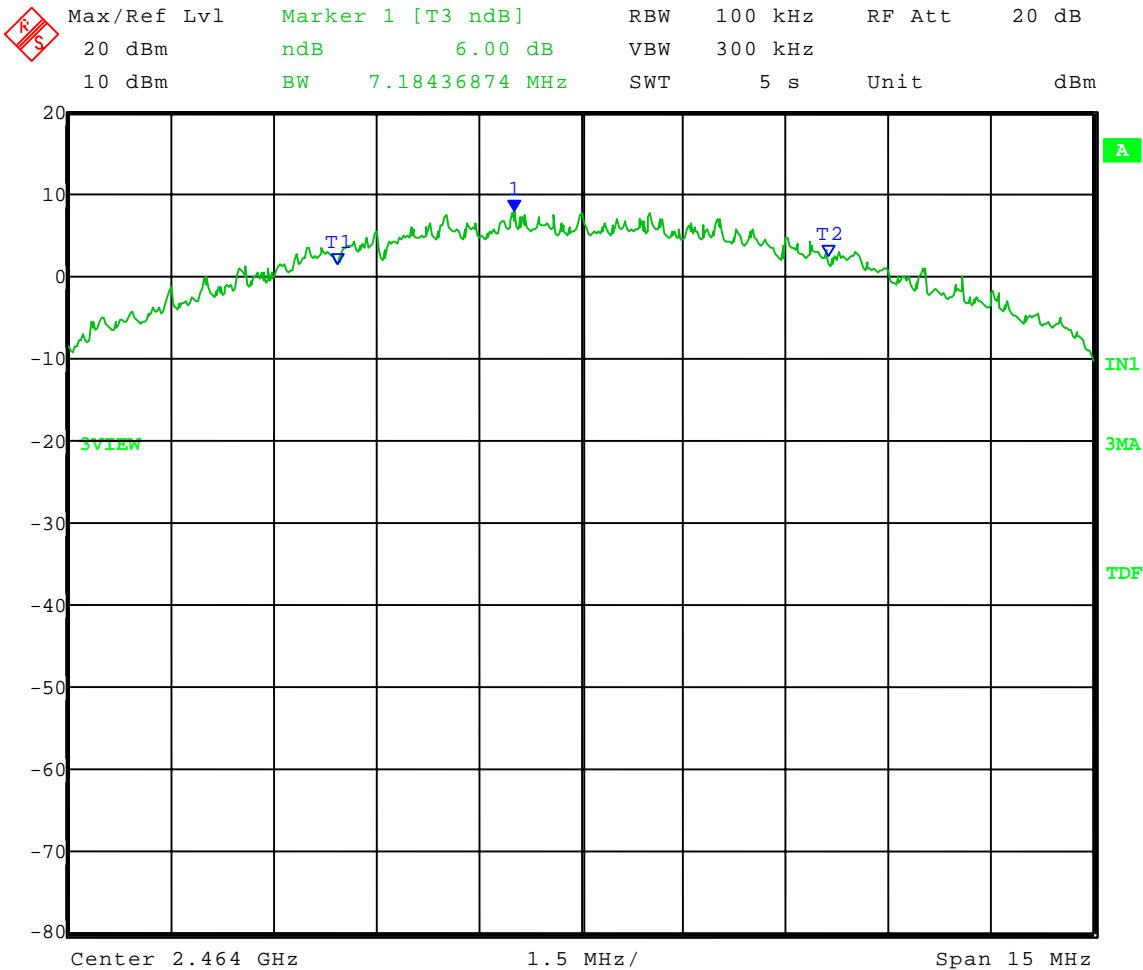


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: 6 dB Bandwidth - Conducted
Operator: Craig B
Comment: High Channel: Frequency – 2.464 GHz
Antenna Port A

6 dB Bandwidth = 7.2 MHz



Date: 3 JUN 2008 12:10:08



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

DUTY CYCLE CORRECTION FACTOR

PART 15.247



1250 Peterson Dr., Wheeling, IL 60090

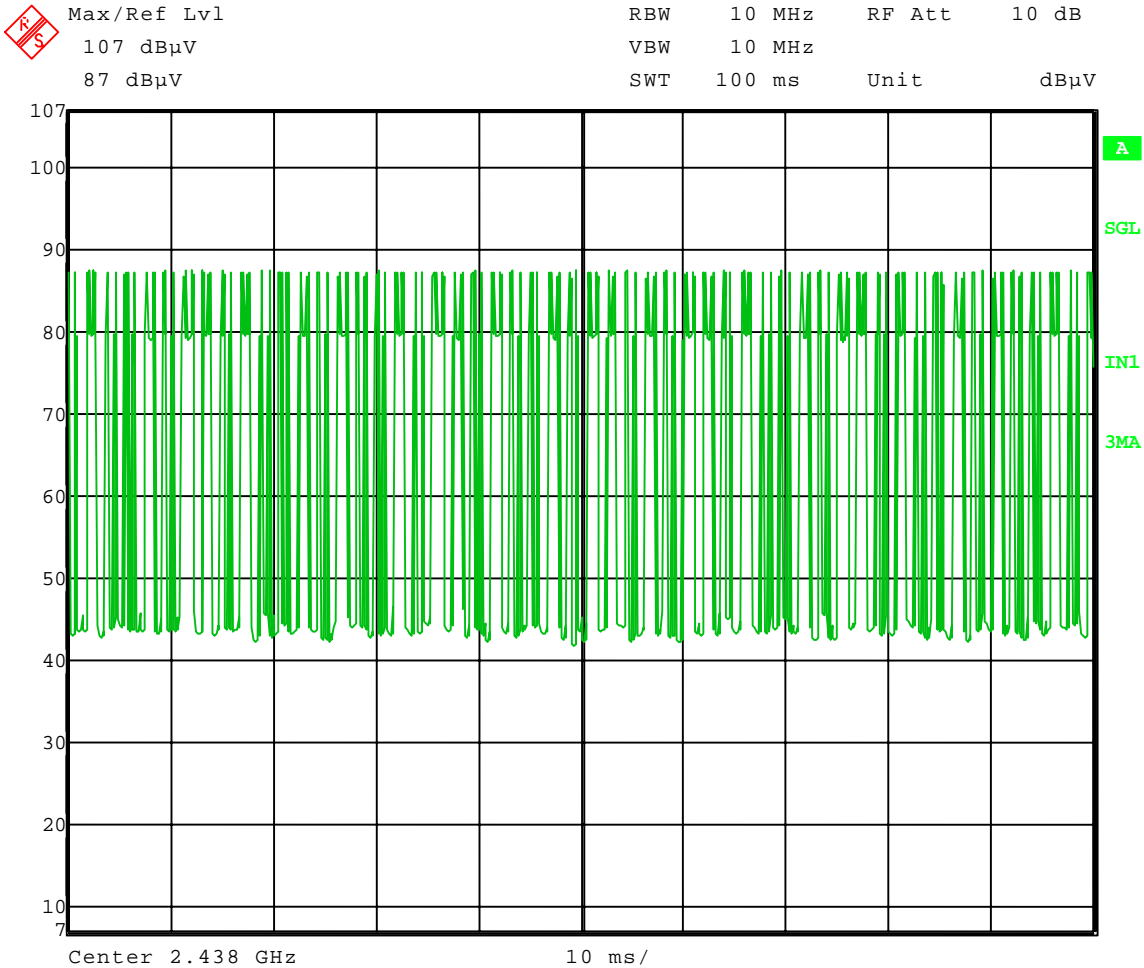
Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 03-24-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Duty Cycle
Operator: Craig B

Comment: 5 pulses at 0.080160321 ms each
5 pulses at 0.300601202 ms each
10 pulses at 0.140280561 ms each

Total on Time = 3.306613225 ms during 10 ms Sweep
 $20 \log (3.307 / 10) = -9.61$
Duty Cycle Correction Factor = 9.61 dB

Pulse train over 100 ms:



Date: 24.MAR.2008 09:51:08

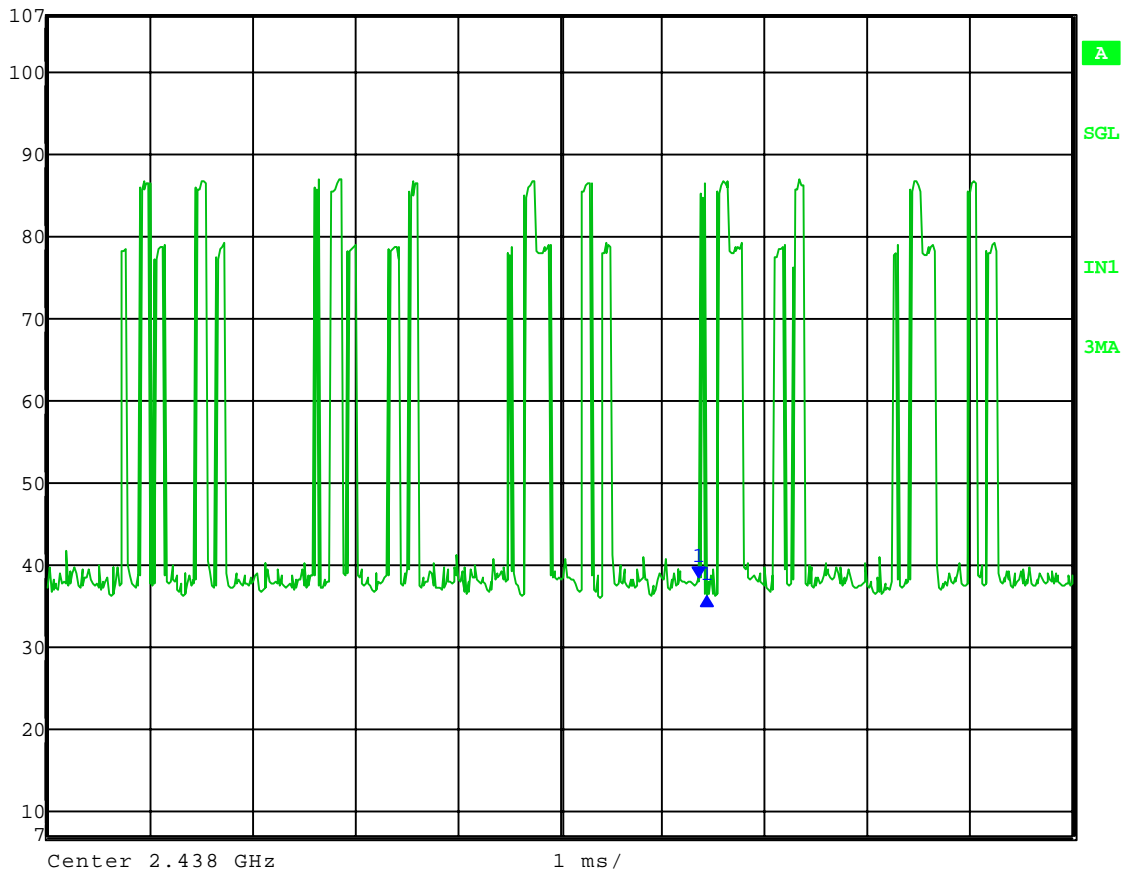


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 03-24-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Duty Cycle
Operator: Craig B
Comment: 0.080160321 ms pulse

	Max/Ref Lvl	Delta 1 [T3]	RBW	5 MHz	RF Att	10 dB
	107 dB μ V	-2.26 dB	VBW	5 MHz		
	87 dB μ V	80.160321 μ s	SWT	10 ms	Unit	dB μ V



Date: 24.MAR.2008 09:55:23

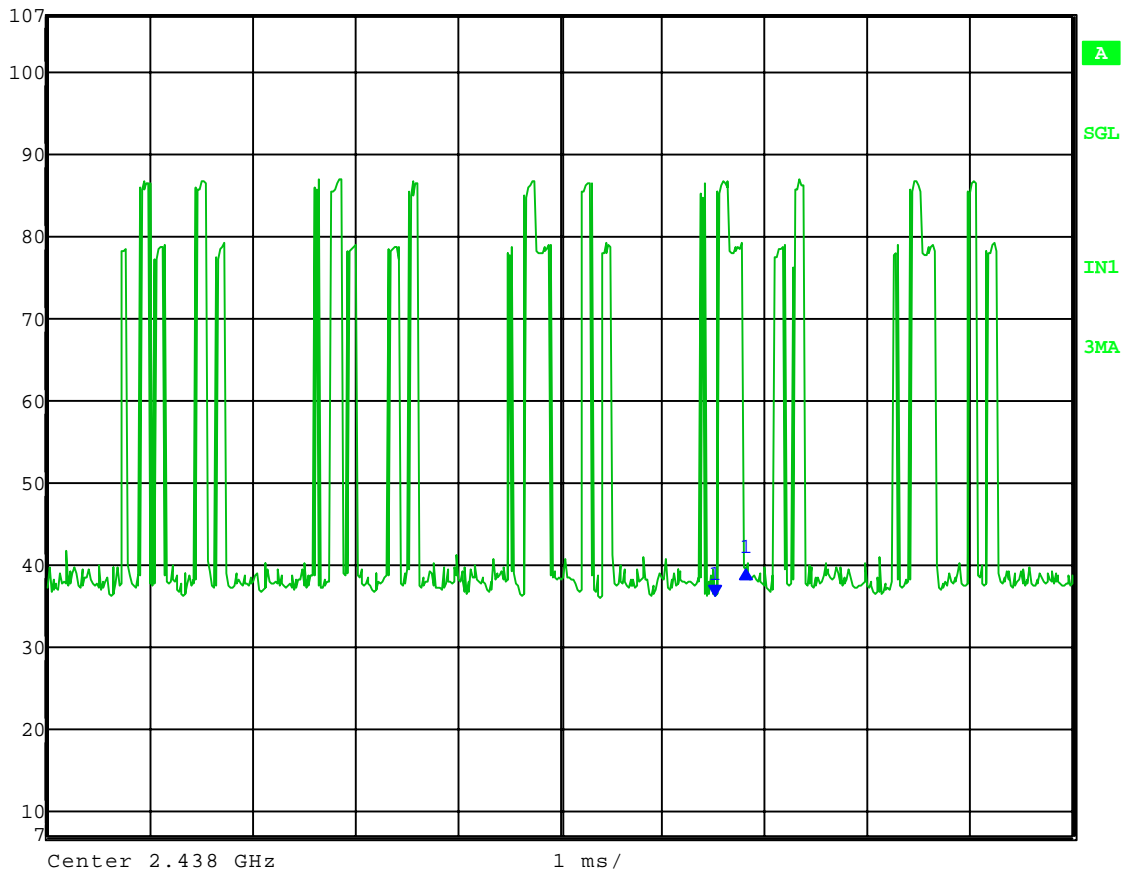


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 03-24-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Duty Cycle
Operator: Craig B
Comment: 0.300601202 ms pulse

	Max/Ref Lvl	Delta 1 [T3]	RBW	5 MHz	RF Att	10 dB
	107 dB μ V	3.12 dB	VBW	5 MHz		
	87 dB μ V	300.601202 μ s	SWT	10 ms	Unit	dB μ V



Date: 24.MAR.2008 09:55:58

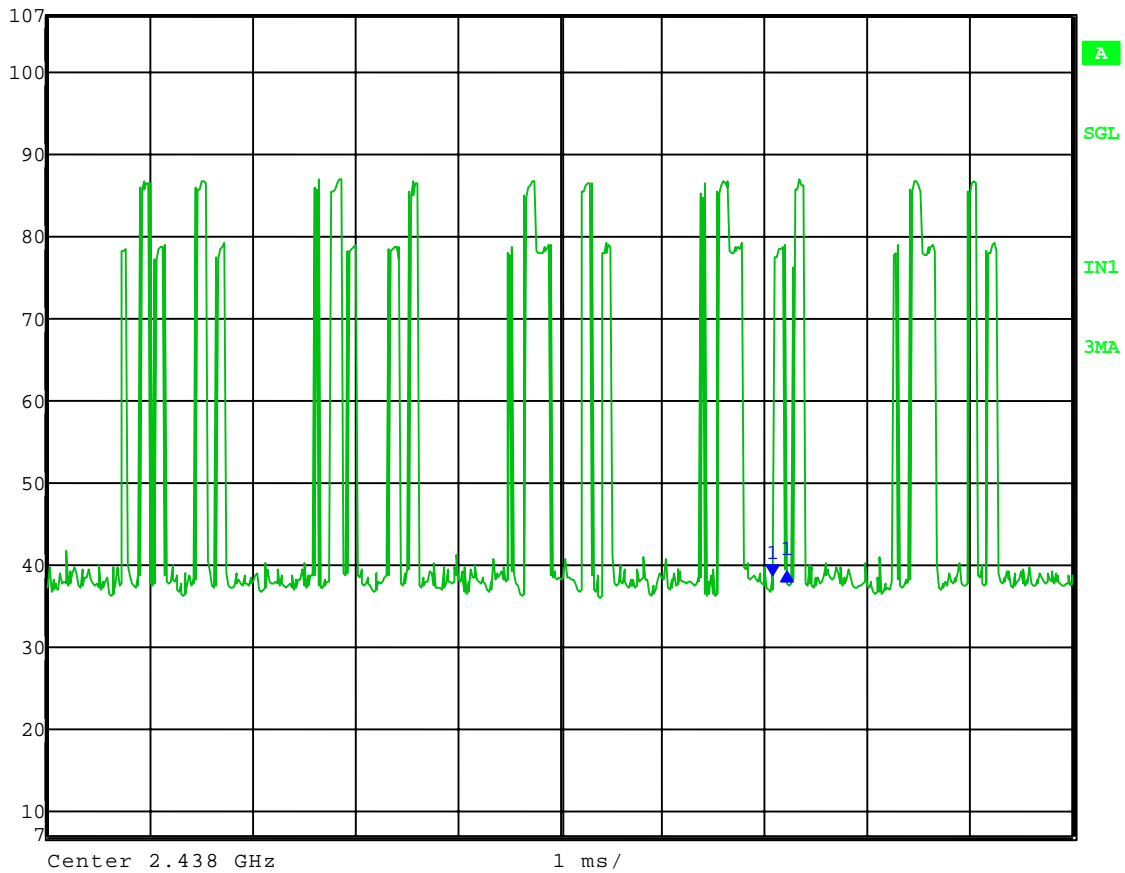


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 03-24-2008
Company: Klipsch Audio Technologies
EUT: Klipsch RoomGroove
Test: Duty Cycle
Operator: Craig B
Comment: 0.140280561 ms pulse

	Max/Ref Lvl	Delta 1 [T3]	RBW	5 MHz	RF Att	10 dB
	107 dB μ V	0.50 dB	VBW	5 MHz		
	87 dB μ V	140.280561 μ s	SWT	10 ms	Unit	dB μ V



Date: 24.MAR.2008 09:56:32



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

CONDUCTED PEAK OUTPUT POWER GRAPHS

PART 15.247

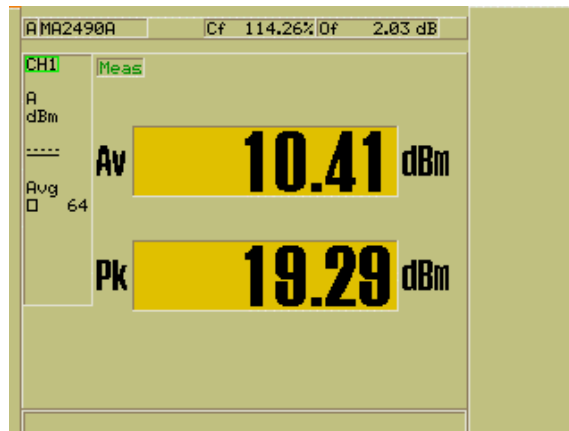


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: Peak Power Output - Conducted
Operator: Craig B
Comment: Low Channel: 2.412 GHz
Antenna Port A

Peak Output Power = 19.29 dBm = 84.9 mW



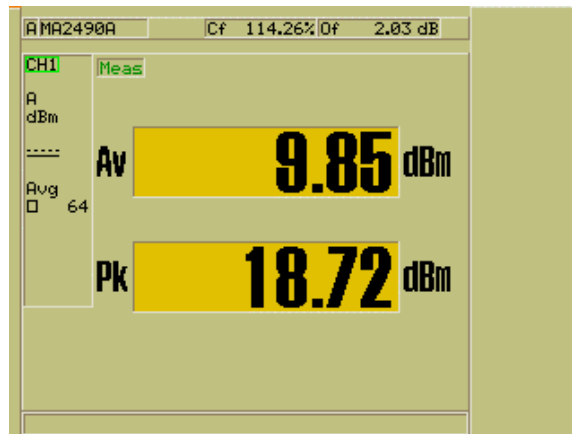


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: Peak Power Output - Conducted
Operator: Craig B
Comment: Mid Channel: 2.438 GHz
Antenna Port A

Peak Output Power = 18.72 dBm = 74.5 mW



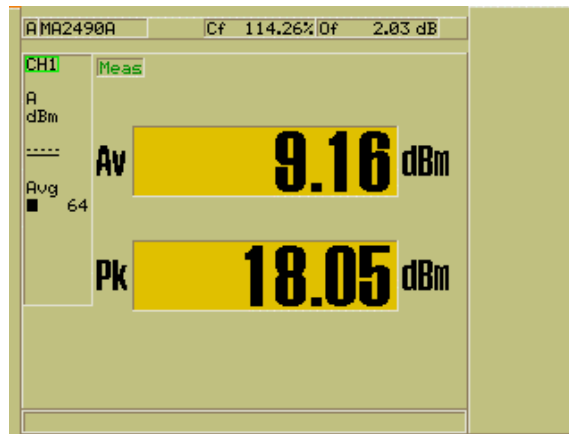


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: Peak Power Output - Conducted
Operator: Craig B
Comment: High Channel: 2.464 GHz
Antenna Port A

Peak Output Power = 18.05 dBm = 63.8 mW



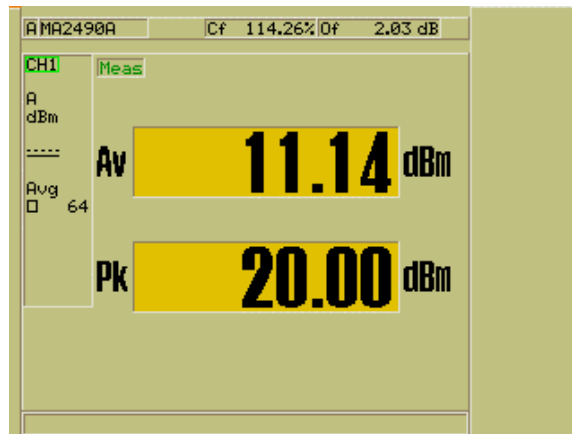


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: Peak Power Output - Conducted
Operator: Craig B
Comment: Low Channel: 2.412 GHz
Antenna Port B

Peak Output Power = 20.00 dBm = 100.0 mW



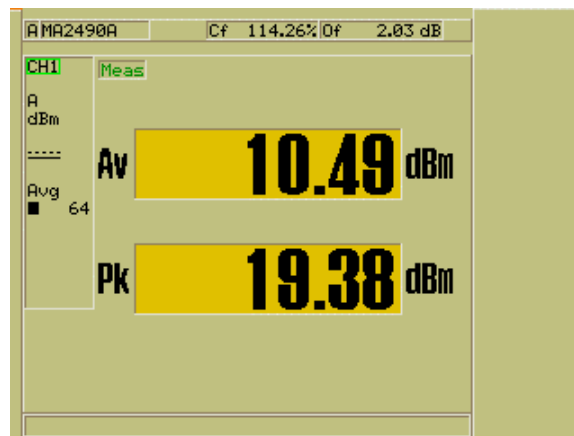


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: Peak Power Output - Conducted
Operator: Craig B
Comment: Mid Channel: 2.438 GHz
Antenna Port B

Peak Output Power = 19.38 dBm = 86.7 mW



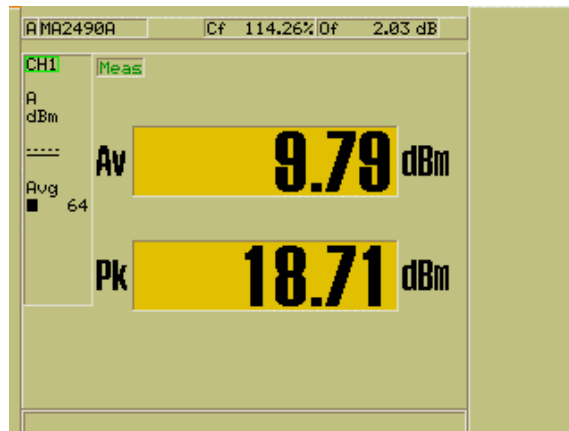


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-03-2008
Company: Klipsch Audio Technologies
EUT: RoomGroove
Test: Peak Power Output - Conducted
Operator: Craig B
Comment: High Channel: 2.464 GHz
Antenna Port B

Peak Output Power = 18.71 dBm = 74.3 mW





1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

PEAK POWER SPECTRAL DENSITY

PART 15.247(e)

ANTENNA PORT A

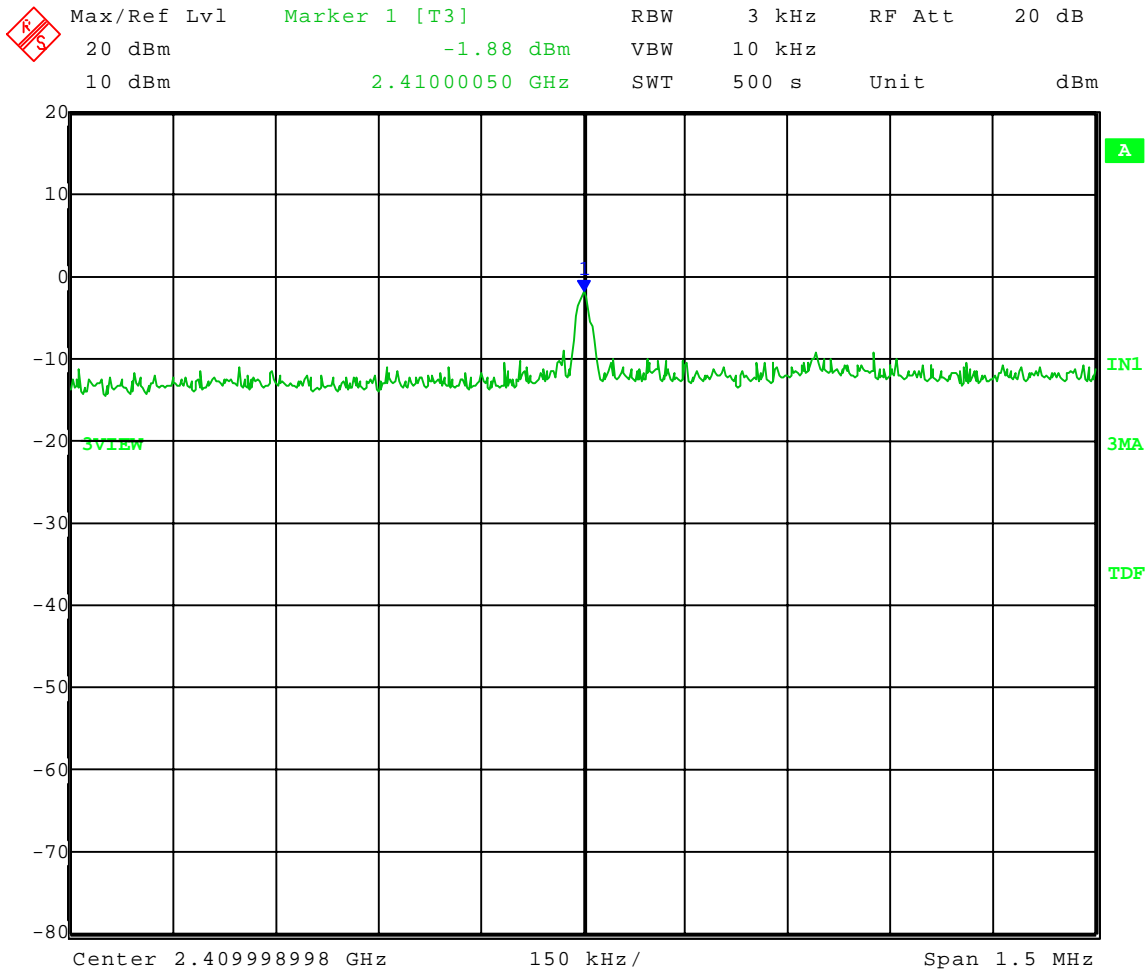


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-24-2008
Company: Klipsch
EUT: RoomGroove
Test: Peak Power Spectral Density - Conducted
Operator: Craig B / Bill S
Comment: Low Channel: Frequency - 2.411 GHz
Antenna A
Limit: 8 dBm

3 kHz Bandwidth = -1.88 dBm



Date: 24.JUN.2008 11:36:07

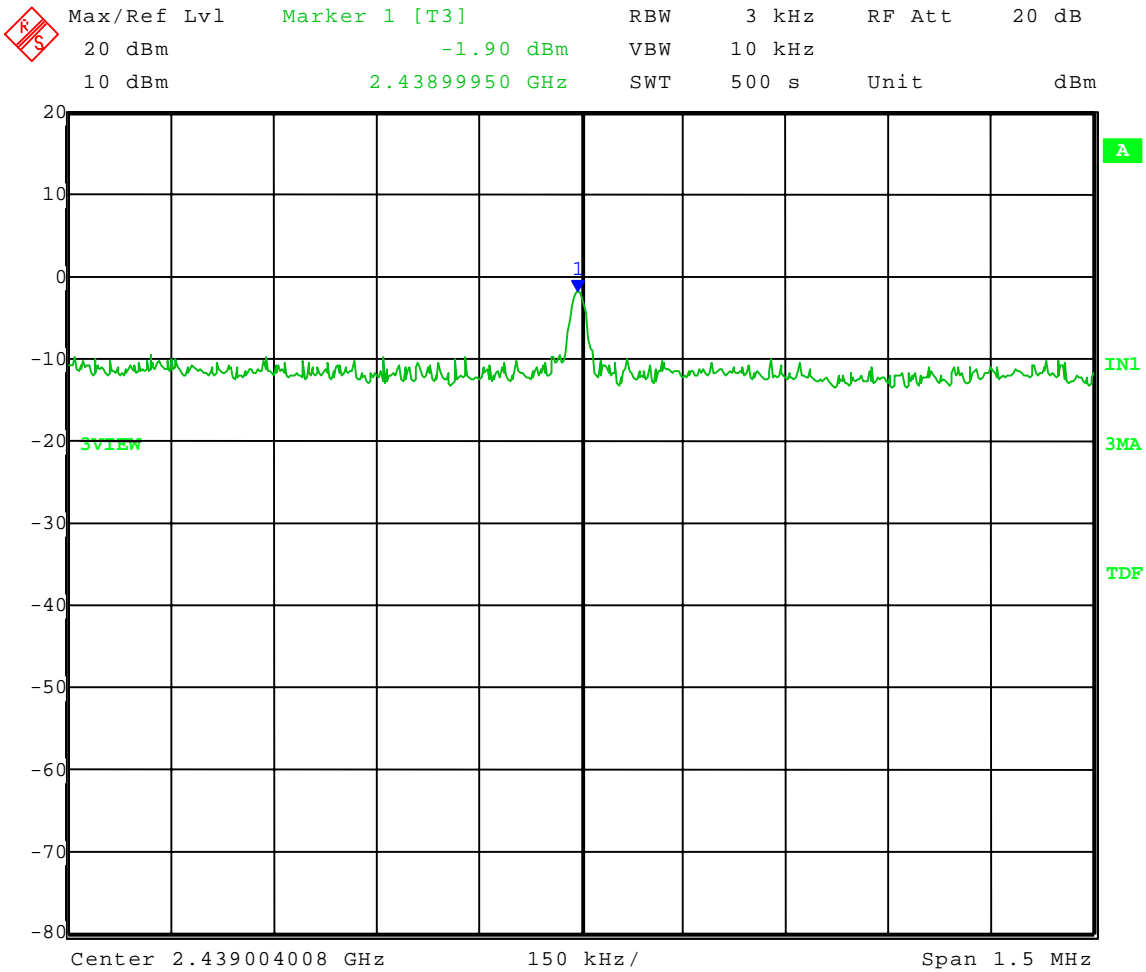


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-24-2008
Company: Klipsch
EUT: RoomGroove
Test: Peak Power Spectral Density - Conducted
Operator: Craig B / Bill S
Comment: Mid Channel: Frequency - 2.438 GHz
Antenna A
Limit: 8 dBm

3 kHz Bandwidth = -1.90 dBm



Date: 24.JUN.2008 11:56:38

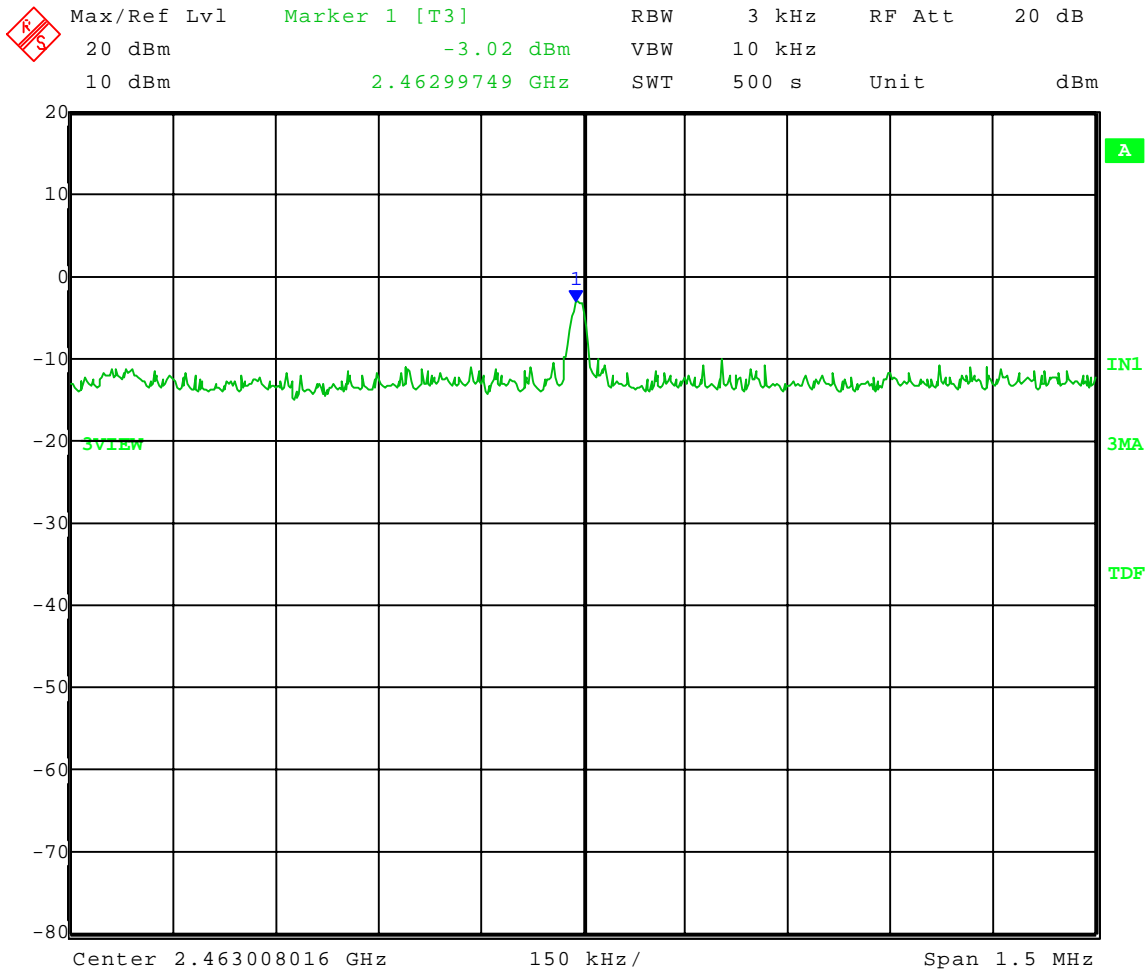


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-24-2008
Company: Klipsch
EUT: RoomGroove
Test: Peak Power Spectral Density - Conducted
Operator: Craig B / Bill S
Comment: High Channel: Frequency - 2.464 GHz
Antenna A
Limit: 8 dBm

3 kHz Bandwidth = -3.02 dBm



Date: 24.JUN.2008 12:08:21



1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

PEAK POWER SPECTRAL DENSITY

PART 15.247(e)

ANTENNA PORT B

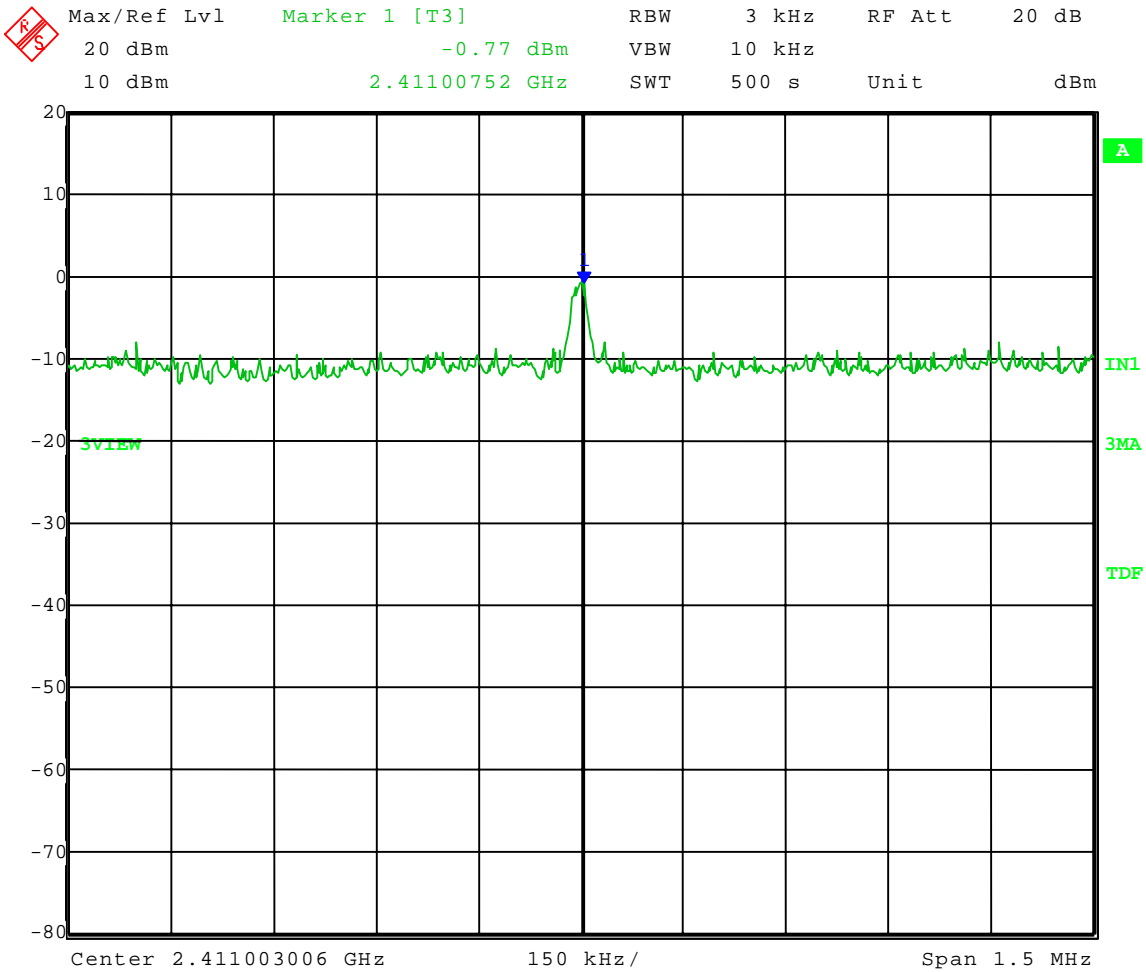


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-24-2008
Company: Klipsch
EUT: RoomGroove
Test: Peak Power Spectral Density - Conducted
Operator: Craig B / Bill S
Comment: Low Channel: Frequency - 2.411 GHz
Antenna B
Limit: 8 dBm

3 kHz Bandwidth = -0.77 dBm



Date: 24.JUN.2008 11:18:46

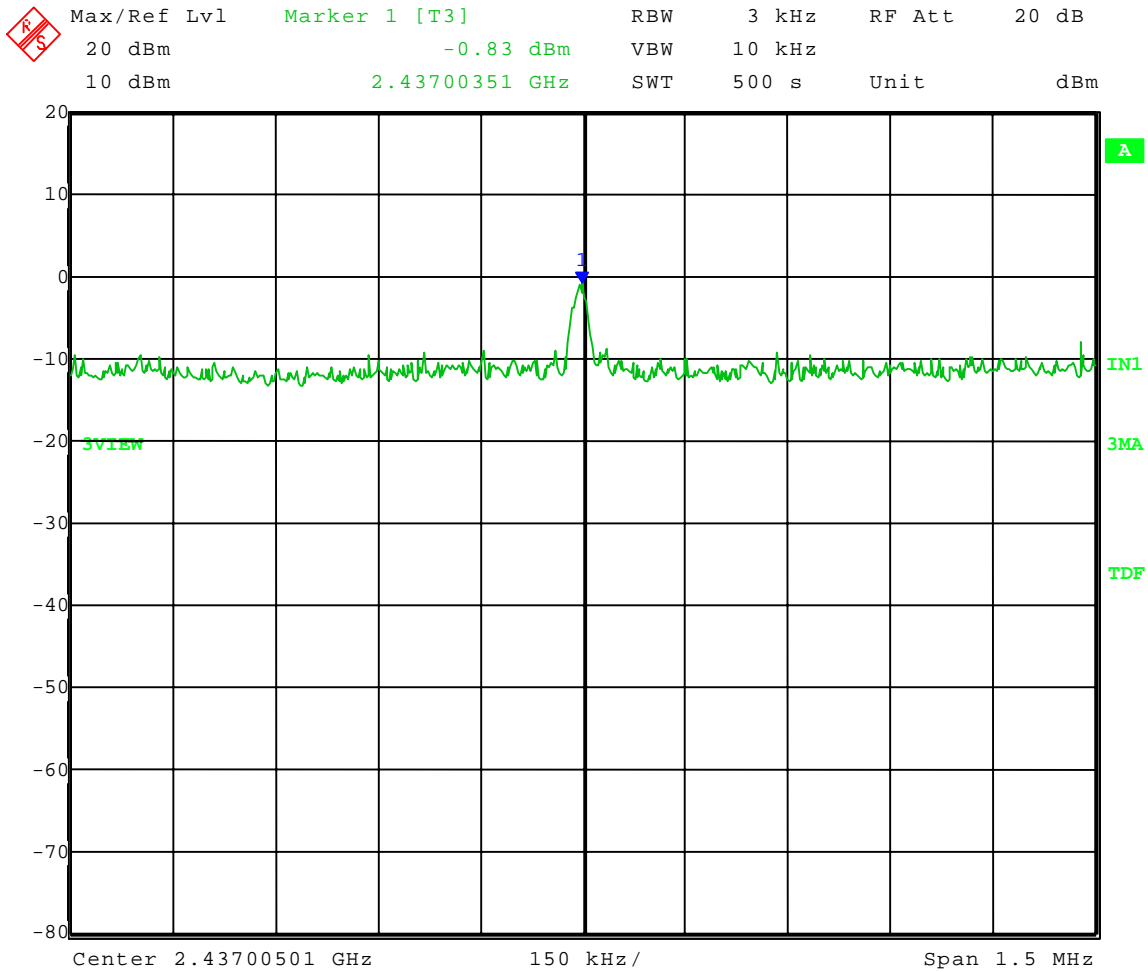


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-24-2008
Company: Klipsch
EUT: RoomGroove
Test: Peak Power Spectral Density - Conducted
Operator: Craig B / Bill S
Comment: Mid Channel: Frequency - 2.438 GHz
Antenna B
Limit: 8 dBm

3 kHz Bandwidth = -0.83 dBm



Date: 24.JUN.2008 11:08:11

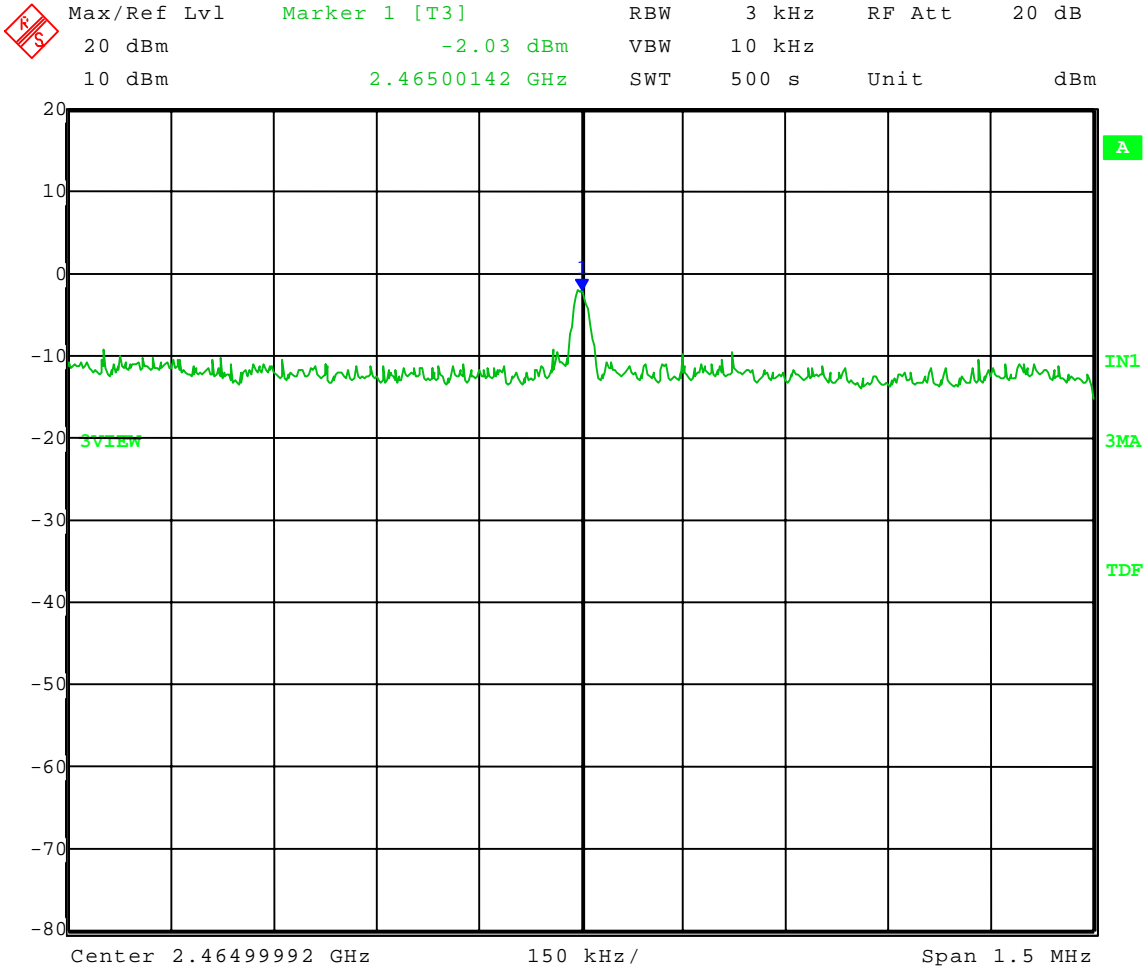


1250 Peterson Dr., Wheeling, IL 60090

Company: Klipsch L.L.C.
Model Tested: RoomGroove
Report Number: 14001

Test Date: 06-24-2008
Company: Klipsch
EUT: RoomGroove
Test: Peak Power Spectral Density - Conducted
Operator: Craig B / Bill S
Comment: High Channel: Frequency - 2.464 GHz
Antenna B
Limit: 8 dBm

3 kHz Bandwidth = -2.03 dBm



Date: 24.JUN.2008 10:56:55