

# Controltek, Inc.

## Mega M.O.L.E.

April 11, 2008

Report No. CNTR0018

Report Prepared By



[www.nwemc.com](http://www.nwemc.com)

1-888-EMI-CERT

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**EMC Test Report**

**Certificate of Test**  
**Issue Date: April 11, 2008**  
**Controltek, Inc.**  
**Model: Mega M.O.L.E.**

Emissions			
Test Description	Specification	Test Method	Pass/Fail
Spurious Radiated Emissions	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass
Output Power	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass
Occupied Bandwidth	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass
Band Edge Compliance	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass
Spurious Conducted Emissions	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass
Power Spectral Density	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass
AC Powerline Conducted Emissions	FCC 15.207:2007	ANSI C63.4:2003	Pass
Radiated Emission	FCC 15.109(g) (CISPR 22:1997):2007	ANSI C63.4:2003	Pass

**Modifications made to the product**  
**See the Modifications section of this report**

**Test Facility**

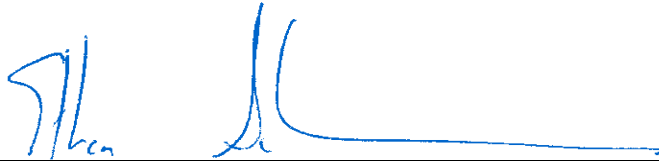
The measurement facility used to collect the data is located at:

Northwest EMC, Inc.  
 22975 NW Evergreen Parkway, Suite 400  
 Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site Filing #3496A).

**Approved By:**



Ethan Schoonover, Sultan Lab Manager



NVLAP Lab Code: 200630-0

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

*Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.*

Revision Number	Description	Date	Page Number
00	None		

**FCC:** Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.



**NVLAP:** Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



NVLAP LAB CODE 200629-0  
 NVLAP LAB CODE 200630-0  
 NVLAP LAB CODE 200676-0  
 NVLAP LAB CODE 200761-0

**Industry Canada:** Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.



**CAB:** Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.



**TÜV Product Service:** Included in TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories, available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA0604C.



**TÜV Rheinland:** Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.



**NEMKO:** Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



**Australia/New Zealand:** The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



**VCCI:** Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (*Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294.*)



**BSMI:** Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.



**GOST:** Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



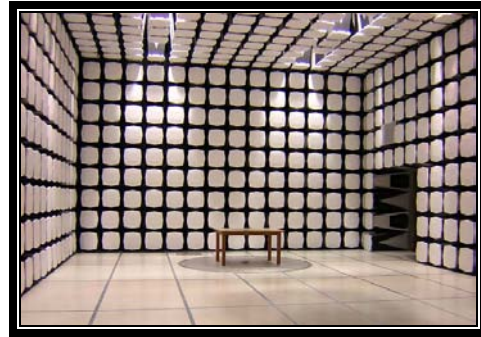
**MIC:** Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157*)



## SCOPE

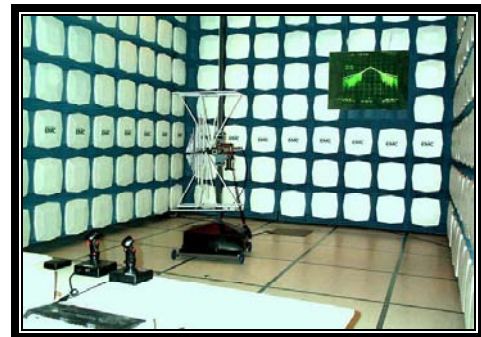
For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/scope.asp>



**California – Orange County Facility  
Labs OC01 – OC13**

41 Tesla Ave. Irvine, CA 92618  
(888) 364-2378 Fax: (503) 844-3826



**Oregon – Evergreen Facility  
Labs EV01 – EV11**

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124  
(503) 844-4066 Fax: (503) 844-3826



**Washington – Sultan Facility  
Labs SU01 – SU07**

14128 339<sup>th</sup> Ave. SE Sultan, WA 98294  
(888) 364-2378

**Party Requesting the Test**

<b>Company Name:</b>	Controltek, Inc.
<b>Address:</b>	3905 NE 112th Avenue
<b>City, State, Zip:</b>	Vancouver, WA 98682
<b>Test Requested By:</b>	Sam Battaglia
<b>Model:</b>	Mega M.O.L.E.
<b>First Date of Test:</b>	March 26, 2008
<b>Last Date of Test:</b>	March 27, 2008
<b>Receipt Date of Samples:</b>	March 26, 2008
<b>Equipment Design Stage:</b>	Preproduction
<b>Equipment Condition:</b>	No Damage

**Information Provided by the Party Requesting the Test****Functional Description of the EUT (Equipment Under Test):**

Digital Transmission System (DTS) radio with +4 dBm output power and operating at 2.4 GHz.  
Device is set up to broadcast - round robin to each channel requesting a beacon.

**Testing Objective:**

Seeking TCB certification under 15.247.

**CONFIGURATION 1 CNTR0018**

<b>EUT</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
EUT	Controltek, Inc.	Mega M.O.L.E	Unit 1

<b>Peripherals in test setup boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
I/O module	Controltek, Inc.	I/O Pod 20	None

<b>Remote Equipment Outside of Test Setup Boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
Host PC	HP	Unknown	Unknown

<b>Cables</b>					
<b>Cable Type</b>	<b>Shield</b>	<b>Length (m)</b>	<b>Ferrite</b>	<b>Connection 1</b>	<b>Connection 2</b>
USB	Yes	1.0	No	EUT	Host PC
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

**CONFIGURATION 2 CNTR0018**

<b>EUT</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
EUT	Controltek, Inc.	Mega M.O.L.E	Unit 1

<b>Peripherals in test setup boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
I/O module	Controltek, Inc.	I/O Pod 20	None

<b>Remote Equipment Outside of Test Setup Boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
Host PC	HP	Unknown	Unknown

<b>Cables</b>					
<b>Cable Type</b>	<b>Shield</b>	<b>Length (m)</b>	<b>Ferrite</b>	<b>Connection 1</b>	<b>Connection 2</b>
USB Power	Yes	1.0	No	EUT	AC Adapter
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					



**CONFIGURATION 3 CNTR0018****EUT**

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Controltek, Inc.	Mega M.O.L.E	Unit 1

**Peripherals in test setup boundary**

Description	Manufacturer	Model/Part Number	Serial Number
I/O module	Controltek, Inc.	I/O Pod 20	None

**Cables**

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB	Yes	1.0	No	EUT	Host PC

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

**CONFIGURATION 4 CNTR0018****EUT**

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Controltek, Inc.	Mega M.O.L.E	Unit 1

**Peripherals in test setup boundary**

Description	Manufacturer	Model/Part Number	Serial Number
I/O module	Controltek, Inc.	I/O Pod 20	None

**Remote Equipment Outside of Test Setup Boundary**

Description	Manufacturer	Model/Part Number	Serial Number
Host PC	HP	Unknown	Unknown

**Cables**

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB	Yes	1.5	No	EUT	Host PC

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

**CONFIGURATION 13 CNTR0019**

<b>Software/Firmware Running during test</b>	
<b>Description</b>	<b>Version</b>
Windows xp	5.1 build 2600xpsp_sp2
CTEK RF Messenger	0.01
Hyper Terminal	None

<b>EUT</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
EUT - Emissions	Controltek, Inc.	Mega M.O.L.E	Unit 1

<b>Peripherals in test setup boundary</b>			
<b>Description</b>	<b>Manufacturer</b>	<b>Model/Part Number</b>	<b>Serial Number</b>
I/O module	Controltek, Inc.	I/O Pod 20	None
Wire Whip Antenna	ECD	E47-6342-11	Lot 9546
Host Computer	Dell	Dimension 1100	H163W81
Monitor	IBM	6558-03N	55-70151
Keyboard	Dell	RT7D20	-07VA
Mouse	Logitech	M-CAA42	LZA14813499
Printer	Epson	LX-300	1YLY179968

<b>Cables</b>					
<b>Cable Type</b>	<b>Shield</b>	<b>Length (m)</b>	<b>Ferrite</b>	<b>Connection 1</b>	<b>Connection 2</b>
USB	Yes	1.0	No	EUT	Host PC
Thermocouples (x20)	No	1.0m	No	I/O Pod 20	Unterminated
Keyboard	PA	1.8m	PA	Host Computer	Keyboard
Mouse	PA	1.8m	PA	Host Computer	Mouse
Video	Yes	1.8m	Yes	Host Computer	Monitor
Parallel	Yes	1.8m	No	Host Computer	Printer
AC Power	No	1.8m	No	Host Computer	AC Mains
AC Power	No	1.8m	No	Monitor	AC Mains
AC Power	PA	1.8m	PA	Printer	AC Mains

**PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.**

<b>Equipment modifications</b>					
<b>Item</b>	<b>Date</b>	<b>Test</b>	<b>Modification</b>	<b>Note</b>	<b>Disposition of EUT</b>
1	3/26/2008	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	3/26/2008	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	3/26/2008	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	3/26/2008	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	3/26/2008	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	3/27/2008	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	3/27/2008	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
8	4/10/2008	Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

#### MODES OF OPERATION

Tx & Rx radio ch.11, Record data streaming to wireless software and USB hyperterminal

#### POWER SETTINGS INVESTIGATED

230V/50Hz

120V/60Hz

#### CONFIGURATIONS INVESTIGATED

CNTR0019 - 13) Basic Configuration with PC Host

#### FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	1000 MHz
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#### CLOCKS AND OSCILLATORS

None Provided

#### SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

#### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Biconilog	EMCO	3142	AXB	1/15/2008	24 mo
EV11 Cables		10m Test Distance Cables	EVL	5/1/2007	13 mo
Pre-Amplifier	Miteq	AM-1551	AOY	5/1/2007	13 mo
Spectrum Analyzer	Agilent	E4443A	AAS	12/7/2007	13 mo

#### MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

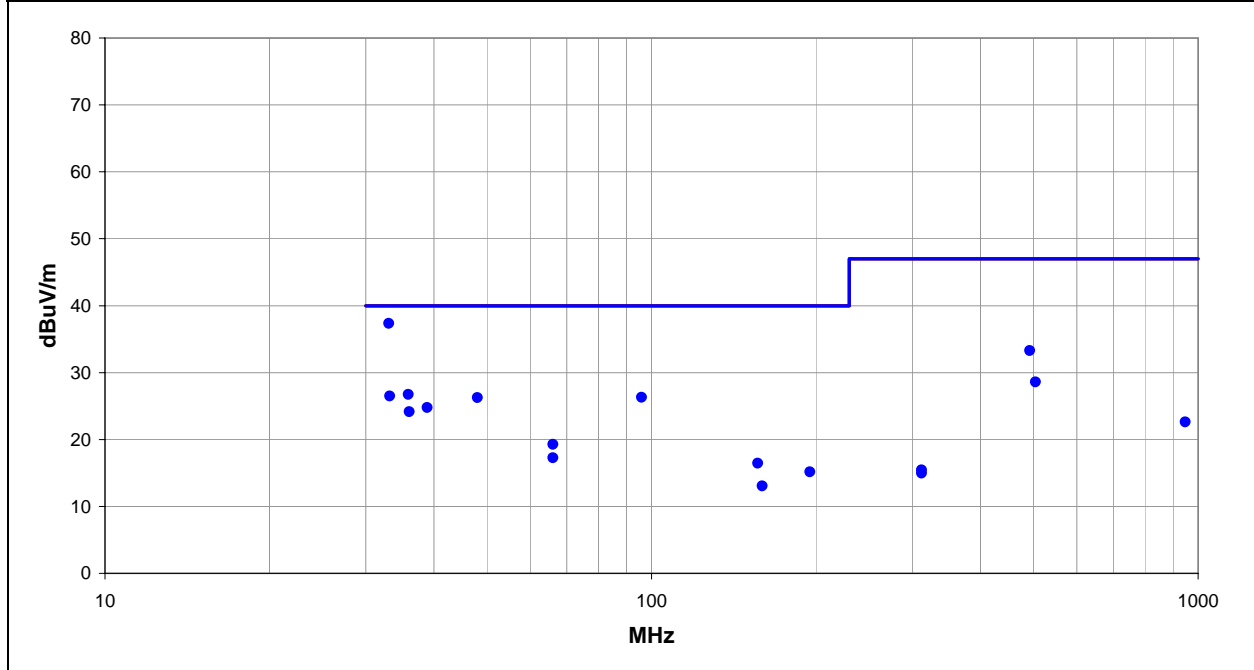
# EMC

# RADIATED EMISSIONS

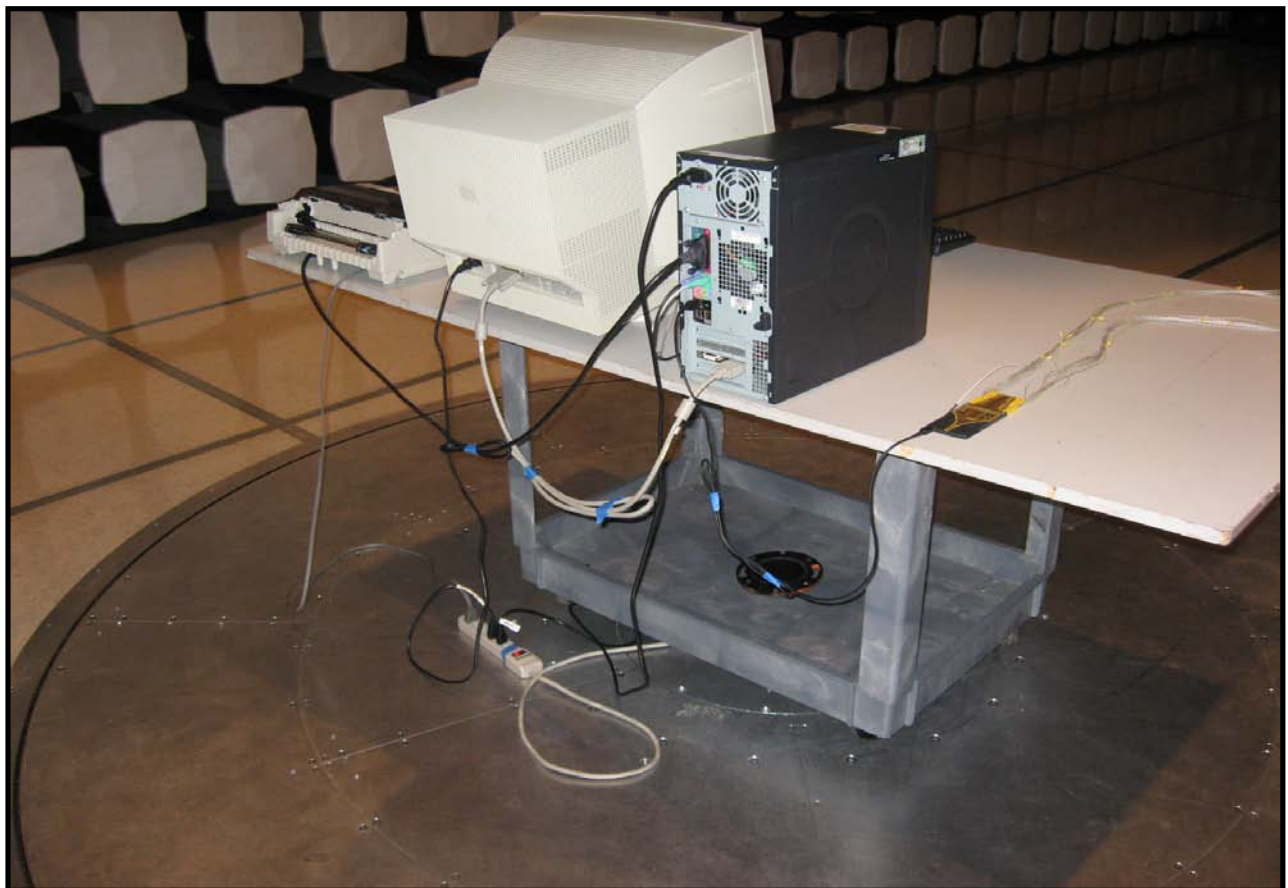
<b>Work Order:</b>	CNTR0019	<b>Date:</b>	04/10/08	<i>David Divergigelis</i> <b>Tested by:</b> David Divergigelis
<b>Project:</b>	None	<b>Temperature:</b>	22 °C	
<b>Job Site:</b>	EV11	<b>Humidity:</b>	36.5	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	1018.0mb	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	13 - Basic Configuration with PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	None			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Tx & Rx radio ch.11, Record data streaming to wireless software and USB hyperterminal			
<b>Deviations:</b>	No deviations.			
<b>Comments:</b>	None			

<b>Test Specifications</b>	<b>Class A</b>	<b>Test Method</b>
EN 55022: 2006		CISPR 22:2005 (Amended by A1:2005 and A2:2006)
FCC 15.109(g) (CISPR 22:1997):2007		ANSI C63.4:2003

<b>Run #</b>	8	<b>Test Distance (m)</b>	10	<b>Antenna Height(s)</b>	1-4m	<b>Results</b>	Pass
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Freq	Amplitude	Factor	Antenna Height	Azimuth (degrees)	Test Distance	External Attenuation	Polarity/ Transducer Type	Detector	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec. (dB)
33.054	54.4	-17.0	1.0	17.0	10.0	0.0	Vert	QP	0.0	37.4	40.0	-2.6
35.887	45.1	-18.4	1.0	308.0	10.0	0.0	Vert	QP	0.0	26.7	40.0	-13.3
33.197	43.6	-17.1	2.1	0.0	10.0	0.0	Horz	QP	0.0	26.5	40.0	-13.5
492.058	47.9	-14.6	1.7	317.0	10.0	0.0	Horz	QP	0.0	33.3	47.0	-13.7
95.962	53.3	-27.0	4.0	104.0	10.0	0.0	Horz	QP	0.0	26.3	40.0	-13.7
48.000	49.6	-23.3	1.2	233.0	10.0	0.0	Vert	QP	0.0	26.3	40.0	-13.7
38.882	44.7	-19.9	1.0	51.0	10.0	0.0	Vert	QP	0.0	24.8	40.0	-15.2
36.040	42.6	-18.4	3.9	328.0	10.0	0.0	Horz	QP	0.0	24.2	40.0	-15.8
504.017	43.0	-14.4	1.6	318.0	10.0	0.0	Horz	QP	0.0	28.6	47.0	-18.4
66.000	46.4	-27.1	1.5	318.0	10.0	0.0	Vert	QP	0.0	19.3	40.0	-20.7
66.000	44.4	-27.1	3.3	219.0	10.0	0.0	Horz	QP	0.0	17.3	40.0	-22.7
156.358	41.5	-25.0	1.0	207.0	10.0	0.0	Vert	QP	0.0	16.5	40.0	-23.5
947.693	30.8	-8.2	1.0	82.0	10.0	0.0	Horz	QP	0.0	22.6	47.0	-24.4
194.846	38.6	-23.5	3.0	179.0	10.0	0.0	Horz	QP	0.0	15.1	40.0	-24.9
159.437	37.8	-24.8	1.0	80.0	10.0	0.0	Vert	QP	0.0	13.0	40.0	-27.0
312.000	34.4	-18.9	1.1	226.0	10.0	0.0	Vert	QP	0.0	15.5	47.0	-31.5
312.000	33.9	-18.9	3.2	186.0	10.0	0.0	Horz	QP	0.0	15.0	47.0	-32.0



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

**MODES OF OPERATION**

Transmitting low channel  
 Transmitting mid channel  
 Transmitting high channel

**POWER SETTINGS INVESTIGATED**

3.7 VDC battery via USB power

**FREQUENCY RANGE INVESTIGATED**

Start Frequency 30 MHz Stop Frequency 25 GHz

**SAMPLE CALCULATIONS**

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

**TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	1/16/2008	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	16
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Bilog Cables	EVA	10/23/2007	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	1/3/2008	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	24
EV01 Cables		Double Ridge Horn Cables	EVB	1/3/2008	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	6/22/2007	13
Antenna, Horn	ETS	3160-07	AHU	NCR	0
EV01 Cables		Standard Gain Horns Cables	EVF	10/23/2007	13
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	6/22/2007	13
Antenna, Horn	ETS	3160-08	AHV	NCR	0
EV01 Cables		Standard Gain Horns Cables	EVF	10/23/2007	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	7/25/2007	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
EV01 Cables		18-26GHz Standard Gain Horn Cable	EVD	7/25/2007	13

**MEASUREMENT BANDWIDTHS**

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

**MEASUREMENT UNCERTAINTY**

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

**TEST DESCRIPTION**

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.



EUT: Mega M.O.L.E.	Work Order: CNTR0018
Serial Number: Unit 1	Date: 03/27/08
Customer: Controltek, Inc.	Temperature: 22°C
Attendees: None	Humidity: 25%
Project: None	Barometric Pres.: 30.37
Tested by: Rod Peloquin	Power: 3.7 VDC and USB
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 3

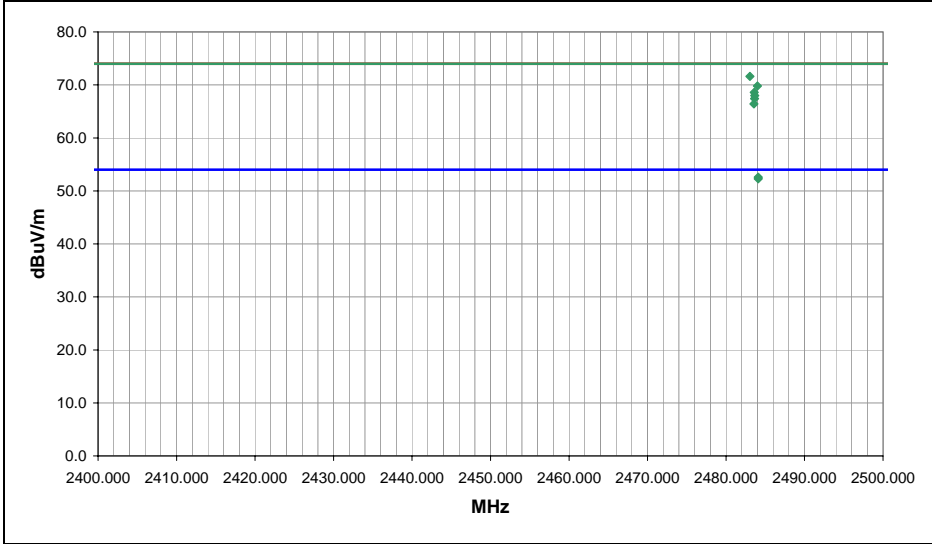
**COMMENTS**  
Power via USB from PC host remote

**EUT OPERATING MODES**  
Transmitting high channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	1
Configuration #	4
Results	Pass

*Rod Peloquin*  
Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.517	31.8	2.2	305.0	1.0	3.0	20.0	H-Horn	AV	0.0	54.0	54.0	0.0	EUT on side, Antenna horizontal
2483.222	31.7	2.2	287.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.9	54.0	-0.1	EUT on end, Antenna horizontal
2483.503	30.8	2.2	101.0	1.0	3.0	20.0	V-Horn	AV	0.0	53.0	54.0	-1.0	EUT horizontal, Antenna vertical
2483.507	30.8	2.2	10.0	1.0	3.0	20.0	V-Horn	AV	0.0	53.0	54.0	-1.0	EUT on end, Antenna horizontal
2480.190	64.4	2.2	148.0	1.0	3.0	20.0	H-Horn	AV	0.0	86.6			Fundamental, EUT horizontal, Antenna vertical
2484.100			148.0	1.0	3.0	20.0	H-Horn	AV	0.0	52.6	54.0	-1.4	EUT horizontal, Antenna vertical. Marker Delta calculated from 86.6 - 34.0 = 52.5
2480.160	64.2	2.2	112.0	1.1	3.0	20.0	V-Horn	AV	0.0	86.4			Fundamental, EUT on side, Antenna horizontal
2484.100			112.0	1.1	3.0	20.0	V-Horn	AV	0.0	52.3	54.0	-1.7	EUT on side, Antenna horizontal. Marker Delta calculated from 86.4 - 34.1 = 52.4
2483.043	49.4	2.2	190.0	1.0	3.0	20.0	H-Horn	PK	0.0	71.6	74.0	-2.4	EUT horizontal, Antenna vertical
2484.000	47.6	2.2	111.0	1.1	3.0	20.0	V-Horn	PK	0.0	69.8	74.0	-4.2	EUT on side, Antenna horizontal
2483.597	46.4	2.2	305.0	1.0	3.0	20.0	H-Horn	PK	0.0	68.6	74.0	-5.4	EUT on side, Antenna horizontal
2483.645	45.8	2.2	287.0	1.1	3.0	20.0	H-Horn	PK	0.0	68.0	74.0	-6.0	EUT on end, Antenna horizontal
2483.623	45.2	2.2	10.0	1.0	3.0	20.0	V-Horn	PK	0.0	67.4	74.0	-6.6	EUT on end, Antenna horizontal
2483.547	44.2	2.2	100.0	1.0	3.0	20.0	V-Horn	PK	0.0	66.4	74.0	-7.6	EUT horizontal, Antenna vertical



EUT: Mega M.O.L.E.	Work Order: CNTR0018
Serial Number: Unit 1	Date: 03/27/08
Customer: Controltek, Inc.	Temperature: 22°C
Attendees: None	Humidity: 25%
Project: None	Barometric Pres.: 30.37
Tested by: Rod Peloquin	Power: 3.7 VDC and USB
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m)	1 - 4
Test Distance (m)	3

**COMMENTS**  
Power via USB from PC host remote: EUT horizontal, EUT Antenna vertical, Measurement Antenna Horizontal

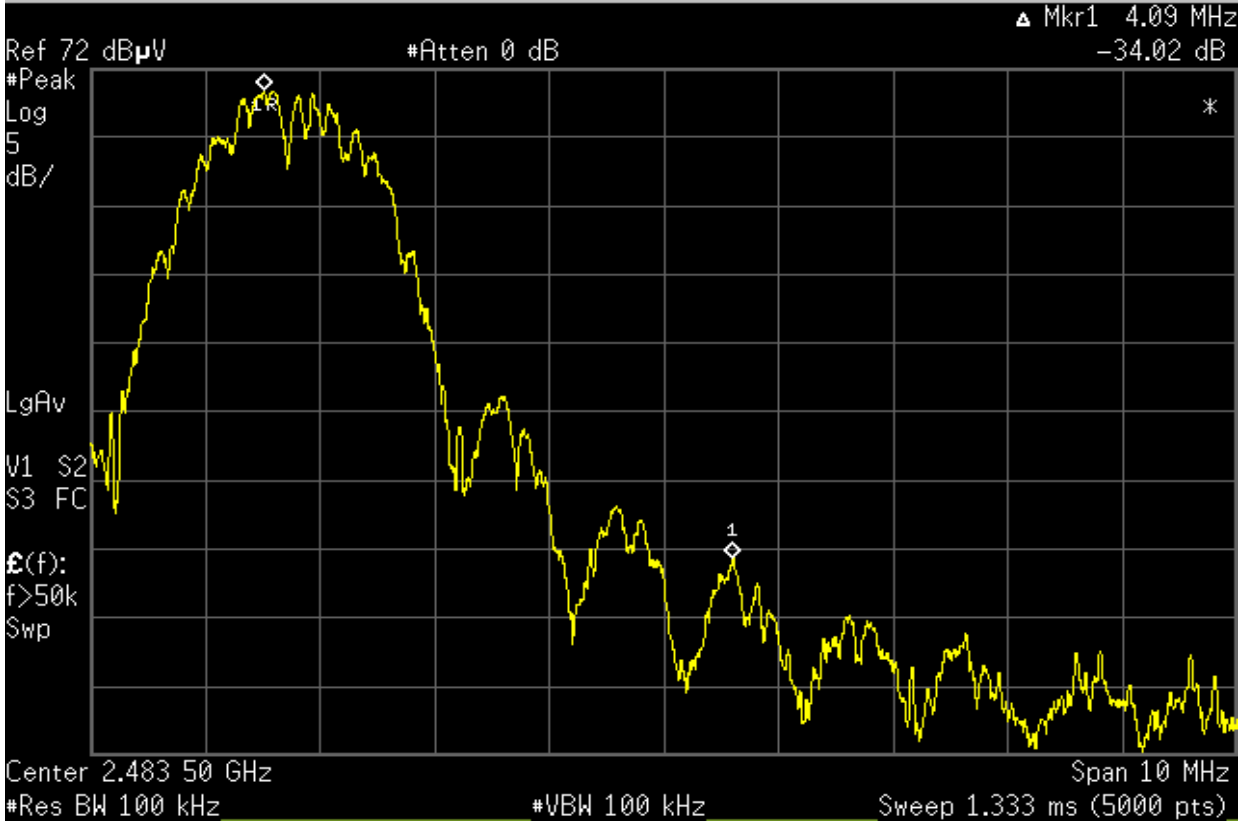
**EUT OPERATING MODES**  
Transmitting high channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	1
Configuration #	4
Results	NA

*Rod Peloquin*  
Signature

Agilent 11:56:46 Mar 27, 2008 R T



EUT:	Mega M.O.L.E.	Work Order:	CNTR0018
Serial Number:	Unit 1	Date:	03/27/08
Customer:	Controltek, Inc.	Temperature:	22°C
Attendees:	None	Humidity:	25%
Project:	None	Barometric Pres.:	30.37
Tested by:	Rod Peloquin	Power:	3.7 VDC and USB
		Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

**COMMENTS**  
Power via USB from PC host remote, EUT on side, EUT Antenna Horizontal, Measurement Antenna Vertical

**EUT OPERATING MODES**  
Transmitting high channel

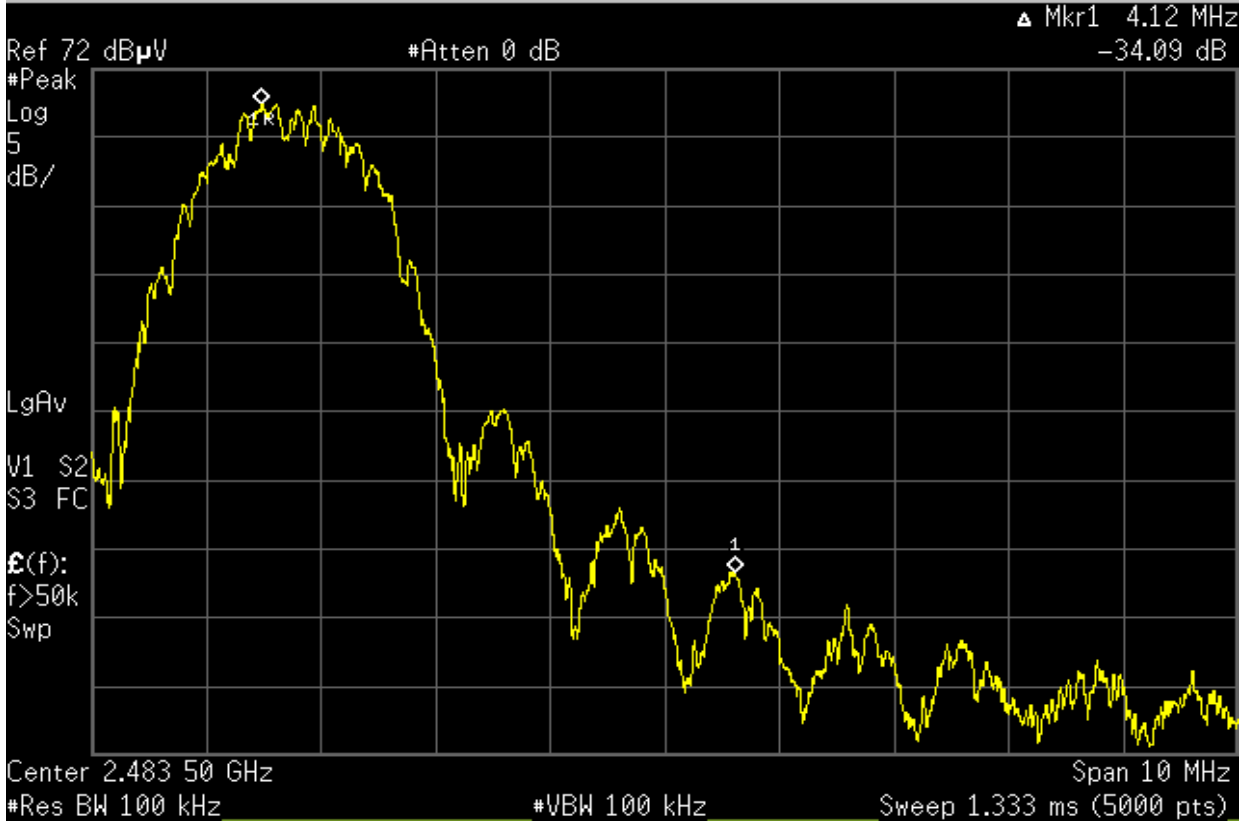
**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	1
Configuration #	4
Results	NA

*Rod Peloquin*  
Signature

Agilent 10:59:21 Mar 27, 2008

R T



# RADIATED SPURIOUS EMISSIONS

## EMC

EUT: Mega M.O.L.E.		Work Order: CNTR0018
Serial Number: Unit 1		Date: 03/27/08
Customer: Controltek, Inc.		Temperature: 22°C
Attendees: None		Humidity: 25%
Project: None		Barometric Pres.: 30.37
Tested by: Rod Peloquin	Power: 3.7 VDC and USB	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS
Antenna Height(s) (m)   1 - 4   Test Distance (m)   3

**COMMENTS**  
Power via USB from PC host remote

**EUT OPERATING MODES**

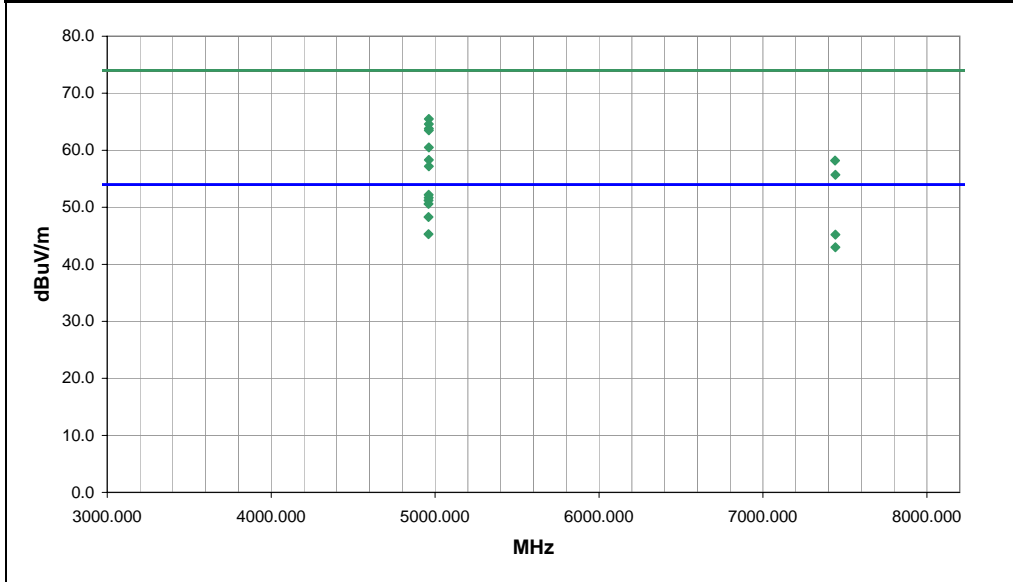
Transmitting high channel

**DEVIATIONS FROM TEST STANDARD**

No deviations.

Run #	2
Configuration #	4
Results	Pass

*Rod Peloquin*  
Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4960.273	41.2	11.0	103.0	1.1	3.0	0.0	V-Horn	AV	0.0	52.2	54.0	-1.8	EUT on side, Antenna horizontal
4960.265	40.7	11.0	156.0	1.1	3.0	0.0	H-Horn	AV	0.0	51.7	54.0	-2.3	EUT on side, Antenna horizontal
4959.380	40.2	11.0	344.0	1.1	3.0	0.0	V-Horn	AV	0.0	51.2	54.0	-2.8	EUT horizontal, Antenna vertical
4960.238	39.6	11.0	144.0	1.0	3.0	0.0	H-Horn	AV	0.0	50.6	54.0	-3.4	EUT on end, Antenna horizontal
4959.360	37.3	11.0	17.0	1.0	3.0	0.0	V-Horn	AV	0.0	48.3	54.0	-5.7	EUT on end, Antenna horizontal
4961.453	54.5	11.0	103.0	1.1	3.0	0.0	V-Horn	PK	0.0	65.5	74.0	-8.5	EUT on side, Antenna horizontal
4959.485	34.3	11.0	65.0	1.9	3.0	0.0	H-Horn	AV	0.0	45.3	54.0	-8.7	EUT horizontal, Antenna vertical
7442.010	27.5	17.7	121.0	1.3	3.0	0.0	H-Horn	AV	0.0	45.2	54.0	-8.8	EUT on side, Antenna horizontal
4961.378	53.6	11.0	156.0	1.1	3.0	0.0	H-Horn	PK	0.0	64.6	74.0	-9.4	EUT on side, Antenna horizontal
4961.333	52.8	11.0	344.0	1.1	3.0	0.0	V-Horn	PK	0.0	63.8	74.0	-10.2	EUT horizontal, Antenna vertical
4961.471	52.5	11.0	144.0	1.0	3.0	0.0	H-Horn	PK	0.0	63.5	74.0	-10.5	EUT on end, Antenna horizontal
7441.983	25.3	17.7	71.0	1.2	3.0	0.0	V-Horn	AV	0.0	43.0	54.0	-11.0	EUT on side, Antenna horizontal
4961.360	49.5	11.0	17.0	1.0	3.0	0.0	V-Horn	PK	0.0	60.5	74.0	-13.5	EUT on end, Antenna horizontal
4961.410	47.3	11.0	99.0	1.0	3.0	0.0	V-Horn	PK	0.0	58.3	74.0	-15.7	100 kHz, 30 kHz
7439.420	40.5	17.7	121.0	1.3	3.0	0.0	H-Horn	PK	0.0	58.2	74.0	-15.8	EUT on side, Antenna horizontal
4961.518	46.2	11.0	64.0	1.9	3.0	0.0	H-Horn	PK	0.0	57.2	74.0	-16.8	EUT horizontal, Antenna vertical
7441.998	38.0	17.7	71.0	1.2	3.0	0.0	V-Horn	PK	0.0	55.7	74.0	-18.3	EUT on side, Antenna horizontal

EUT: Mega M.O.L.E.	Work Order: CNTR0018
Serial Number: Unit 1	Date: 03/27/08
Customer: Controltek, Inc.	Temperature: 22°C
Attendees: None	Humidity: 25%
Project: None	Barometric Pres.: 30.37
Tested by: Rod Peloquin	Power: 3.7 VDC and USB
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	<b>Test Method</b>
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 3

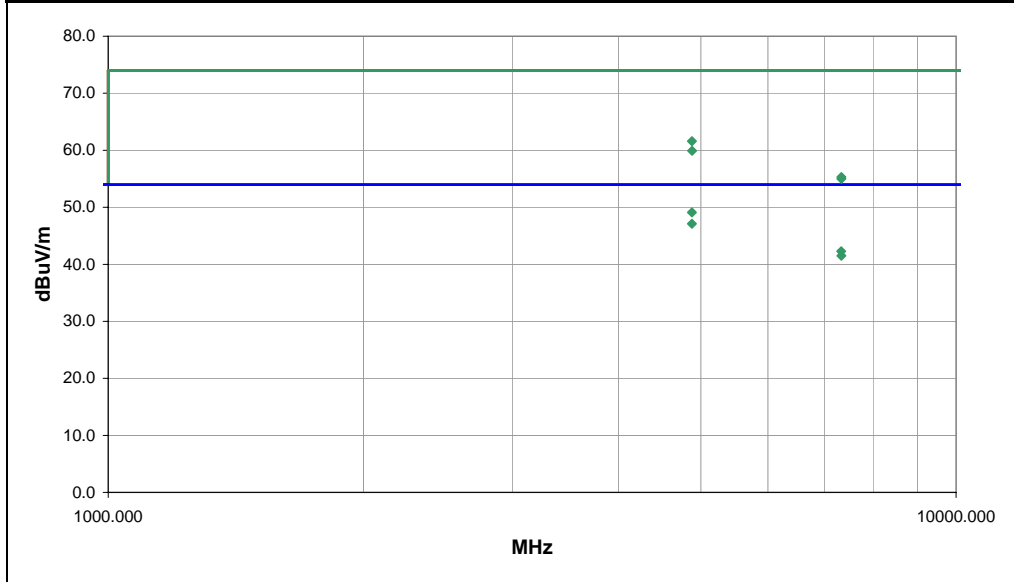
**COMMENTS**  
Power via USB from PC host remote

**EUT OPERATING MODES**  
Transmitting mid channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	3
Configuration #	4
Results	Pass

*Rod Peloquin*  
Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4879.480	38.6	10.5	95.0	1.0	3.0	0.0	V-Horn	AV	0.0	49.1	54.0	-4.9	EUT on side, Antenna horizontal
4879.445	36.6	10.5	165.0	1.1	3.0	0.0	H-Horn	AV	0.0	47.1	54.0	-6.9	EUT on side, Antenna horizontal
7319.297	25.2	17.1	318.0	1.0	3.0	0.0	H-Horn	AV	0.0	42.3	54.0	-11.7	EUT on side, Antenna horizontal
4879.467	51.1	10.5	95.0	1.0	3.0	0.0	V-Horn	PK	0.0	61.6	74.0	-12.4	EUT on side, Antenna horizontal
7322.028	24.4	17.1	343.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.5	54.0	-12.5	EUT on side, Antenna horizontal
4881.425	49.4	10.5	165.0	1.1	3.0	0.0	H-Horn	PK	0.0	59.9	74.0	-14.1	EUT on side, Antenna horizontal
7321.850	38.2	17.1	318.0	1.0	3.0	0.0	H-Horn	PK	0.0	55.3	74.0	-18.7	EUT on side, Antenna horizontal
7322.008	37.9	17.1	343.0	1.1	3.0	0.0	V-Horn	PK	0.0	55.0	74.0	-19.0	EUT on side, Antenna horizontal

# RADIATED SPURIOUS EMISSIONS

**EMC**

EUT: Mega M.O.L.E.		Work Order: CNTR0018
Serial Number: Unit 1		Date: 03/27/08
Customer: Controltek, Inc.		Temperature: 22°C
Attendees: None		Humidity: 25%
Project: None		Barometric Pres.: 30.37
Tested by: Rod Peloquin	Power: 3.7 VDC and USB	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

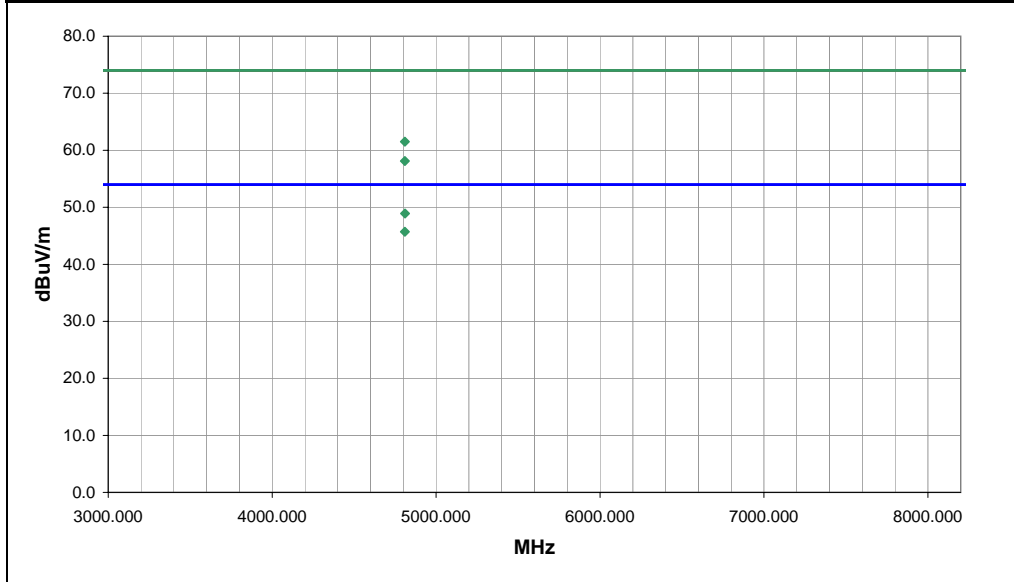
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

**COMMENTS**  
Power via USB from PC host remote

**EUT OPERATING MODES**  
Transmitting low channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	4	 Signature
Configuration #	4	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4810.231	38.8	10.1	125.0	1.8	3.0	0.0	H-Horn	AV	0.0	48.9	54.0	-5.1	EUT on side, Antenna horizontal
4809.493	35.6	10.1	337.0	1.1	3.0	0.0	V-Horn	AV	0.0	45.7	54.0	-8.3	EUT on side, Antenna horizontal
4809.525	51.4	10.1	125.0	1.8	3.0	0.0	H-Horn	PK	0.0	61.5	74.0	-12.5	EUT on side, Antenna horizontal
4809.280	48.0	10.1	337.0	1.1	3.0	0.0	V-Horn	PK	0.0	58.1	74.0	-15.9	EUT on side, Antenna horizontal

EUT: <b>Mega M.O.L.E.</b>	Work Order: <b>CNTR0018</b>
Serial Number: <b>Unit 1</b>	Date: <b>03/27/08</b>
Customer: <b>Controltek, Inc.</b>	Temperature: <b>22°C</b>
Attendees: <b>None</b>	Humidity: <b>25%</b>
Project: <b>None</b>	Barometric Pres.: <b>30.37</b>
Tested by: <b>Rod Peloquin</b>	Power: <b>3.7 VDC and USB</b>
	Job Site: <b>EV01</b>

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003, KDB No. 558074

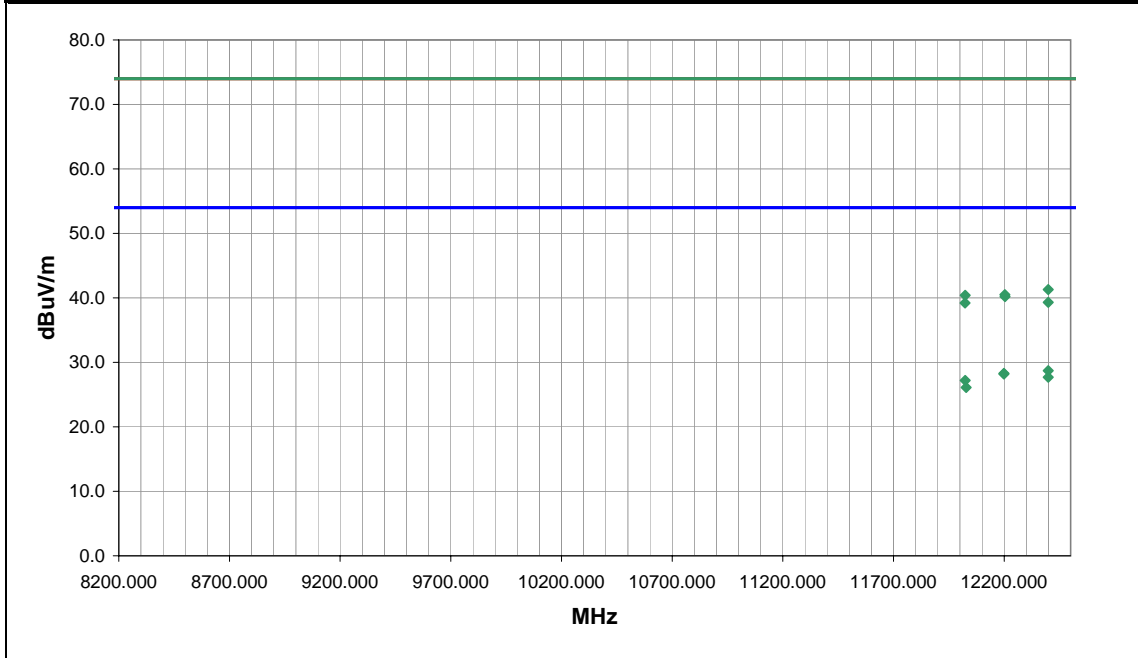
<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   3

**COMMENTS**  
Power via USB from PC host remote

**EUT OPERATING MODES**  
Transmitting, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

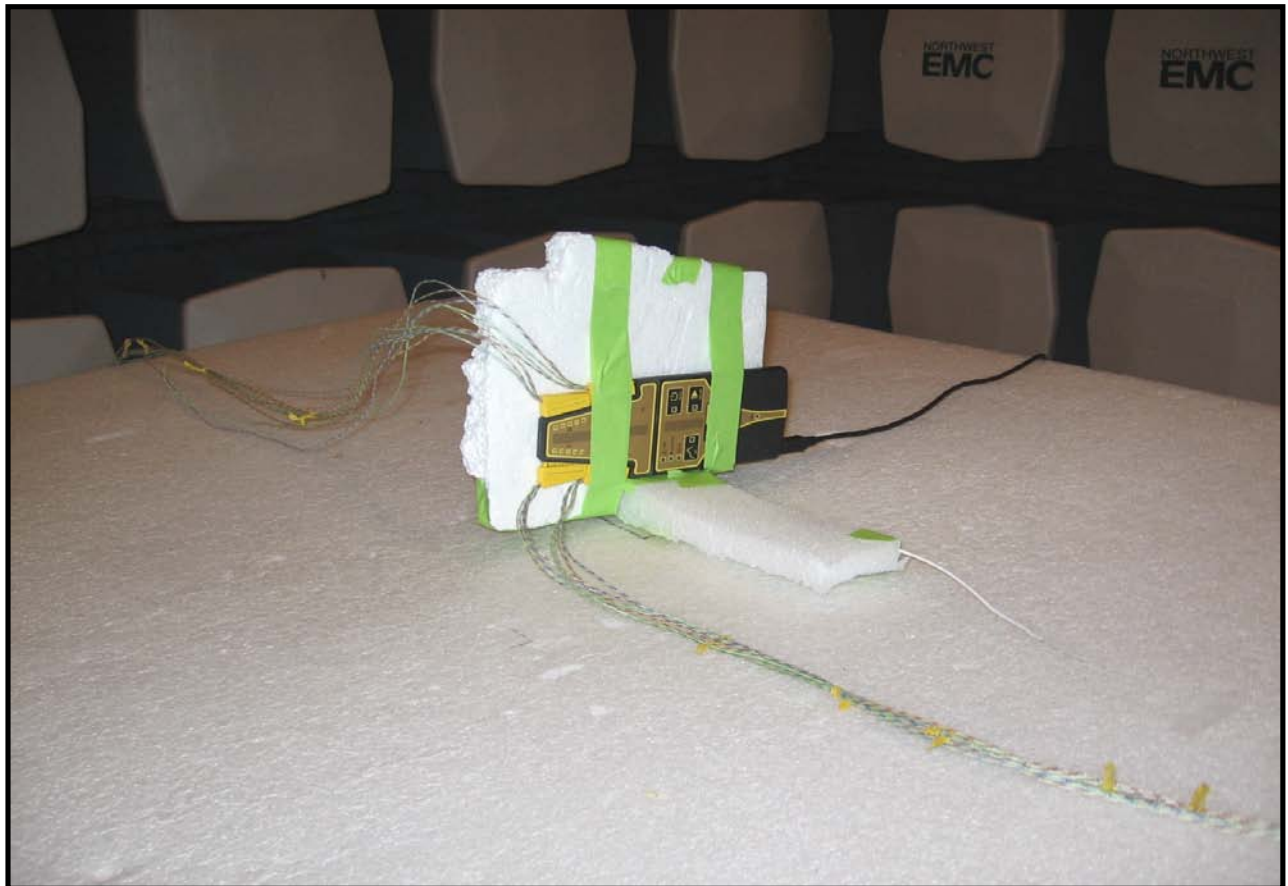
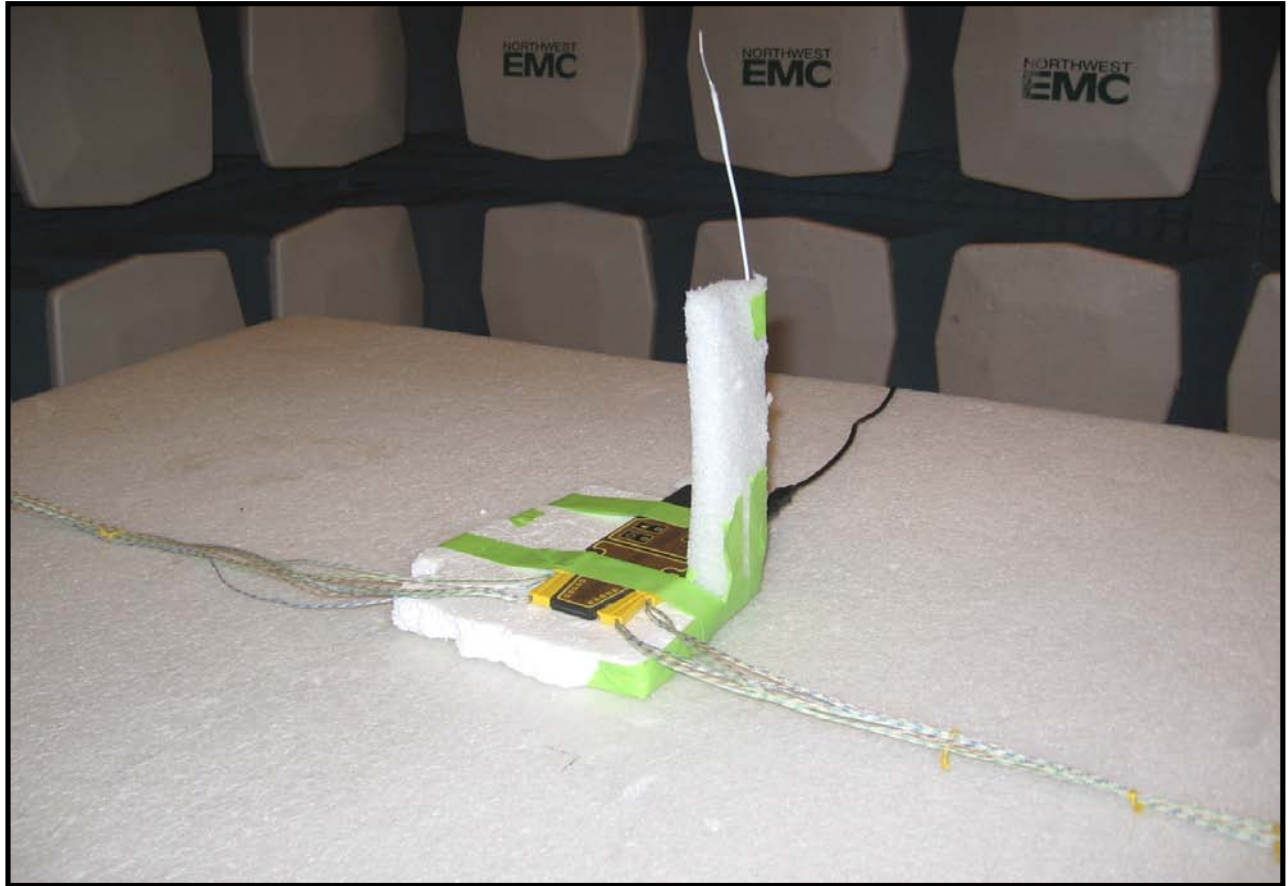
Run #	5	 Signature
Configuration #	4	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
12398.580	31.9	-3.2	117.0	1.1	3.0	0.0	H-Horn	AV	0.0	28.7	54.0	-25.3	High channel
12198.630	33.0	-4.7	90.0	1.4	3.0	0.0	V-Horn	AV	0.0	28.3	54.0	-25.7	Mid channel
12198.620	32.9	-4.7	270.0	1.1	3.0	0.0	H-Horn	AV	0.0	28.2	54.0	-25.8	Mid channel
12398.590	30.9	-3.2	102.0	1.2	3.0	0.0	V-Horn	AV	0.0	27.7	54.0	-26.3	High channel
12023.520	33.3	-6.1	118.0	1.1	3.0	0.0	H-Horn	AV	0.0	27.2	54.0	-26.8	Low channel
12028.330	32.2	-6.1	259.0	1.1	3.0	0.0	V-Horn	AV	0.0	26.1	54.0	-27.9	Low channel
12398.460	44.5	-3.2	117.0	1.1	3.0	0.0	H-Horn	PK	0.0	41.3	74.0	-32.7	High channel
12203.060	45.2	-4.7	270.0	1.1	3.0	0.0	H-Horn	PK	0.0	40.5	74.0	-33.5	Mid channel
12023.530	46.4	-6.0	118.0	1.1	3.0	0.0	H-Horn	PK	0.0	40.4	74.0	-33.6	Low channel
12203.760	44.9	-4.7	90.0	1.4	3.0	0.0	V-Horn	PK	0.0	40.2	74.0	-33.8	Mid channel
12398.680	42.5	-3.2	102.0	1.2	3.0	0.0	V-Horn	PK	0.0	39.3	74.0	-34.7	High channel
12023.200	45.2	-6.0	259.0	1.1	3.0	0.0	V-Horn	PK	0.0	39.2	74.0	-34.8	Low channel











Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

#### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode.

**EMC**

**OCCUPIED BANDWIDTH**

<b>EUT:</b> Mega M.O.L.E.	<b>Work Order:</b> CNTR0018
<b>Serial Number:</b> Unit 1	<b>Date:</b> 03/26/08
<b>Customer:</b> Controltek, Inc.	<b>Temperature:</b> 23°C
<b>Attendees:</b> Sean Scott, Paul	<b>Humidity:</b> 25%
<b>Project:</b> None	<b>Barometric Pres.:</b> 29.95
<b>Tested by:</b> Rod Peloquin	<b>Power:</b> 3.7 V DC nominal
	<b>Job Site:</b> EV06

<b>TEST SPECIFICATIONS</b>	<b>Test Method</b>
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

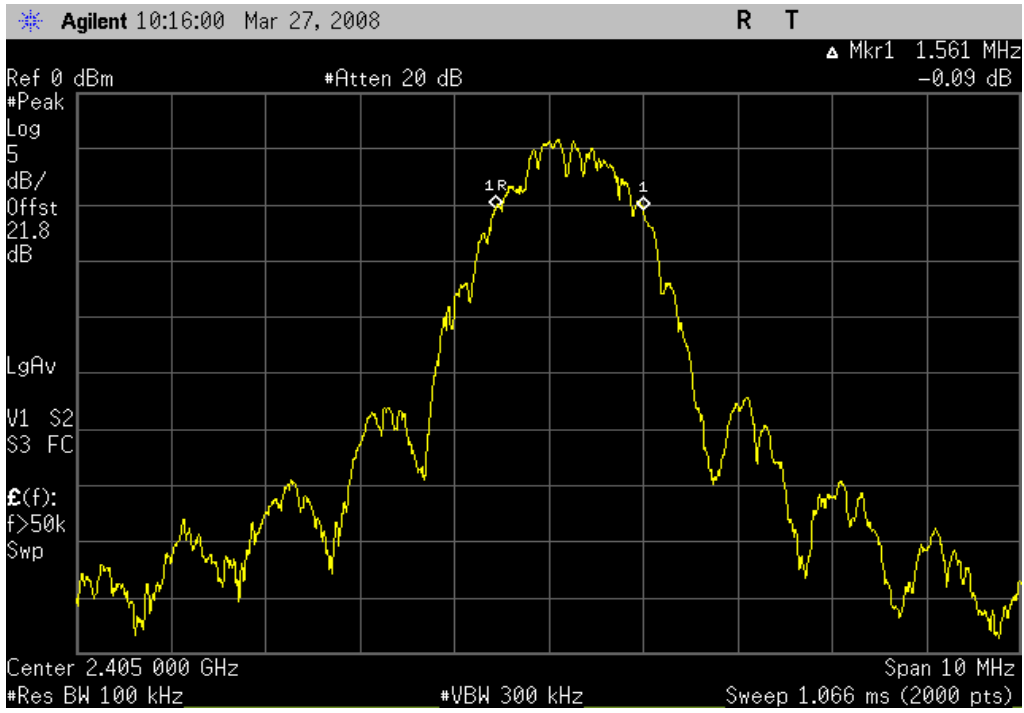
**COMMENTS**  
None

**DEVIATIONS FROM TEST STANDARD**  
None

<b>Configuration #</b>	1	<i>Rod Peloquin</i> Signature
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	Value	Limit	Results
Low Channel	1.56 MHz	> 500 kHz	Pass
Mid Channel	1.58 MHz	> 500 kHz	Pass
High Channel	1.66 MHz	> 500 kHz	Pass

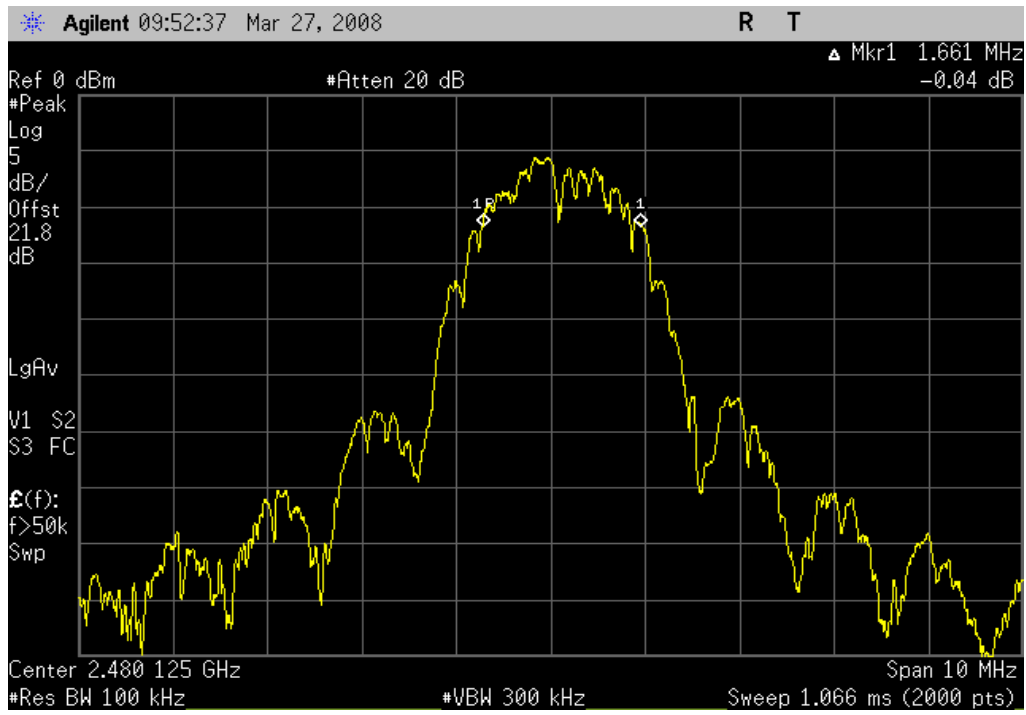
Low Channel		
<b>Result:</b> Pass	<b>Value:</b> 1.56 MHz	<b>Limit:</b> > 500 kHz

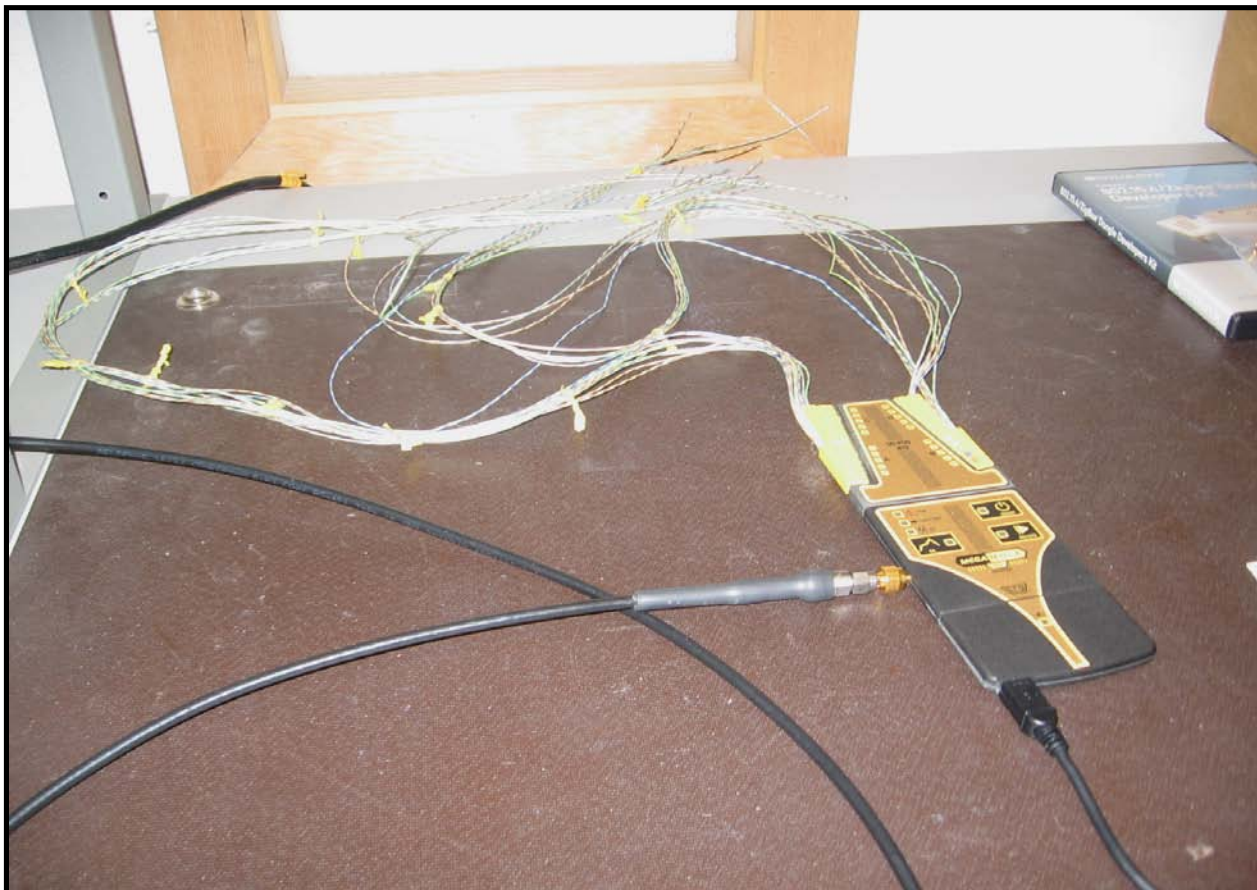


Mid Channel		
<b>Result:</b> Pass	<b>Value:</b> 1.58 MHz	<b>Limit:</b> > 500 kHz



High Channel		
<b>Result:</b> Pass	<b>Value:</b> 1.66 MHz	<b>Limit:</b> > 500 kHz





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

#### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode.

**De Facto EIRP Limit:** Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36dBm.

**EMC**

**OUTPUT POWER**

<b>EUT:</b> Mega M.O.L.E.	<b>Work Order:</b> CNTR0018
<b>Serial Number:</b> Unit 1	<b>Date:</b> 03/26/08
<b>Customer:</b> Controltek, Inc.	<b>Temperature:</b> 23°C
<b>Attendees:</b> Sean Scott, Paul	<b>Humidity:</b> 25%
<b>Project:</b> None	<b>Barometric Pres.:</b> 29.95
<b>Tested by:</b> Rod Peloquin	<b>Power:</b> 3.7 V DC nominal
	<b>Job Site:</b> EV06

<b>TEST SPECIFICATIONS</b>	<b>Test Method</b>
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

**COMMENTS**  
None

**DEVIATIONS FROM TEST STANDARD**  
None

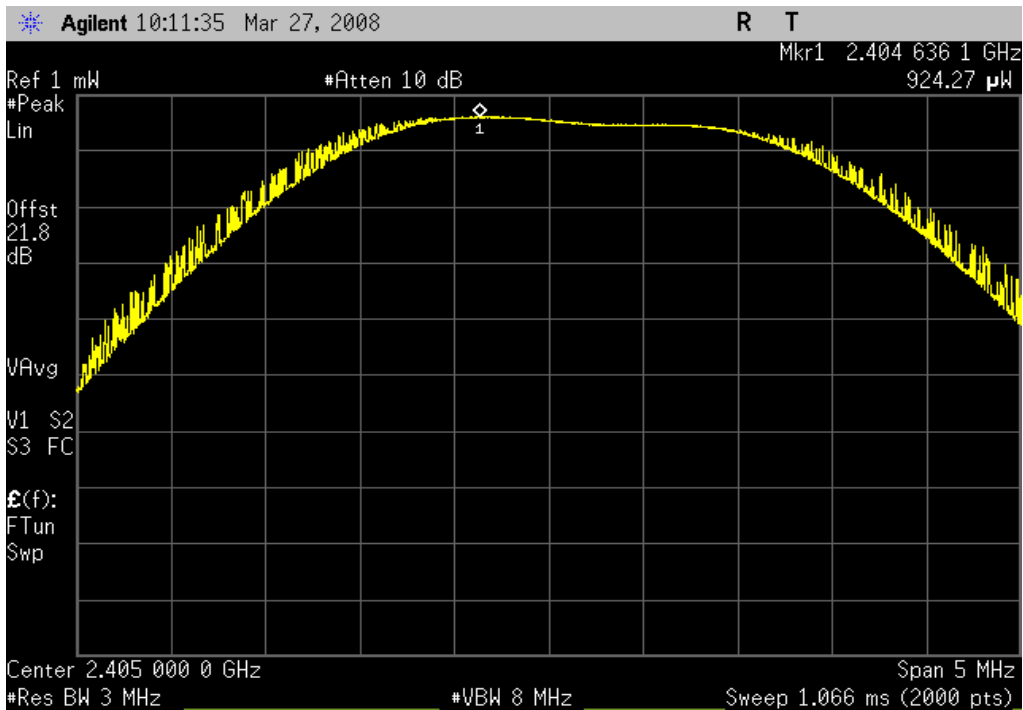
<b>Configuration #</b>	1	<i>Rod Peloquin</i> Signature
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	Value	Limit	Results
Low Channel	0.924 mW	1 Watt	Pass
Mid Channel	0.904 mW	1 Watt	Pass
High Channel	0.811 mW	1 Watt	Pass

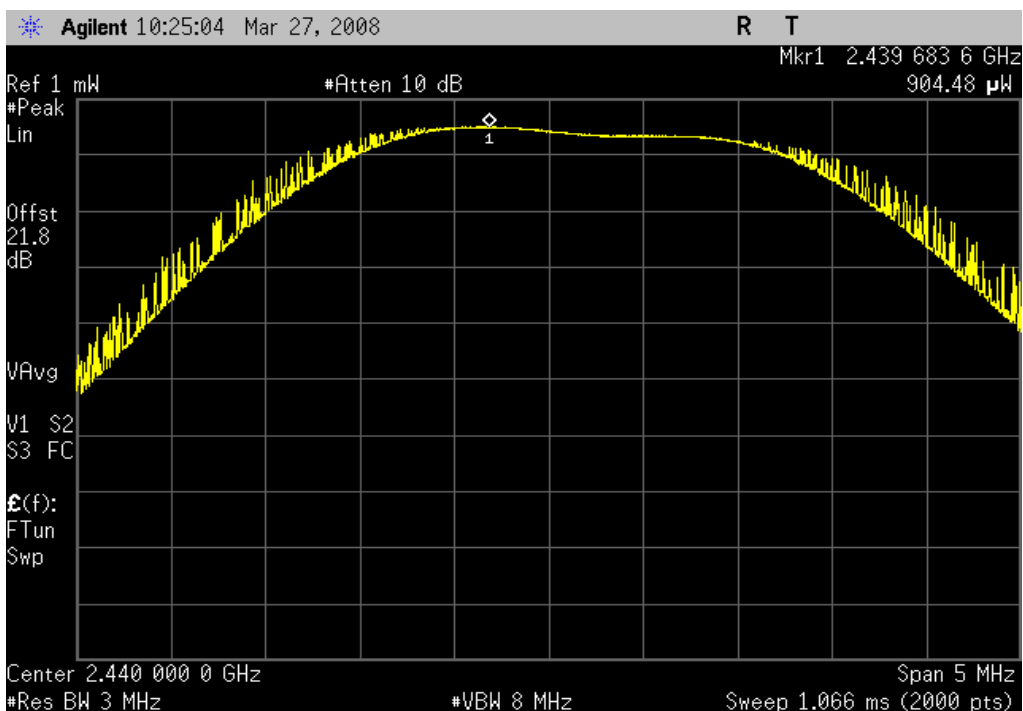


# OUTPUT POWER

Low Channel		
<b>Result:</b> Pass	<b>Value:</b> 0.924 mW	<b>Limit:</b> 1 Watt

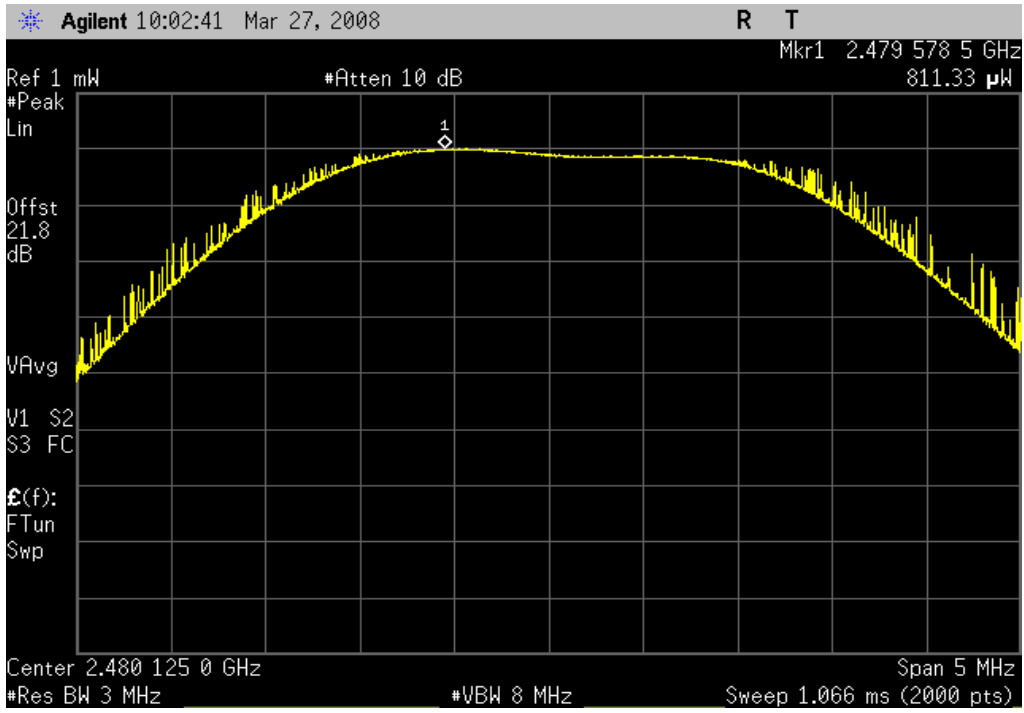


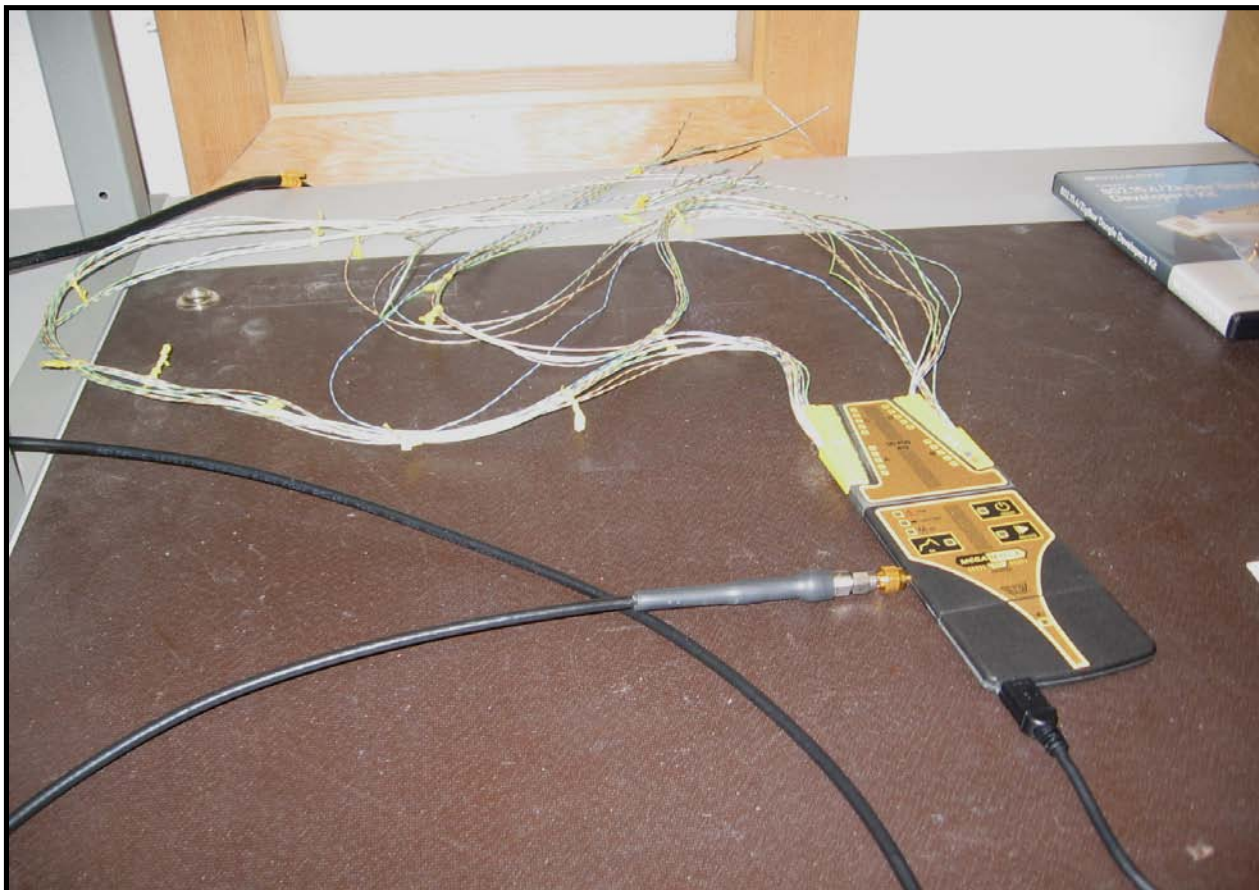
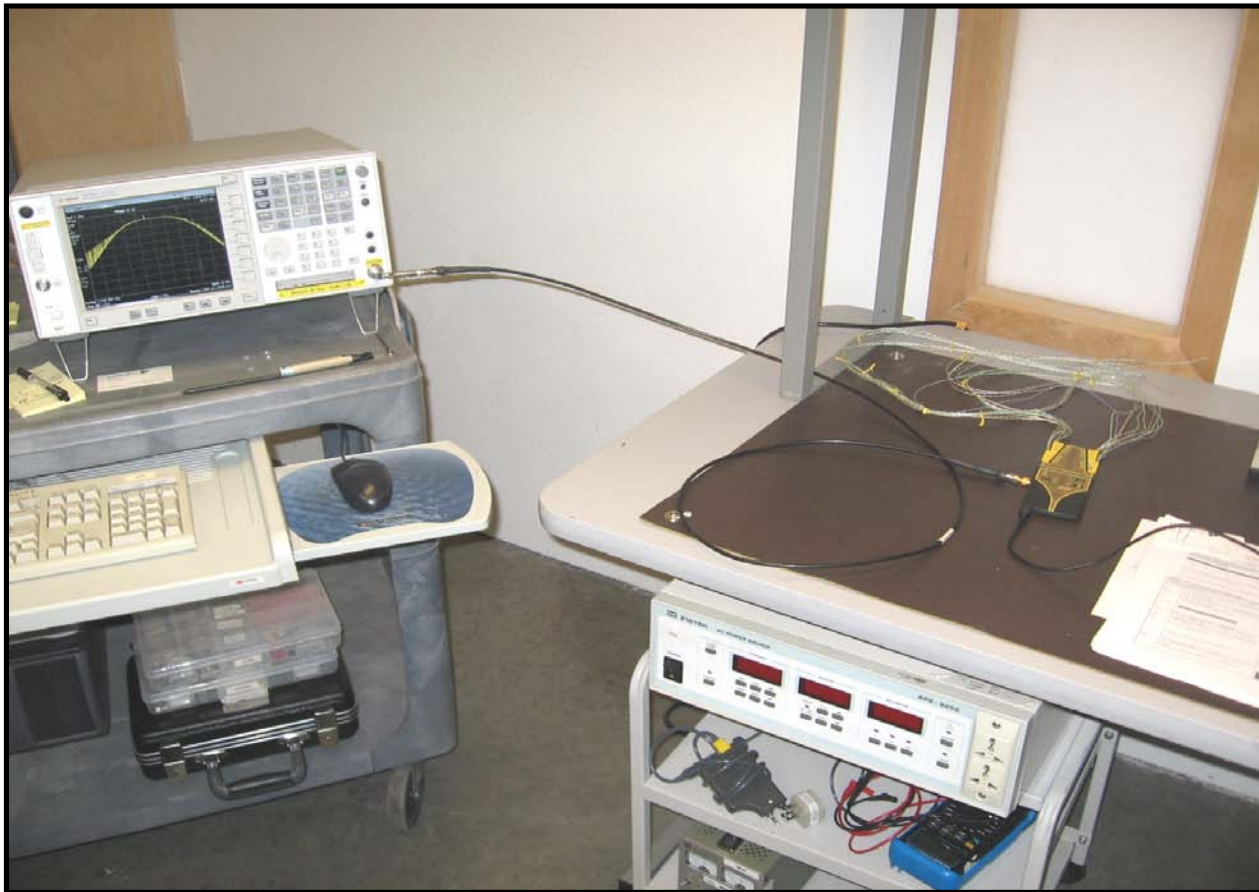
Mid Channel		
<b>Result:</b> Pass	<b>Value:</b> 0.904 mW	<b>Limit:</b> 1 Watt



# OUTPUT POWER

High Channel		
<b>Result:</b> Pass	<b>Value:</b> 0.811 mW	<b>Limit:</b> 1 Watt





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13

#### MEASUREMENT UNCERTAINTY


Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The requirements of FCC 15.247(d) for emissions at least 20dB below the carrier in any 100kHz bandwidth outside the allowable band was measured with the EUT set to low and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 10 MHz below the band edge to 10 MHz above the band edge.

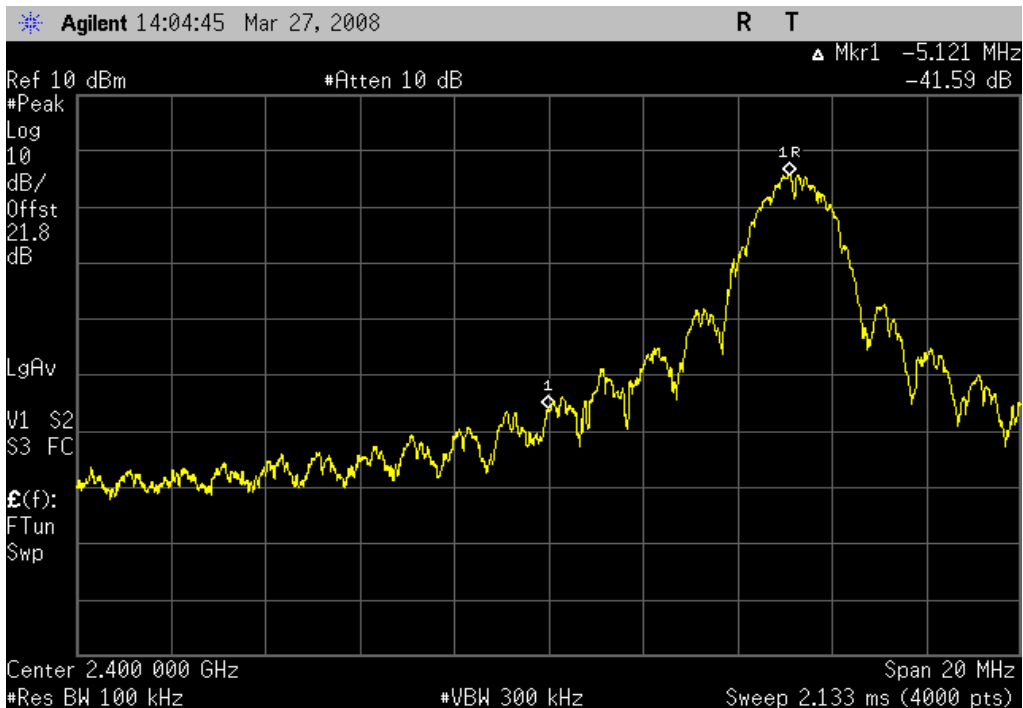
## EMC

## BAND EDGE COMPLIANCE

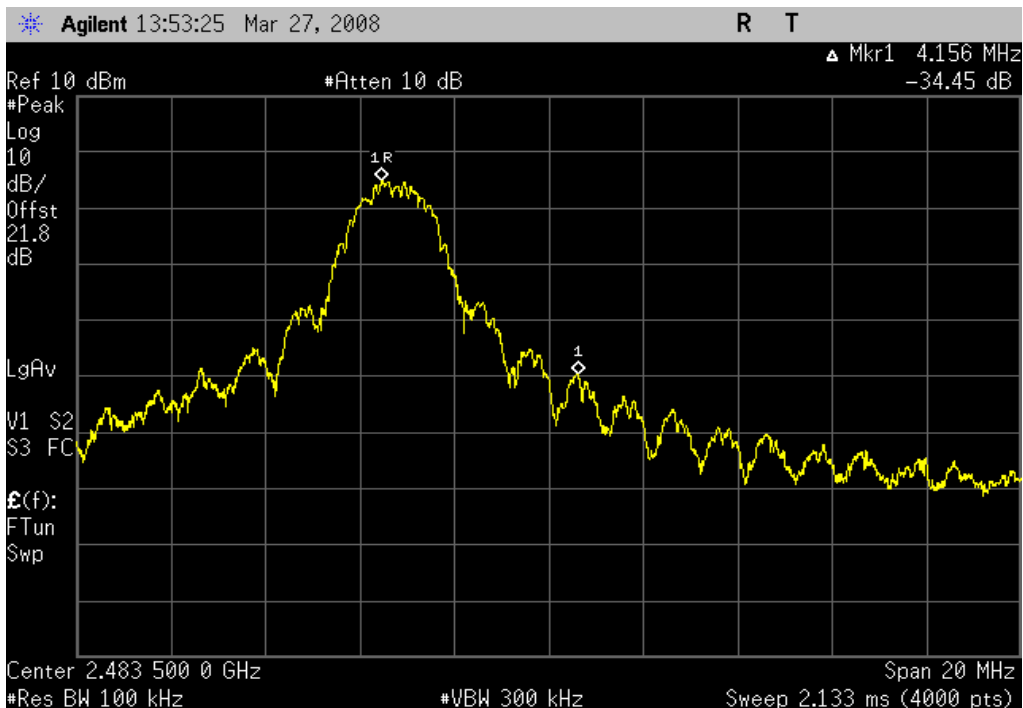
EUT:	Mega M.O.L.E.	Work Order:	CNTR0018
Serial Number:	Unit 1	Date:	03/26/08
Customer:	Controltek, Inc.	Temperature:	23°C
Attendees:	Sean Scott, Paul Austen	Humidity:	25%
Project:	None	Barometric Pres.:	29.95
Tested by:	Rod Peloquin	Power:	3.7 V DC nominal
		Job Site:	EV06
TEST SPECIFICATIONS		Test Method	
FCC 15.247 (DTS):2007		ANSI C63.4:2003 KDB No. 558074	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
Configuration #	1	 Signature	
		Value	Limit
Low Channel		-41.6 dBc	≤ -20 dBc
High Channel		-34.5 dBc	≤ -20 dBc
			Results
			Pass
			Pass

**BAND EDGE COMPLIANCE**

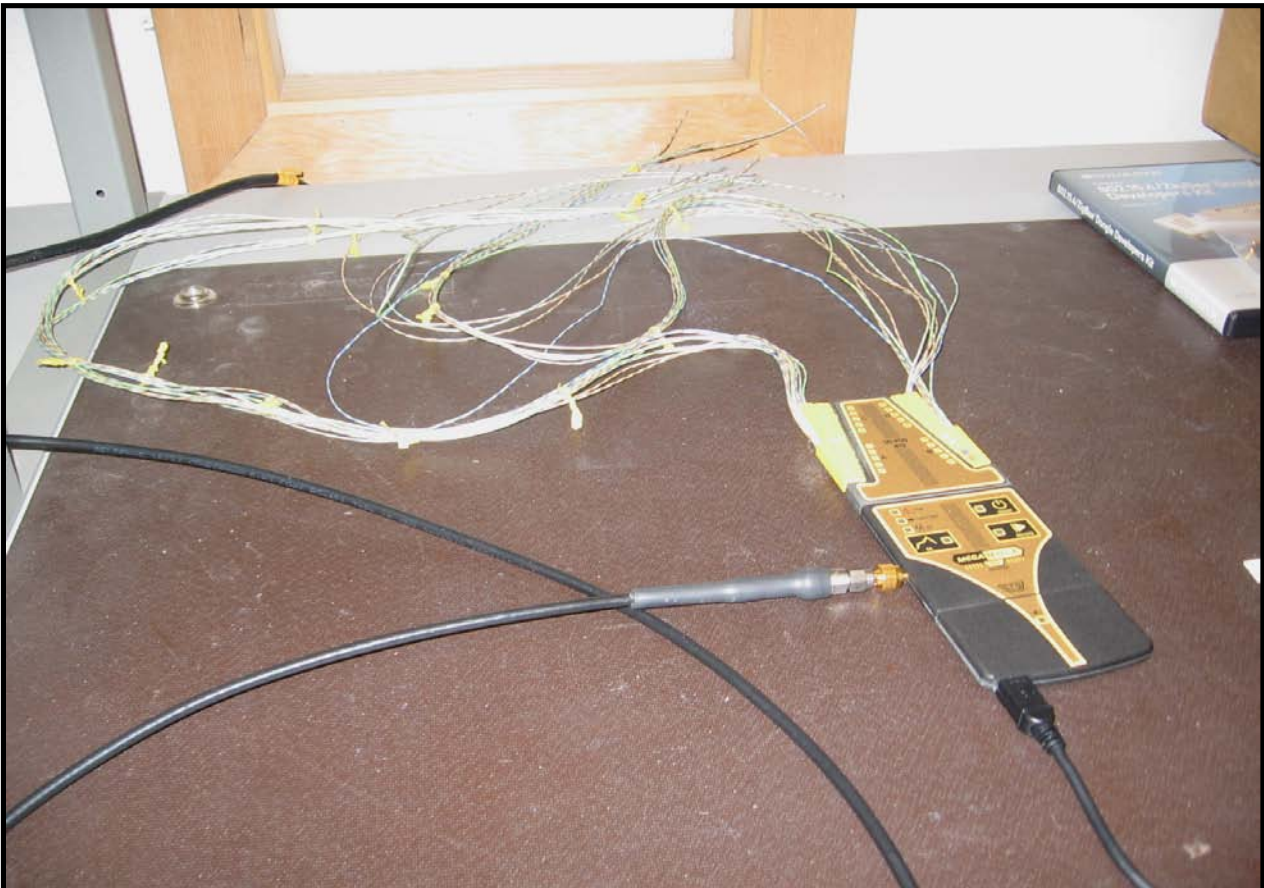
Low Channel		
<b>Result:</b> Pass	<b>Value:</b> -41.6 dBc	<b>Limit:</b> ≤ -20 dBc



High Channel		
<b>Result:</b> Pass	<b>Value:</b> -34.5 dBc	<b>Limit:</b> ≤ -20 dBc







Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

#### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.



## EMC

## SPURIOUS CONDUCTED EMISSIONS

EUT: Mega M.O.L.E.	Work Order: CNTR0018
Serial Number: Unit 1	Date: 03/26/08
Customer: Controltek, Inc.	Temperature: 23°C
Attendees: Sean Scott, Paul Austen	Humidity: 25%
Project: None	Barometric Pres.: 29.95
Tested by: Rod Peloquin	Power: 3.7 V DC nominal
	Job Site: EV06

TEST SPECIFICATIONS		Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	

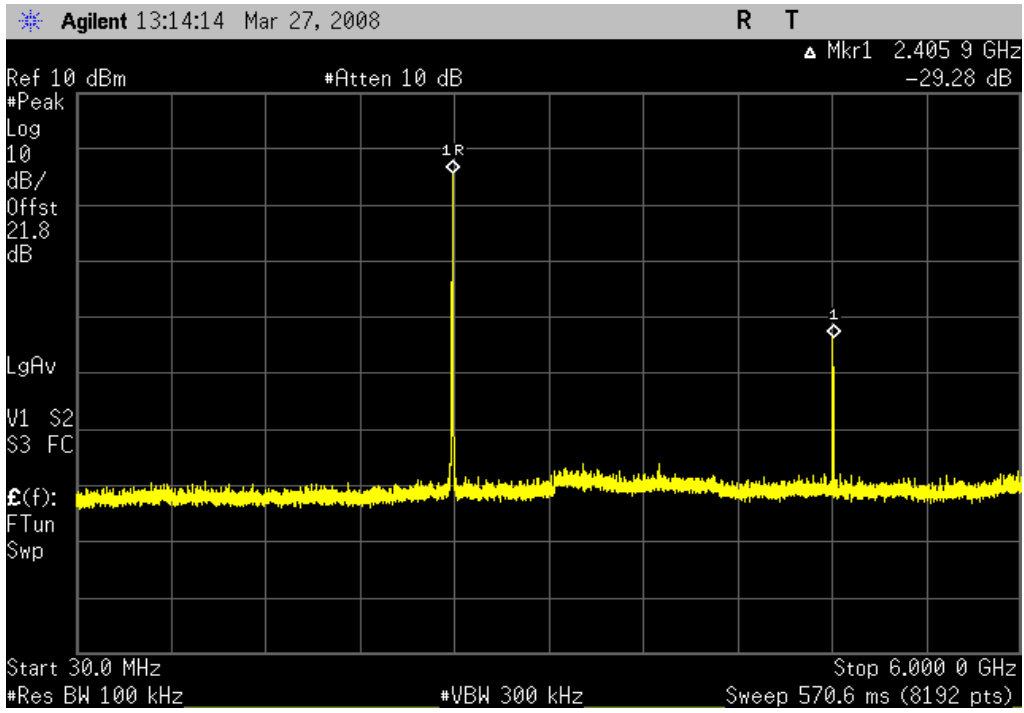
COMMENTS
None

DEVIATIONS FROM TEST STANDARD
None

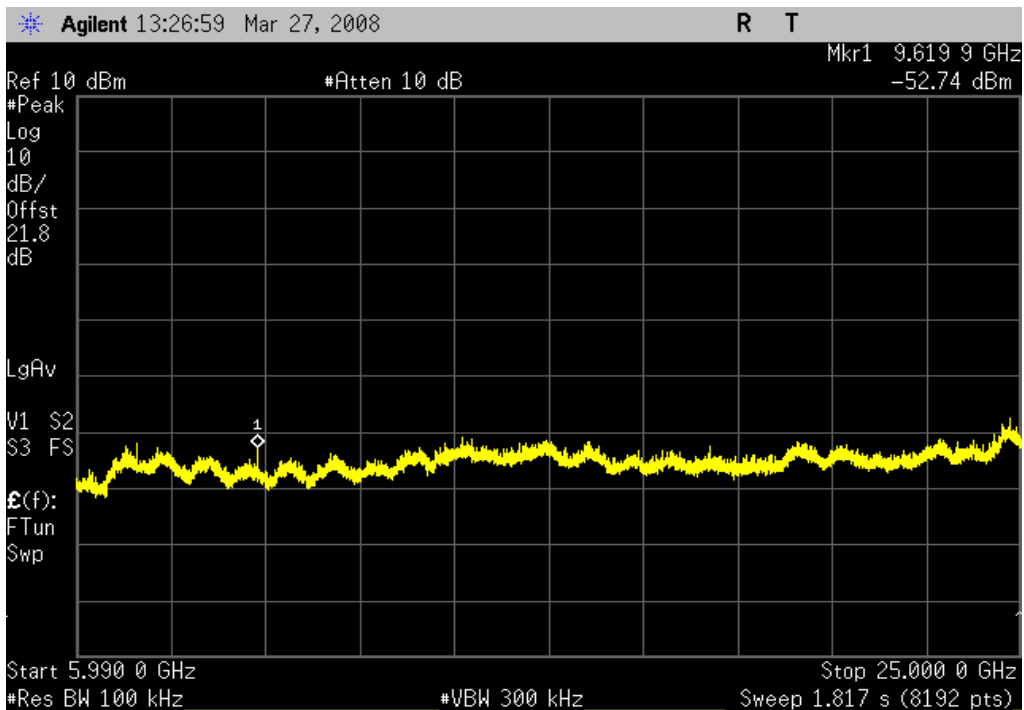
Configuration #	1	<i>Rod Peloquin</i> Signature
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		Value	Limit	Results
Low Channel	0MHz - 6GHz	-29.28 dBc	≤ -20 dBc	Pass
	5.9GHz - 25GHz	< -40 dBc	≤ -20 dBc	Pass
Mid Channel	0MHz - 6GHz	-28.85 dBc	≤ -20 dBc	Pass
	5.9GHz - 25GHz	< -40 dBc	≤ -20 dBc	Pass
High Channel	0MHz - 6GHz	-28.03 dBc	≤ -20 dBc	Pass
	5.9GHz - 25GHz	< -40 dBc	≤ -20 dBc	Pass

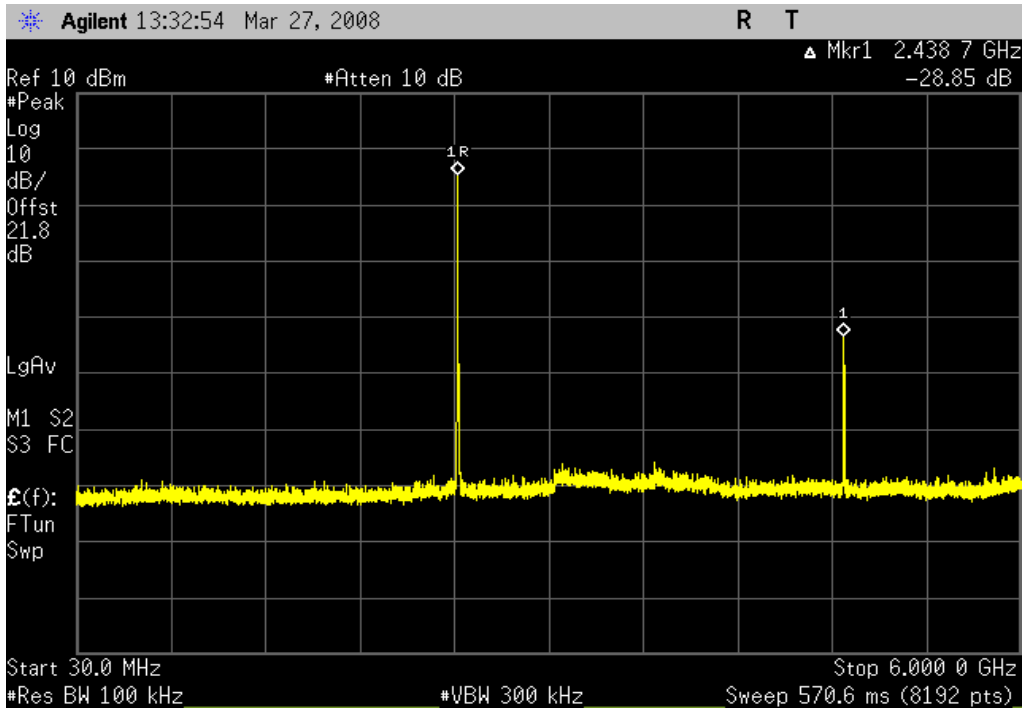
Low Channel, 0MHz - 6GHz  
**Result:** Pass      **Value:** -29.28 dBc      **Limit:** ≤ -20 dBc



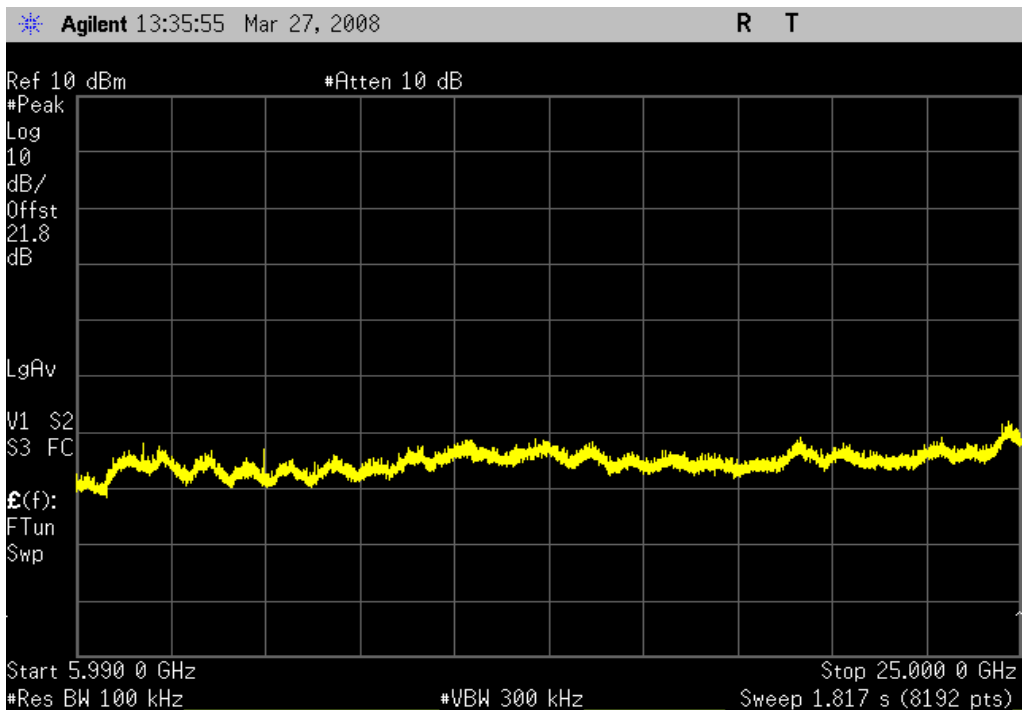
Low Channel, 5.9GHz - 25GHz  
**Result:** Pass      **Value:** < -40 dBc      **Limit:** ≤ -20 dBc



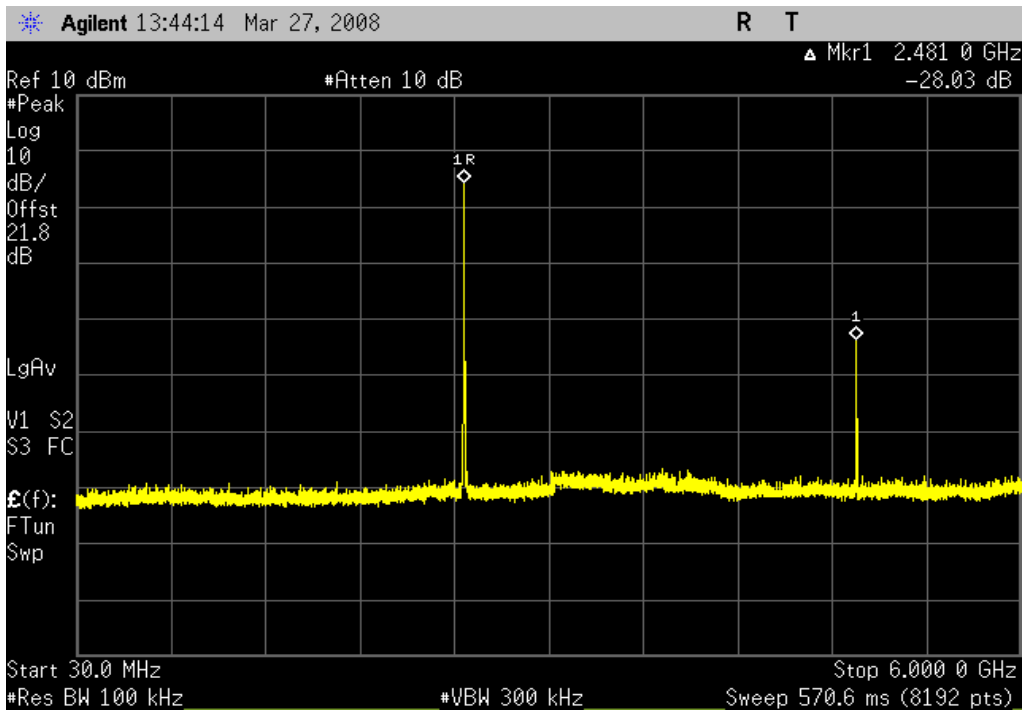
Mid Channel, 0MHz - 6GHz  
**Result:** Pass      **Value:** -28.85 dBc      **Limit:** ≤ -20 dBc



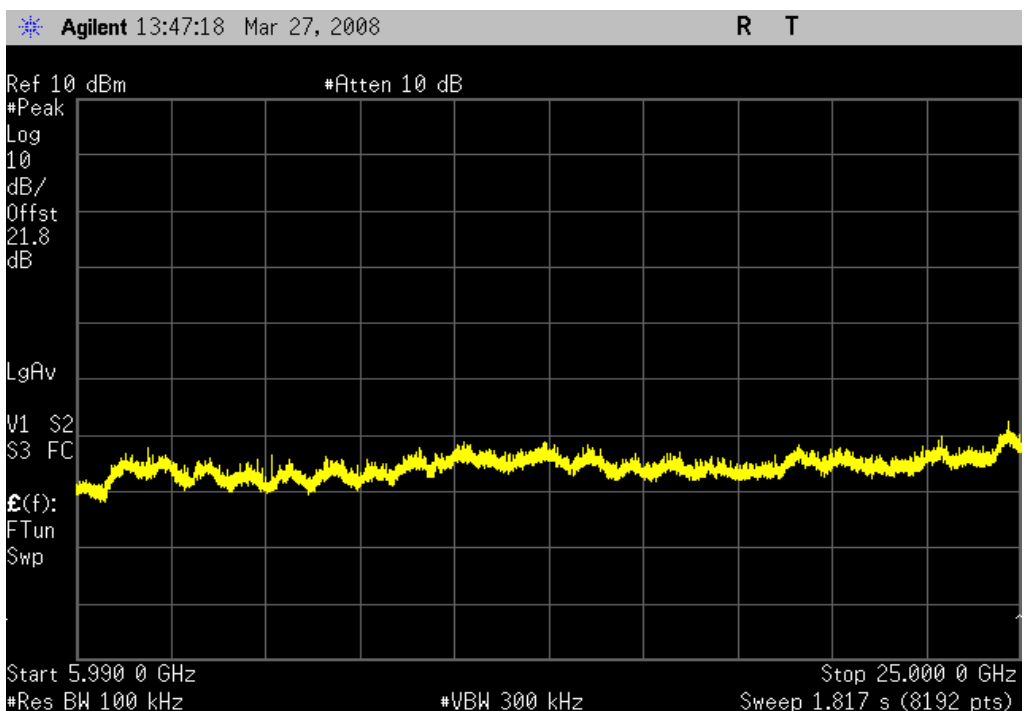
Mid Channel, 5.9GHz - 25GHz  
**Result:** Pass      **Value:** < -40 dBc      **Limit:** ≤ -20 dBc



High Channel, 0MHz - 6GHz		
<b>Result:</b> Pass	<b>Value:</b> -28.03 dBc	<b>Limit:</b> ≤ -20 dBc



High Channel, 5.9GHz - 25GHz		
<b>Result:</b> Pass	<b>Value:</b> < -40 dBc	<b>Limit:</b> ≤ -20 dBc





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

#### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

#### MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

#### TEST DESCRIPTION

The peak power spectral density measurements were measured with the EUT set to low, mid, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation. Per the procedure outlined in FCC 97-114, the spectrum analyzer was used as follows:

The emission peak(s) were located and zoom in on within the passband. The resolution bandwidth was set to 3 kHz, the video bandwidth was set to greater than or equal to the resolution bandwidth. The sweep speed was set equal to the span divided by 3 kHz (sweep = (SPAN/3 kHz)). For example, given a span of 1.5 MHz, the sweep should be  $1.5 \times 10^6 \div 3 \times 10^3 = 500$  seconds. External attenuation was used and added to the reading. The following FCC procedure was used for modifying the power spectral density measurements:

*"If the spectrum line spacing cannot be resolved on the available spectrum analyzer, the noise density function on most modern conventional spectrum analyzers will directly measure the noise power density normalized to a 1 Hz noise power bandwidth. Add 34.8 dB for correction to 3 kHz."*

## EMC

## POWER SPECTRAL DENSITY

EUT:	Mega M.O.L.E.	Work Order:	CNTR0018
Serial Number:	Unit 1	Date:	03/26/08
Customer:	Controltek, Inc.	Temperature:	23°C
Attendees:	Sean Scott, Paul Austen	Humidity:	25%
Project:	None	Barometric Pres.:	29.95
Tested by:	Rod Peloquin	Power:	3.7 V DC nominal
		Job Site:	EV06

TEST SPECIFICATIONS		Test Method
FCC 15.247 (DTS):2007		ANSI C63.4:2003 KDB No. 558074

COMMENTS
None

DEVIATIONS FROM TEST STANDARD
None

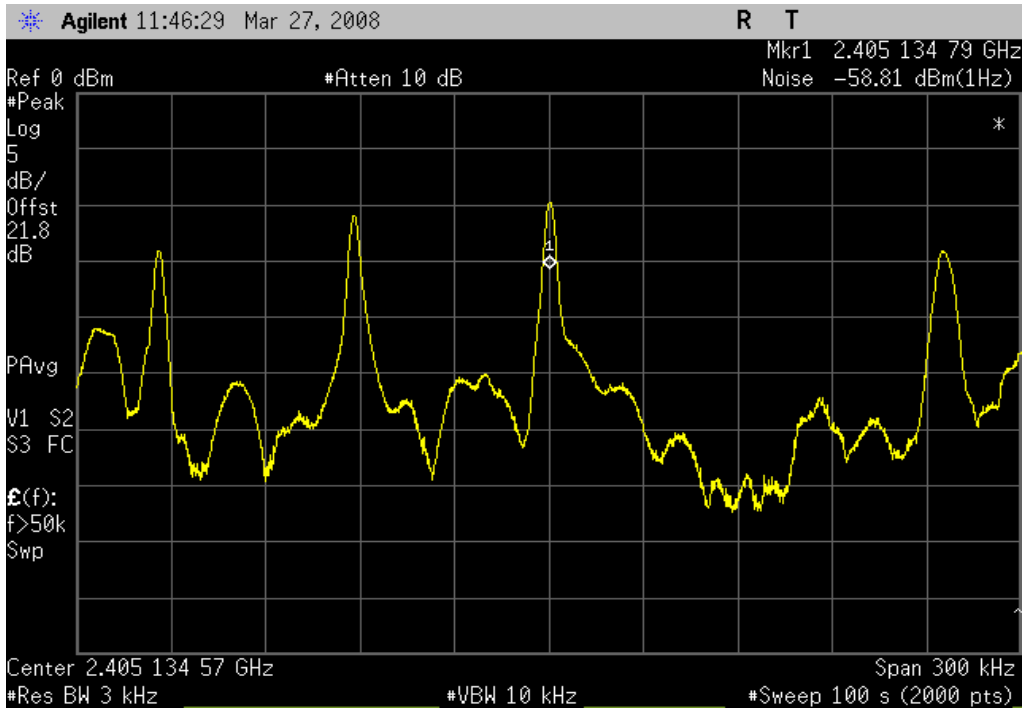
Configuration #	1	<i>Rodry Le Peloquin</i> Signature
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	Value	Limit	Results
Low Channel	-24.01 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel	-24.33 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel	-25.4 dBm / 3 kHz	8 dBm / 3 kHz	Pass



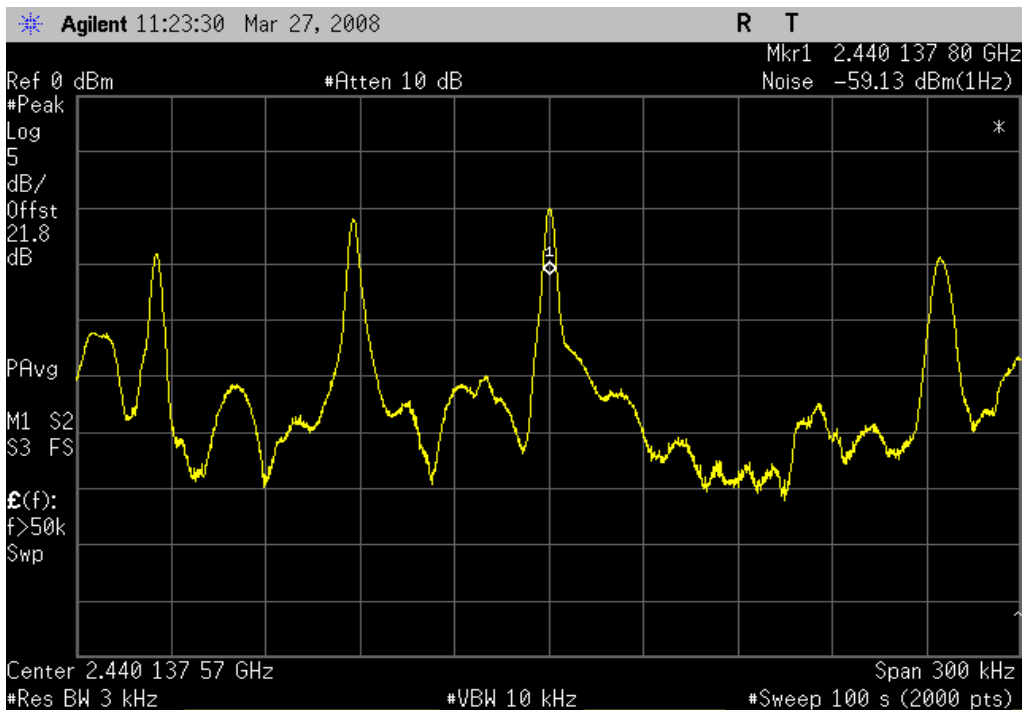
**Low Channel**

**Result:** Pass                      **Value:** -24.01 dBm / 3 kHz                      **Limit:** 8 dBm / 3 kHz



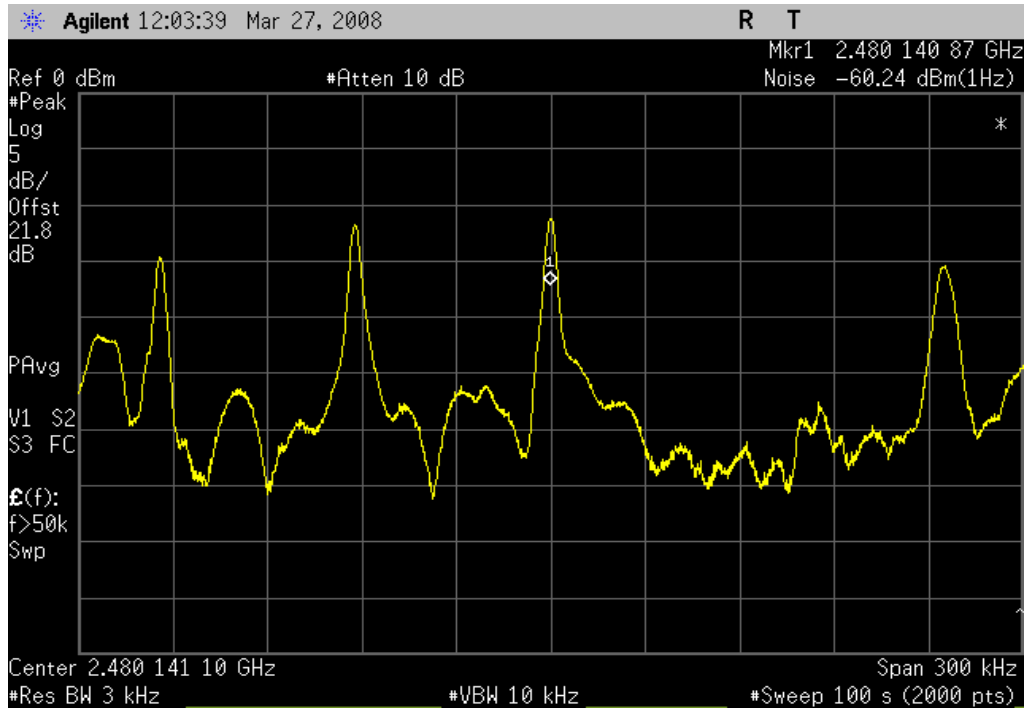
**Mid Channel**

**Result:** Pass                      **Value:** -24.33 dBm / 3 kHz                      **Limit:** 8 dBm / 3 kHz



## High Channel

**Result:** Pass      **Value:** -25.4 dBm / 3 kHz      **Limit:** 8 dBm / 3 kHz





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

**MODES OF OPERATION**

Transmitting high channel
Transmitting mid channel
Transmitting low channel

**POWER SETTINGS INVESTIGATED**

120V/60Hz
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**CONFIGURATIONS INVESTIGATED**

CNTR0018 - 3) AC Power line Conducted - PC Host
CNTR0018 - 2) AC Power line Conducted - Adapter

**SAMPLE CALCULATIONS**

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator
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**TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwartz	ESCI	ARG	12/7/2007	13 mo
Attenuator	Coaxicom	66702 2910-20	ATO	5/25/2007	13 mo
High Pass Filter	T.T.E.	7766	HFG	2/5/2008	13 mo
LISN	Solar	9252-50-R-24-BNC	LIP	1/4/2008	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	1/4/2008	13 mo
EV07 Cables		Conducted Cables	EVG	4/17/2007	13 mo

**MEASUREMENT BANDWIDTHS**

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

**MEASUREMENT UNCERTAINTY**

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

**TEST DESCRIPTION**

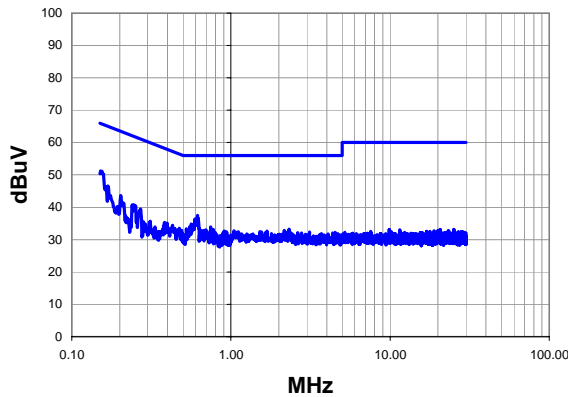
Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm.

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Pelouin</i> <b>Tested by:</b> Rod Pelouin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	2 - AC Power line Conducted - Adapter			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting low channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	AC Power Adapter			

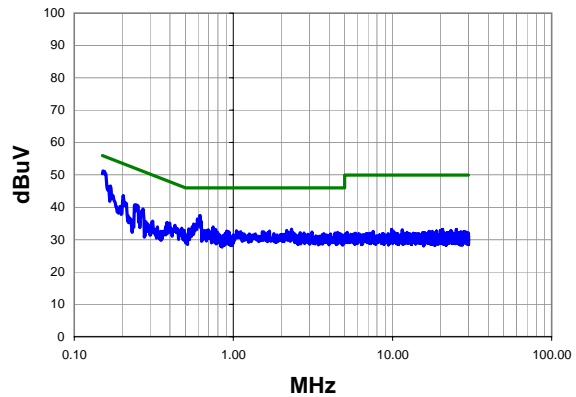
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	1	<b>Line:</b> High Line	<b>Ext. Attenuation:</b> 20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.152	29.3	22.0	51.3	65.9	-14.6
0.169	25.0	21.6	46.6	65.0	-18.4
0.616	16.7	20.7	37.4	56.0	-18.6
0.203	22.6	21.0	43.6	63.5	-19.9
0.240	19.8	21.0	40.8	62.1	-21.3
0.271	18.5	21.0	39.5	61.1	-21.6
0.745	13.3	20.7	34.0	56.0	-22.0
0.526	12.5	20.8	33.3	56.0	-22.7
0.431	13.6	20.9	34.5	57.2	-22.8
2.320	12.7	20.5	33.2	56.0	-22.8
0.398	14.2	20.9	35.1	57.9	-22.8
0.776	12.5	20.6	33.1	56.0	-22.9
0.383	14.4	20.9	35.3	58.2	-22.9
0.473	12.7	20.8	33.5	56.5	-22.9
0.696	12.3	20.7	33.0	56.0	-23.0
0.653	12.1	20.7	32.8	56.0	-23.2
2.168	12.3	20.5	32.8	56.0	-23.2
1.048	12.2	20.5	32.7	56.0	-23.3
0.906	12.1	20.6	32.7	56.0	-23.3
1.688	12.1	20.5	32.6	56.0	-23.4

Peak Data - vs - Average Limit

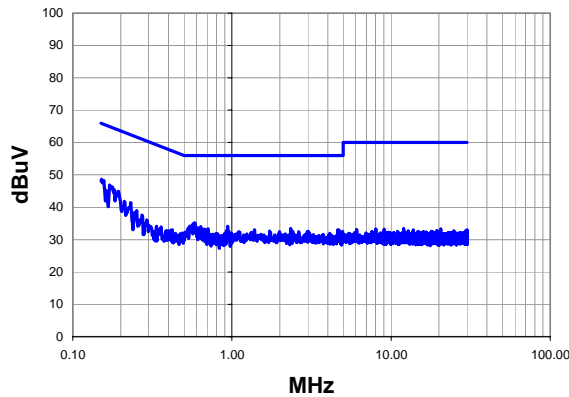
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.152	29.3	22.0	51.3	55.9	-4.6
0.169	25.0	21.6	46.6	55.0	-8.4
0.616	16.7	20.7	37.4	46.0	-8.6
0.203	22.6	21.0	43.6	53.5	-9.9
0.240	19.8	21.0	40.8	52.1	-11.3
0.271	18.5	21.0	39.5	51.1	-11.6
0.745	13.3	20.7	34.0	46.0	-12.0
0.526	12.5	20.8	33.3	46.0	-12.7
0.431	13.6	20.9	34.5	47.2	-12.8
2.320	12.7	20.5	33.2	46.0	-12.8
0.398	14.2	20.9	35.1	47.9	-12.8
0.776	12.5	20.6	33.1	46.0	-12.9
0.383	14.4	20.9	35.3	48.2	-12.9
0.473	12.7	20.8	33.5	46.5	-12.9
0.696	12.3	20.7	33.0	46.0	-13.0
0.653	12.1	20.7	32.8	46.0	-13.2
2.168	12.3	20.5	32.8	46.0	-13.2
1.048	12.2	20.5	32.7	46.0	-13.3
0.906	12.1	20.6	32.7	46.0	-13.3
1.688	12.1	20.5	32.6	46.0	-13.4

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	2 - AC Power line Conducted - Adapter			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting low channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	AC Power Adapter			

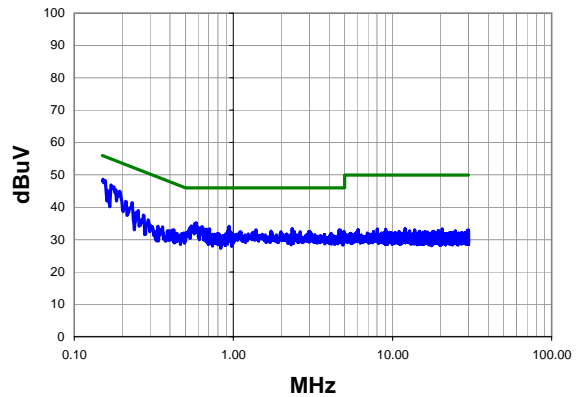
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	2	<b>Line:</b>	Neutral	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.152	26.7	22.0	48.7	65.9	-17.2
0.170	25.3	21.6	46.9	64.9	-18.0
0.193	23.8	21.2	45.0	63.9	-19.0
0.162	23.4	21.8	45.2	65.4	-20.2
0.580	14.4	20.8	35.2	56.0	-20.8
0.232	20.5	21.0	41.5	62.4	-20.9
0.211	20.8	21.0	41.8	63.2	-21.4
0.939	13.6	20.5	34.1	56.0	-21.9
0.636	13.3	20.7	34.0	56.0	-22.0
0.531	12.8	20.8	33.6	56.0	-22.4
2.344	12.9	20.5	33.4	56.0	-22.6
0.708	12.7	20.7	33.4	56.0	-22.6
0.252	18.0	21.0	39.0	61.7	-22.7
0.658	12.5	20.7	33.2	56.0	-22.8
0.679	12.5	20.7	33.2	56.0	-22.8
1.384	12.5	20.5	33.0	56.0	-23.0
4.616	12.5	20.5	33.0	56.0	-23.0
4.712	12.4	20.5	32.9	56.0	-23.1
0.923	12.2	20.5	32.7	56.0	-23.3
0.954	12.1	20.5	32.6	56.0	-23.4

Peak Data - vs - Average Limit

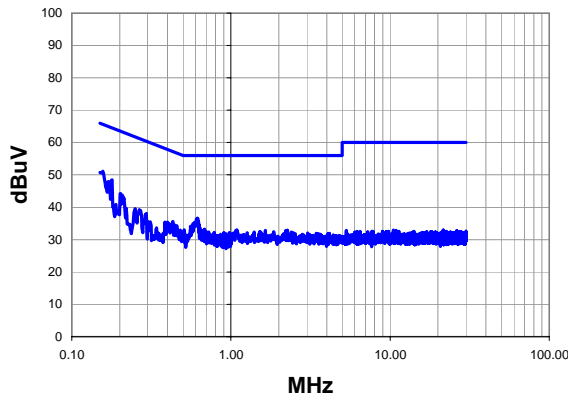
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.152	26.7	22.0	48.7	55.9	-7.2
0.170	25.3	21.6	46.9	54.9	-8.0
0.193	23.8	21.2	45.0	53.9	-9.0
0.162	23.4	21.8	45.2	55.4	-10.2
0.580	14.4	20.8	35.2	46.0	-10.8
0.232	20.5	21.0	41.5	52.4	-10.9
0.211	20.8	21.0	41.8	53.2	-11.4
0.939	13.6	20.5	34.1	46.0	-11.9
0.636	13.3	20.7	34.0	46.0	-12.0
0.531	12.8	20.8	33.6	46.0	-12.4
2.344	12.9	20.5	33.4	46.0	-12.6
0.708	12.7	20.7	33.4	46.0	-12.6
0.252	18.0	21.0	39.0	51.7	-12.7
0.658	12.5	20.7	33.2	46.0	-12.8
0.679	12.5	20.7	33.2	46.0	-12.8
1.384	12.5	20.5	33.0	46.0	-13.0
4.616	12.5	20.5	33.0	46.0	-13.0
4.712	12.4	20.5	32.9	46.0	-13.1
0.923	12.2	20.5	32.7	46.0	-13.3
0.954	12.1	20.5	32.6	46.0	-13.4

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	2 - AC Power line Conducted - Adapter			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting mid channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	AC Power Adapter			

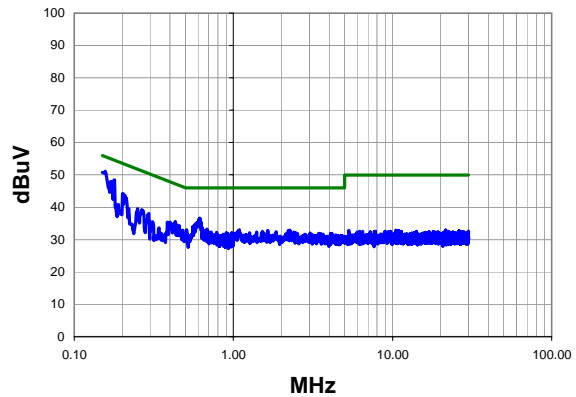
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	3	<b>Line:</b> High Line	<b>Ext. Attenuation:</b> 20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.157	29.3	21.9	51.2	65.6	-14.5
0.179	27.0	21.4	48.4	64.5	-16.1
0.170	26.4	21.6	48.0	64.9	-16.9
0.614	15.9	20.7	36.6	56.0	-19.4
0.201	23.2	21.0	44.2	63.6	-19.4
0.432	14.8	20.9	35.7	57.2	-21.6
0.266	18.3	21.0	39.3	61.3	-22.0
0.250	18.6	21.0	39.6	61.7	-22.2
0.636	13.0	20.7	33.7	56.0	-22.3
0.295	17.1	20.9	38.0	60.4	-22.4
0.441	13.8	20.8	34.6	57.0	-22.4
0.456	13.5	20.8	34.3	56.8	-22.4
0.400	14.5	20.9	35.4	57.9	-22.5
0.385	14.5	20.9	35.4	58.2	-22.8
0.684	12.5	20.7	33.2	56.0	-22.8
0.509	12.2	20.8	33.0	56.0	-23.0
1.088	12.5	20.5	33.0	56.0	-23.0
0.674	12.2	20.7	32.9	56.0	-23.1
2.264	12.4	20.5	32.9	56.0	-23.1
1.648	12.3	20.5	32.8	56.0	-23.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.157	29.3	21.9	51.2	55.6	-4.5
0.179	27.0	21.4	48.4	54.5	-6.1
0.170	26.4	21.6	48.0	54.9	-6.9
0.614	15.9	20.7	36.6	46.0	-9.4
0.201	23.2	21.0	44.2	53.6	-9.4
0.432	14.8	20.9	35.7	47.2	-11.6
0.266	18.3	21.0	39.3	51.3	-12.0
0.250	18.6	21.0	39.6	51.7	-12.2
0.636	13.0	20.7	33.7	46.0	-12.3
0.295	17.1	20.9	38.0	50.4	-12.4
0.441	13.8	20.8	34.6	47.0	-12.4
0.456	13.5	20.8	34.3	46.8	-12.4
0.400	14.5	20.9	35.4	47.9	-12.5
0.385	14.5	20.9	35.4	48.2	-12.8
0.684	12.5	20.7	33.2	46.0	-12.8
0.509	12.2	20.8	33.0	46.0	-13.0
1.088	12.5	20.5	33.0	46.0	-13.0
0.674	12.2	20.7	32.9	46.0	-13.1
2.264	12.4	20.5	32.9	46.0	-13.1
1.648	12.3	20.5	32.8	46.0	-13.2

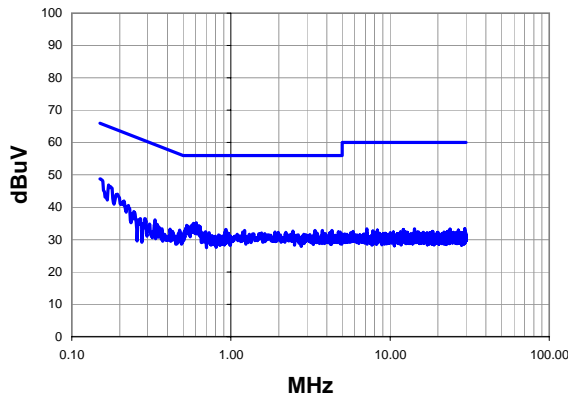


<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	2 - AC Power line Conducted - Adapter			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting mid channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	AC Power Adapter			

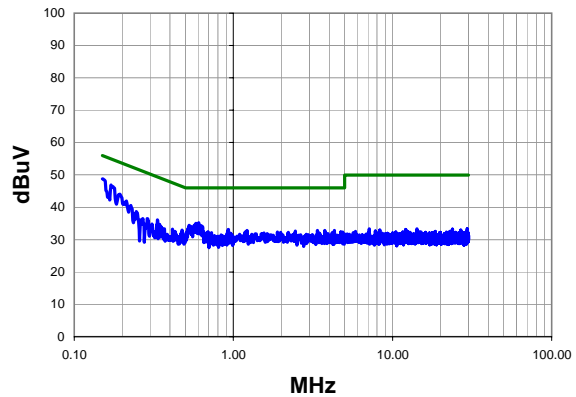
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	4	<b>Line:</b>	Neutral	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	26.8	22.0	48.8	66.0	-17.2
0.170	25.3	21.6	46.9	64.9	-18.0
0.193	22.9	21.2	44.1	63.9	-19.9
0.606	14.5	20.7	35.2	56.0	-20.8
0.582	14.3	20.8	35.1	56.0	-20.9
0.527	13.6	20.8	34.4	56.0	-21.6
0.929	12.6	20.5	33.1	56.0	-22.9
1.216	12.3	20.5	32.8	56.0	-23.2
3.376	12.3	20.5	32.8	56.0	-23.2
3.752	12.3	20.5	32.8	56.0	-23.2
4.320	12.3	20.5	32.8	56.0	-23.2
0.334	15.2	20.9	36.1	59.4	-23.2
0.245	17.7	21.0	38.7	61.9	-23.2
0.922	12.1	20.5	32.6	56.0	-23.4
2.456	12.1	20.5	32.6	56.0	-23.4
0.476	12.1	20.8	32.9	56.4	-23.5
0.694	11.8	20.7	32.5	56.0	-23.5
4.728	11.9	20.5	32.4	56.0	-23.6
1.888	11.8	20.5	32.3	56.0	-23.7
0.728	11.5	20.7	32.2	56.0	-23.8

Peak Data - vs - Average Limit

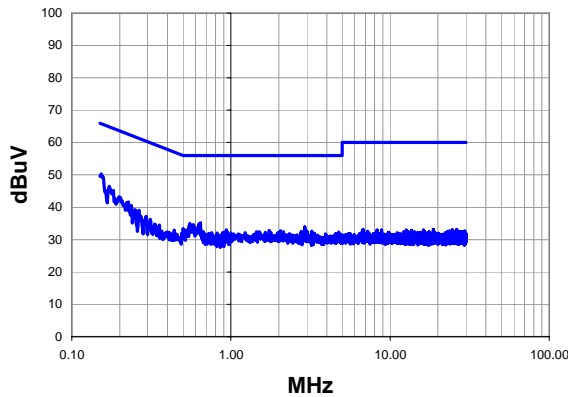
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	26.8	22.0	48.8	56.0	-7.2
0.170	25.3	21.6	46.9	54.9	-8.0
0.193	22.9	21.2	44.1	53.9	-9.9
0.606	14.5	20.7	35.2	46.0	-10.8
0.582	14.3	20.8	35.1	46.0	-10.9
0.527	13.6	20.8	34.4	46.0	-11.6
0.929	12.6	20.5	33.1	46.0	-12.9
1.216	12.3	20.5	32.8	46.0	-13.2
3.376	12.3	20.5	32.8	46.0	-13.2
3.752	12.3	20.5	32.8	46.0	-13.2
4.320	12.3	20.5	32.8	46.0	-13.2
0.334	15.2	20.9	36.1	49.4	-13.2
0.245	17.7	21.0	38.7	51.9	-13.2
0.922	12.1	20.5	32.6	46.0	-13.4
2.456	12.1	20.5	32.6	46.0	-13.4
0.476	12.1	20.8	32.9	46.4	-13.5
0.694	11.8	20.7	32.5	46.0	-13.5
4.728	11.9	20.5	32.4	46.0	-13.6
1.888	11.8	20.5	32.3	46.0	-13.7
0.728	11.5	20.7	32.2	46.0	-13.8

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	2 - AC Power line Conducted - Adapter			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting mid channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	AC Power Adapter			

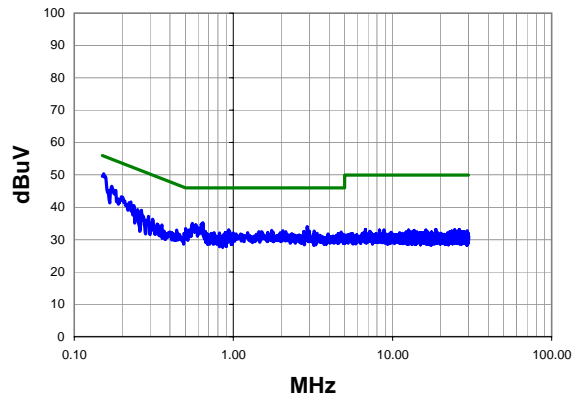
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	5	<b>Line:</b> High Line	<b>Ext. Attenuation:</b> 20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.153	28.4	21.9	50.3	65.8	-15.5
0.172	24.9	21.6	46.5	64.9	-18.4
0.643	14.5	20.7	35.2	56.0	-20.8
0.553	14.2	20.8	35.0	56.0	-21.0
2.912	13.5	20.5	34.0	56.0	-22.0
0.264	18.1	21.0	39.1	61.3	-22.2
0.250	18.3	21.0	39.3	61.7	-22.5
0.502	12.6	20.8	33.4	56.0	-22.6
0.934	12.5	20.5	33.0	56.0	-23.0
1.744	12.3	20.5	32.8	56.0	-23.2
2.048	12.2	20.5	32.7	56.0	-23.3
0.293	16.2	20.9	37.1	60.4	-23.3
3.000	12.1	20.5	32.6	56.0	-23.4
3.224	12.1	20.5	32.6	56.0	-23.4
0.312	15.4	20.9	36.3	59.9	-23.6
1.448	11.9	20.5	32.4	56.0	-23.6
1.504	11.9	20.5	32.4	56.0	-23.6
2.760	11.9	20.5	32.4	56.0	-23.6
4.760	11.9	20.5	32.4	56.0	-23.6
0.906	11.7	20.6	32.3	56.0	-23.7

Peak Data - vs - Average Limit

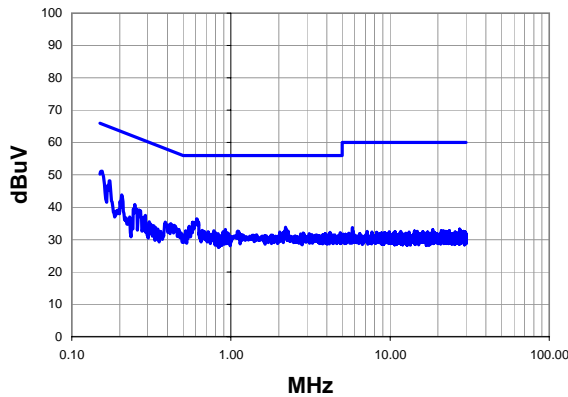
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.153	28.4	21.9	50.3	55.8	-5.5
0.172	24.9	21.6	46.5	54.9	-8.4
0.643	14.5	20.7	35.2	46.0	-10.8
0.553	14.2	20.8	35.0	46.0	-11.0
2.912	13.5	20.5	34.0	46.0	-12.0
0.264	18.1	21.0	39.1	51.3	-12.2
0.250	18.3	21.0	39.3	51.7	-12.5
0.502	12.6	20.8	33.4	46.0	-12.6
0.934	12.5	20.5	33.0	46.0	-13.0
1.744	12.3	20.5	32.8	46.0	-13.2
2.048	12.2	20.5	32.7	46.0	-13.3
0.293	16.2	20.9	37.1	50.4	-13.3
3.000	12.1	20.5	32.6	46.0	-13.4
3.224	12.1	20.5	32.6	46.0	-13.4
0.312	15.4	20.9	36.3	49.9	-13.6
1.448	11.9	20.5	32.4	46.0	-13.6
1.504	11.9	20.5	32.4	46.0	-13.6
2.760	11.9	20.5	32.4	46.0	-13.6
4.760	11.9	20.5	32.4	46.0	-13.6
0.906	11.7	20.6	32.3	46.0	-13.7

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	2 - AC Power line Conducted - Adapter			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting mid channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	AC Power Adapter			

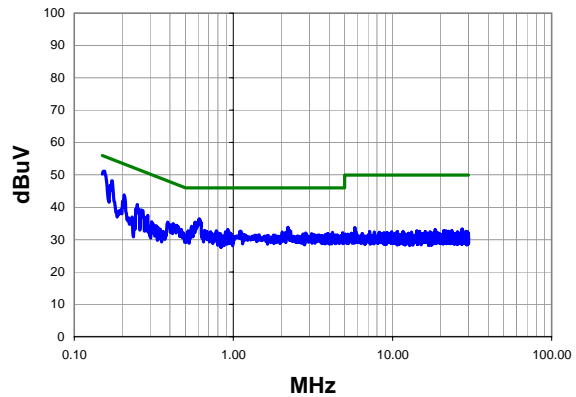
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	6	<b>Line:</b>	Neutral	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.153	29.2	21.9	51.1	65.8	-14.7
0.172	26.6	21.6	48.2	64.9	-16.7
0.607	15.7	20.7	36.4	56.0	-19.6
0.206	22.8	21.0	43.8	63.4	-19.6
0.249	19.9	21.0	40.9	61.8	-20.9
0.546	13.3	20.8	34.1	56.0	-21.9
0.264	18.2	21.0	39.2	61.3	-22.1
2.200	13.3	20.5	33.8	56.0	-22.2
0.419	14.1	20.9	35.0	57.5	-22.5
0.386	14.5	20.9	35.4	58.1	-22.8
0.923	12.6	20.5	33.1	56.0	-22.9
0.289	16.5	20.9	37.4	60.5	-23.1
0.658	12.1	20.7	32.8	56.0	-23.2
0.782	12.1	20.6	32.7	56.0	-23.3
0.519	11.9	20.8	32.7	56.0	-23.3
1.104	12.1	20.5	32.6	56.0	-23.4
0.719	11.8	20.7	32.5	56.0	-23.5
0.893	11.9	20.6	32.5	56.0	-23.5
2.032	11.8	20.5	32.3	56.0	-23.7
4.200	11.8	20.5	32.3	56.0	-23.7

Peak Data - vs - Average Limit

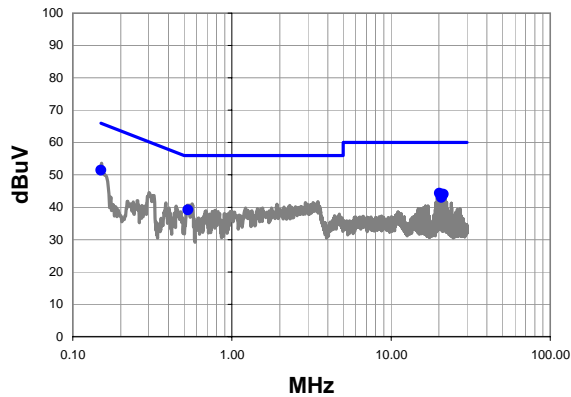
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.153	29.2	21.9	51.1	55.8	-4.7
0.172	26.6	21.6	48.2	54.9	-6.7
0.607	15.7	20.7	36.4	46.0	-9.6
0.206	22.8	21.0	43.8	53.4	-9.6
0.249	19.9	21.0	40.9	51.8	-10.9
0.546	13.3	20.8	34.1	46.0	-11.9
0.264	18.2	21.0	39.2	51.3	-12.1
2.200	13.3	20.5	33.8	46.0	-12.2
0.419	14.1	20.9	35.0	47.5	-12.5
0.386	14.5	20.9	35.4	48.1	-12.8
0.923	12.6	20.5	33.1	46.0	-12.9
0.289	16.5	20.9	37.4	50.5	-13.1
0.658	12.1	20.7	32.8	46.0	-13.2
0.782	12.1	20.6	32.7	46.0	-13.3
0.519	11.9	20.8	32.7	46.0	-13.3
1.104	12.1	20.5	32.6	46.0	-13.4
0.719	11.8	20.7	32.5	46.0	-13.5
0.893	11.9	20.6	32.5	46.0	-13.5
2.032	11.8	20.5	32.3	46.0	-13.7
4.200	11.8	20.5	32.3	46.0	-13.7

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	3 - AC Power line Conducted - PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting low channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	Power via USB from PC host			

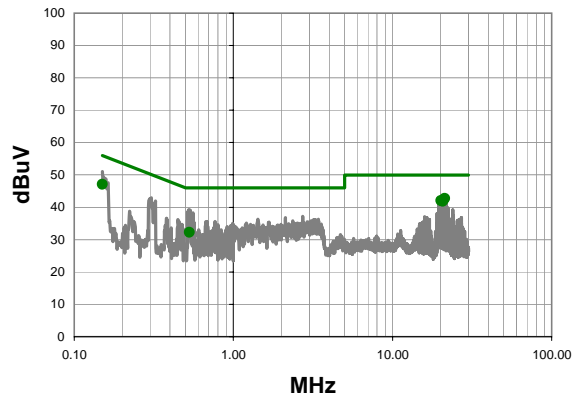
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	7	<b>Line:</b>	High Line	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	29.4	22.0	51.4	66.0	-14.6
20.114	23.8	20.5	44.3	60.0	-15.7
21.258	23.5	20.5	44.0	60.0	-16.0
21.144	23.3	20.5	43.8	60.0	-16.2
0.530	18.4	20.8	39.2	56.0	-16.8
20.688	22.6	20.5	43.1	60.0	-16.9

Average Data - vs - Average Limit

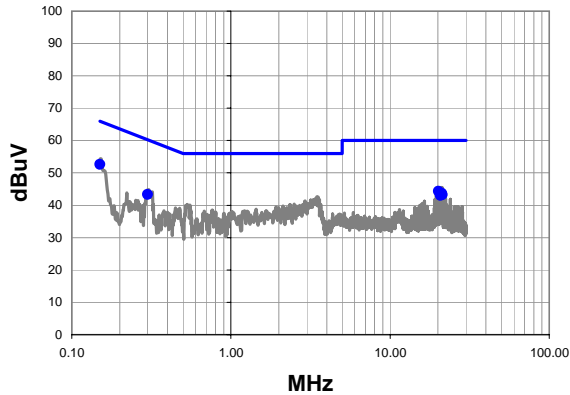
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
21.258	22.2	20.5	42.7	50.0	-7.3
21.144	22.0	20.5	42.5	50.0	-7.5
20.114	21.6	20.5	42.1	50.0	-7.9
20.688	21.4	20.5	41.9	50.0	-8.1
0.150	25.1	22.0	47.1	56.0	-8.9
0.530	11.5	20.8	32.3	46.0	-13.7

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/26/08	<i>Rod Pelouin</i> <b>Tested by:</b> Rod Pelouin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	3 - AC Power line Conducted - PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	Sean Scott			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting low channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	Power via USB from PC host			

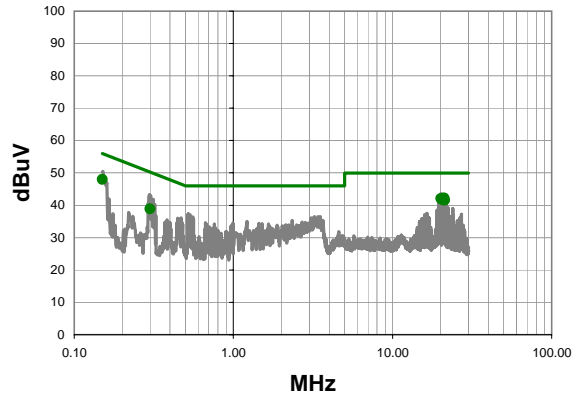
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	8	<b>Line:</b>	Neutral	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	30.6	22.0	52.6	66.0	-13.4
20.114	23.8	20.5	44.3	60.0	-15.7
21.144	23.2	20.5	43.7	60.0	-16.3
21.260	22.7	20.5	43.2	60.0	-16.8
0.300	22.4	20.9	43.3	60.2	-16.9
20.688	22.6	20.5	43.1	60.0	-16.9

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
21.144	21.8	20.5	42.3	50.0	-7.7
20.114	21.6	20.5	42.1	50.0	-7.9
0.150	26.0	22.0	48.0	56.0	-8.0
20.688	21.2	20.5	41.7	50.0	-8.3
21.260	21.1	20.5	41.6	50.0	-8.4
0.300	17.9	20.9	38.8	50.2	-11.4

# EMC

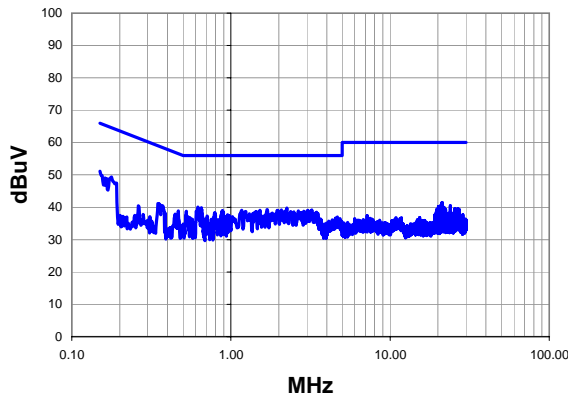
## AC POWERLINE CONDUCTED EMISSIONS

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/27/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	3 - AC Power line Conducted - PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	None			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting mid channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	Power via USB from PC host			

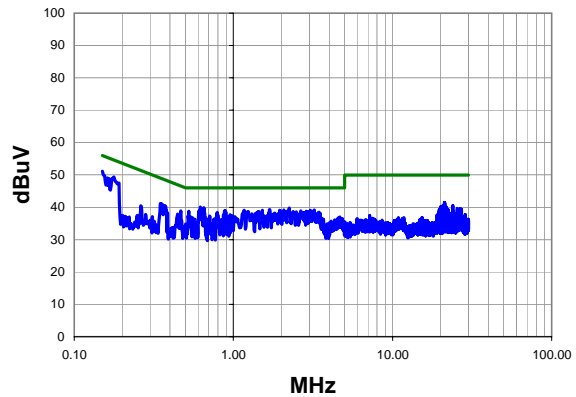
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	9	<b>Line:</b> High Line	<b>Ext. Attenuation:</b> 20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	29.1	22.0	51.1	66.0	-14.9
0.177	27.9	21.5	49.4	64.6	-15.3
0.621	19.3	20.7	40.0	56.0	-16.0
0.652	19.1	20.7	39.8	56.0	-16.2
2.240	19.3	20.5	39.8	56.0	-16.2
1.688	18.8	20.5	39.3	56.0	-16.7
2.072	18.7	20.5	39.2	56.0	-16.8
3.224	18.7	20.5	39.2	56.0	-16.8
1.168	18.6	20.5	39.1	56.0	-16.9
1.520	18.6	20.5	39.1	56.0	-16.9
1.952	18.6	20.5	39.1	56.0	-16.9
3.048	18.6	20.5	39.1	56.0	-16.9
0.884	18.4	20.6	39.0	56.0	-17.0
2.648	18.4	20.5	38.9	56.0	-17.1
0.524	18.0	20.8	38.8	56.0	-17.2
2.872	18.3	20.5	38.8	56.0	-17.2
1.232	18.2	20.5	38.7	56.0	-17.3
1.448	18.2	20.5	38.7	56.0	-17.3
2.376	18.2	20.5	38.7	56.0	-17.3
2.480	18.1	20.5	38.6	56.0	-17.4

Peak Data - vs - Average Limit

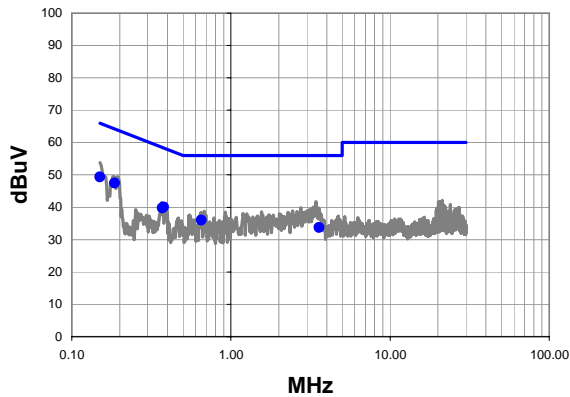
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	29.1	22.0	51.1	56.0	-4.9
0.177	27.9	21.5	49.4	54.6	-5.3
0.621	19.3	20.7	40.0	46.0	-6.0
0.652	19.1	20.7	39.8	46.0	-6.2
2.240	19.3	20.5	39.8	46.0	-6.2
1.688	18.8	20.5	39.3	46.0	-6.7
2.072	18.7	20.5	39.2	46.0	-6.8
3.224	18.7	20.5	39.2	46.0	-6.8
1.168	18.6	20.5	39.1	46.0	-6.9
1.520	18.6	20.5	39.1	46.0	-6.9
1.952	18.6	20.5	39.1	46.0	-6.9
3.048	18.6	20.5	39.1	46.0	-6.9
0.884	18.4	20.6	39.0	46.0	-7.0
2.648	18.4	20.5	38.9	46.0	-7.1
0.524	18.0	20.8	38.8	46.0	-7.2
2.872	18.3	20.5	38.8	46.0	-7.2
1.232	18.2	20.5	38.7	46.0	-7.3
1.448	18.2	20.5	38.7	46.0	-7.3
2.376	18.2	20.5	38.7	46.0	-7.3
2.480	18.1	20.5	38.6	46.0	-7.4

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/27/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	3 - AC Power line Conducted - PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	None			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting mid channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	Power via USB from PC host			

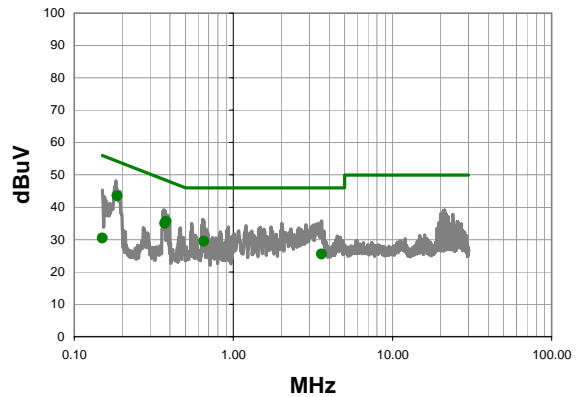
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	10	<b>Line:</b>	Neutral	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	27.4	22.0	49.4	66.0	-16.6
0.186	26.2	21.3	47.5	64.2	-16.7
0.378	19.2	20.9	40.1	58.3	-18.2
0.370	18.9	20.9	39.8	58.5	-18.7
0.653	15.3	20.7	36.0	56.0	-20.0
3.580	13.2	20.5	33.7	56.0	-22.3

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.186	22.2	21.3	43.5	54.2	-10.7
0.378	14.7	20.9	35.6	48.3	-12.7
0.370	14.1	20.9	35.0	48.5	-13.5
0.653	8.8	20.7	29.5	46.0	-16.5
3.580	5.0	20.5	25.5	46.0	-20.5
0.150	8.5	22.0	30.5	56.0	-25.5

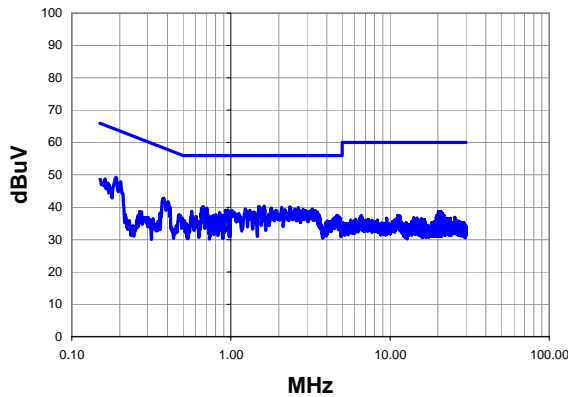


<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/27/08	<i>Rod Peloquin</i> <b>Tested by:</b> Rod Peloquin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	3 - AC Power line Conducted - PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	None			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting high channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	Power via USB from PC host			

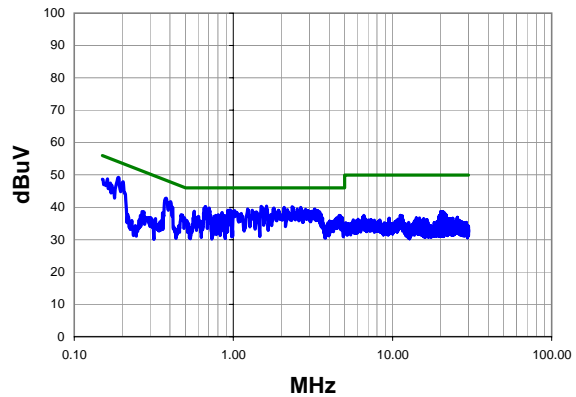
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	11	<b>Line:</b>	High	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.189	28.0	21.2	49.2	64.1	-14.9
0.378	21.9	20.9	42.8	58.3	-15.5
0.203	26.9	21.0	47.9	63.5	-15.6
1.616	19.9	20.5	40.4	56.0	-15.6
1.496	19.8	20.5	40.3	56.0	-15.7
0.670	19.5	20.7	40.2	56.0	-15.8
2.344	19.7	20.5	40.2	56.0	-15.8
2.080	19.5	20.5	40.0	56.0	-16.0
2.648	19.5	20.5	40.0	56.0	-16.0
1.800	19.3	20.5	39.8	56.0	-16.2
0.704	19.1	20.7	39.8	56.0	-16.2
1.232	19.0	20.5	39.5	56.0	-16.5
2.520	19.0	20.5	39.5	56.0	-16.5
3.248	19.0	20.5	39.5	56.0	-16.5
2.840	18.9	20.5	39.4	56.0	-16.6
0.162	27.0	21.8	48.8	65.4	-16.6
2.184	18.8	20.5	39.3	56.0	-16.7
0.957	18.6	20.5	39.1	56.0	-16.9
1.312	18.6	20.5	39.1	56.0	-16.9
1.920	18.6	20.5	39.1	56.0	-16.9

Peak Data - vs - Average Limit

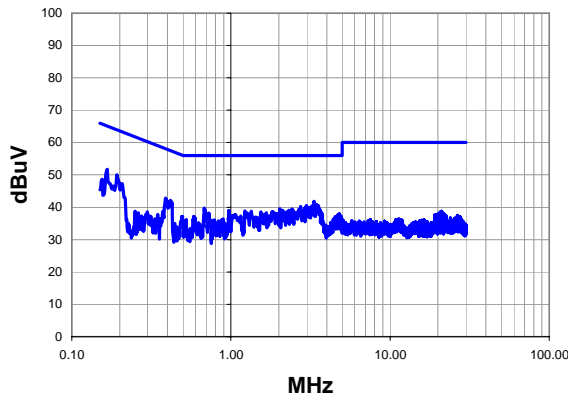
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.189	28.0	21.2	49.2	54.1	-4.9
0.378	21.9	20.9	42.8	48.3	-5.5
0.203	26.9	21.0	47.9	53.5	-5.6
1.616	19.9	20.5	40.4	46.0	-5.6
1.496	19.8	20.5	40.3	46.0	-5.7
0.670	19.5	20.7	40.2	46.0	-5.8
2.344	19.7	20.5	40.2	46.0	-5.8
2.080	19.5	20.5	40.0	46.0	-6.0
2.648	19.5	20.5	40.0	46.0	-6.0
1.800	19.3	20.5	39.8	46.0	-6.2
0.704	19.1	20.7	39.8	46.0	-6.2
1.232	19.0	20.5	39.5	46.0	-6.5
2.520	19.0	20.5	39.5	46.0	-6.5
3.248	19.0	20.5	39.5	46.0	-6.5
2.840	18.9	20.5	39.4	46.0	-6.6
0.162	27.0	21.8	48.8	55.4	-6.6
2.184	18.8	20.5	39.3	46.0	-6.7
0.957	18.6	20.5	39.1	46.0	-6.9
1.312	18.6	20.5	39.1	46.0	-6.9
1.920	18.6	20.5	39.1	46.0	-6.9

<b>Work Order:</b>	CNTR0018	<b>Date:</b>	03/27/08	<i>Rod Pelouin</i> <b>Tested by:</b> Rod Pelouin
<b>Project:</b>	None	<b>Temperature:</b>	23°C	
<b>Job Site:</b>	EV07	<b>Humidity:</b>	25	
<b>Serial Number:</b>	Unit 1	<b>Barometric Pres.:</b>	29.95	
<b>EUT:</b>	Mega M.O.L.E.			
<b>Configuration:</b>	3 - AC Power line Conducted - PC Host			
<b>Customer:</b>	Controltek, Inc.			
<b>Attendees:</b>	None			
<b>EUT Power:</b>	120V/60Hz			
<b>Operating Mode:</b>	Transmitting high channel			
<b>Deviations:</b>	No Deviations			
<b>Comments:</b>	Power via USB from PC host			

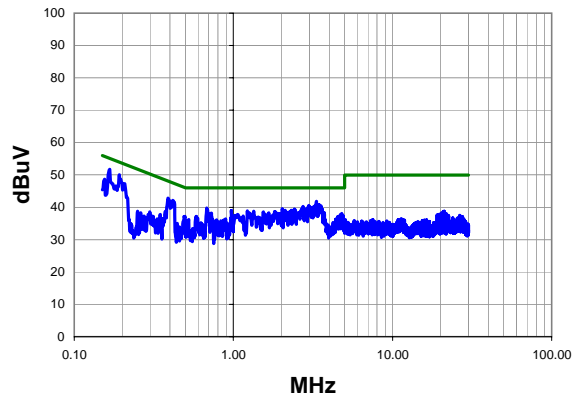
<b>Test Specifications</b> FCC 15.207:2007	<b>Class B</b>	<b>Test Method</b> ANSI C63.4:2003
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<b>Run #</b>	12	<b>Line:</b>	Neutral	<b>Ext. Attenuation:</b>	20	<b>Results</b>	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.167	30.1	21.7	51.8	65.1	-13.3
0.193	28.9	21.2	50.1	63.9	-13.9
3.320	21.3	20.5	41.8	56.0	-14.2
3.456	20.4	20.5	40.9	56.0	-15.1
3.344	20.3	20.5	40.8	56.0	-15.2
0.388	21.9	20.9	42.8	58.1	-15.3
2.984	20.1	20.5	40.6	56.0	-15.4
2.736	19.8	20.5	40.3	56.0	-15.7
0.679	19.1	20.7	39.8	56.0	-16.2
2.896	19.3	20.5	39.8	56.0	-16.2
2.032	19.1	20.5	39.6	56.0	-16.4
2.416	19.0	20.5	39.5	56.0	-16.5
2.112	18.6	20.5	39.1	56.0	-16.9
2.304	18.6	20.5	39.1	56.0	-16.9
0.971	18.5	20.5	39.0	56.0	-17.0
0.155	26.8	21.9	48.7	65.7	-17.0
1.224	18.4	20.5	38.9	56.0	-17.1
2.344	18.4	20.5	38.9	56.0	-17.1
1.344	18.3	20.5	38.8	56.0	-17.2
1.816	18.2	20.5	38.7	56.0	-17.3

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.167	30.1	21.7	51.8	55.1	-3.3
0.193	28.9	21.2	50.1	53.9	-3.9
3.320	21.3	20.5	41.8	46.0	-4.2
3.456	20.4	20.5	40.9	46.0	-5.1
3.344	20.3	20.5	40.8	46.0	-5.2
0.388	21.9	20.9	42.8	48.1	-5.3
2.984	20.1	20.5	40.6	46.0	-5.4
2.736	19.8	20.5	40.3	46.0	-5.7
0.679	19.1	20.7	39.8	46.0	-6.2
2.896	19.3	20.5	39.8	46.0	-6.2
2.032	19.1	20.5	39.6	46.0	-6.4
2.416	19.0	20.5	39.5	46.0	-6.5
2.112	18.6	20.5	39.1	46.0	-6.9
2.304	18.6	20.5	39.1	46.0	-6.9
0.971	18.5	20.5	39.0	46.0	-7.0
0.155	26.8	21.9	48.7	55.7	-7.0
1.224	18.4	20.5	38.9	46.0	-7.1
2.344	18.4	20.5	38.9	46.0	-7.1
1.344	18.3	20.5	38.8	46.0	-7.2
1.816	18.2	20.5	38.7	46.0	-7.3





