

Avnera

AVMD7500-07B

July 29, 2008

Report No. AVNE0032 Rev 01

Report Prepared By



www.nwemc.com

1-888-EMI-CERT

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EMC Test Report



22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test
Issue Date: July 29, 2008
Avnera
Model: AVMD7500-07B

Emissions			
Test Description	Specification	Test Method	Pass/Fail
Spurious Radiated Emissions	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
Peak Output Power	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 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	Pass

Modifications made to the product

See the Modifications section of this report

Deviations to the test standard

None

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 #2834D-1).

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
01	Removed modification info on AC Powerline Conducted Emissions	9/12/08	49-56
01	Added Antenna details to configuration page	9/12/08	8

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-Gen, Issue 2 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. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2*)



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 (US0017). 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



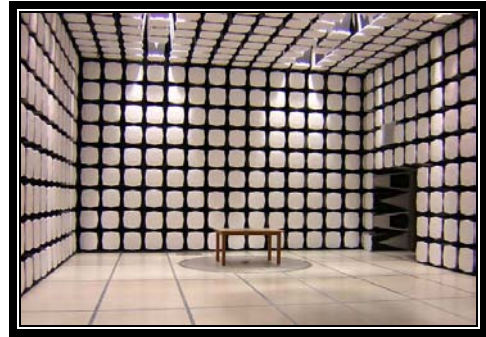
MIC: Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157*)



SCOPE

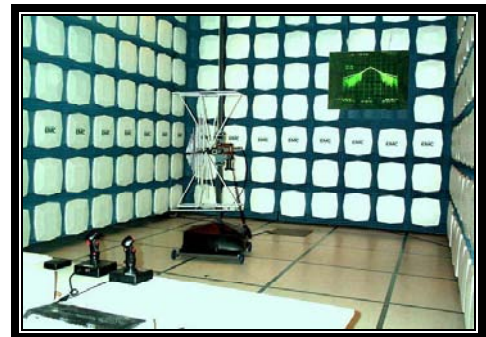
For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>



**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 339th Ave. SE Sultan, WA 98294
(888) 364-2378

Party Requesting the Test

Company Name:	Avnera
Address:	16505 NW Bethany Ct, Suite 100
City, State, Zip:	Beaverton, OR 97006
Test Requested By:	Fred Weiss
Model:	AVMD7500-07B
First Date of Test:	July 23, 2008
Last Date of Test:	July 28, 2008
Receipt Date of Samples:	July 23, 2008
Equipment Design Stage:	Production
Equipment Condition:	No Damage

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

The module is the heart of a multi-source/multi-destination high-quality wireless audio distribution system. The module can operate as either the source end (\\\"Arbiter\\\") or destination end (\\\"Client\\\") based on configuration firmware; the RF performance of the module in either configuration is the same. The heart of the module is the Avnera AV7500 custom IC which contains the audio I/O and baseband signal processing functions, RF transceiver and signal synthesizer, and system control processor. The system can support up to 12 16b/48kHz audio channels that can be configured as mono or stereo transport paths; alternatively, the system can be set up to handle 4 24b/96kHz HD channels). In addition, the over-the-air (OTA) protocol provides bandwidth for link management as well as customer system data such as volume control. The module provides 8 I2S digital audio ports which are configurable as either inputs or outputs to/from system audio sources. The wireless link uses a 16MHz-wide OFDM spectrum operating in the 2.4-2.5GHz ISM band; the transmit spectrum may be centered on 2412MHz, 2438MHz, or 2462MHz, the choice being based on continuous monitoring of the spectrum for the lowest level of interference.

Testing Objective:

Seeking approval by a TCB under FCC 15.247

CONFIGURATION 1 AVNE0032

Software/Firmware Running during test	
Description	Version
AM2Gdebug	v1.0.040

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Wireless Audio Module	Avnera	AVMD7500-07B	02

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Test Fixture	Avnera	AVTF55-01B	13
USB-SPY convertor	Avnera	Anteater	None
AC Adapter	Zip	RWP480505-1	None
Control PC	Dell	Inspiron 6000	DZ88H81

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Leads	No	1.2m	PA	Test Fixture	AC Mains
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 AVNE0032

Software/Firmware Running during test	
Description	Version
AM2Gdebug	v1.0.040

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Wireless Audio Module	Avnera	AVMD7500-07B	04
Printed Dipole Antenna	Avnera	AVTF57	None

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Test Fixture	Avnera	AVTF55-01B	04
Test Fixture	Avnera	AVTF55-01B	14
USB-SPY convertor	Avnera	Anteater	None
AC Adapter	Zip	RWP480505-1	None
Control PC	Dell	Inspiron 6000	DZ88H81

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Leads	No	1.2m	PA	Test Fixture	AC Mains
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 4 AVNE0032

Software/Firmware Running during test	
Description	Version
AM2Gdebug	v1.0.040

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Wireless Audio Module	Avnera	AVMD7500-07B	04

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Test Fixture	Avnera	AVTF55-01B	14
AC Adapter	Zip	RWP480505-1	None

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
USB-SPY convertor	Avnera	Anteater	None
Control PC	Dell	Inspiron 6000	DZ88H81

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Leads	No	1.2m	PA	Test Fixture	AC Mains
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
Audio Cable	Yes	1.0m	No	Test Fixture	Unterminated
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 6 AVNE0032

Software/Firmware Running during test	
Description	Version
AM2Gdebug	v1.0.040

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT - Wireless Audio Module	Avnera	AVMD7500-07B	04

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Test Fixture	Avnera	AVTF55-01B	04
USB-SPY convertor	Avnera	Anteater	None
AC Adapter	Zip	RWP480505-1	None
Control PC	Dell	Inspiron 6000	DZ88H81

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Leads	No	1.2m	PA	Test Fixture	AC Mains
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	7/23/2008	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.
2	7/23/2008	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.
3	7/23/2008	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.
4	7/25/2008	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.
5	7/25/2008	Radiated Spurious 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.
6	7/28/2008	Peak 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.
7	7/28/2008	Power spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was complete.

EMC**SPURIOUS RADIATED EMISSIONS**

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

120VAC/60Hz

TEST EQUIPMENT

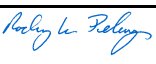
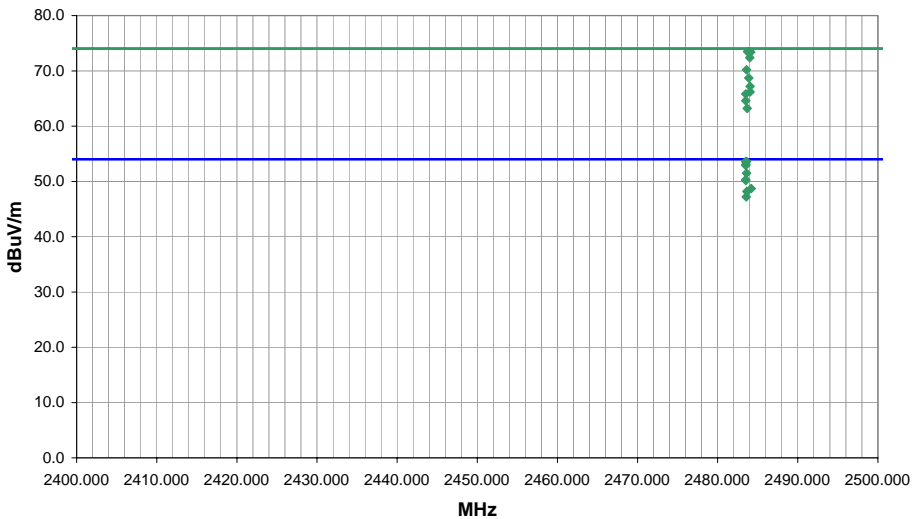
Description	Manufacturer	Model	ID	Last Cal.	Interval
Low Pass Filter 0-1000 MHz	Micro-Tronics	LPM50004	LFD	5/21/2008	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	5/21/2008	13
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	5/19/2008	13
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Bilog Cables	EVA	5/19/2008	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	5/19/2008	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	24
EV01 Cables		Double Ridge Horn Cables	EVB	5/19/2008	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	6/30/2008	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	6/30/2008	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 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 axes, 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.

NORTHWEST EMC		SPURIOUS RADIATED EMISSIONS DATA SHEET										PSA 2007.05.07 EMI 2008.7.3																																																																																																																																													
EUT: AVMD7500-07B												Work Order: AVNE0032																																																																																																																																													
Serial Number: 04												Date: 07/23/08																																																																																																																																													
Customer: Avnera												Temperature: 25°C																																																																																																																																													
Attendees: Fred Weiss												Humidity: 36%																																																																																																																																													
Project: None												Barometric Pres.: 1022.9 mb																																																																																																																																													
Tested by: Rod Peloquin												Power: 120VAC/60Hz																																																																																																																																													
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Results		Pass																																																																																																																																																							
																																																																																																																																																									
<table><thead><tr><th>Freq (MHz)</th><th>Amplitude (dBuV)</th><th>Factor (dB)</th><th>Azimuth (degrees)</th><th>Height (meters)</th><th>Distance (meters)</th><th>External Attenuation (dB)</th><th>Polarity</th><th>Detector</th><th>Distance Adjustment (dB)</th><th>Adjusted dBuV/m</th><th>Spec. Limit dBuV/m</th><th>Compared to Spec. (dB)</th><th>Comments</th></tr></thead><tbody><tr><td>2464.310</td><td>90.5</td><td>2.0</td><td>11.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>V-Horn</td><td>PK</td><td>0.0</td><td>112.5</td><td>74.0</td><td>-8.2</td><td>Fundamental, Antenna 0, Module vertical</td></tr><tr><td>2483.500</td><td></td><td></td><td>11.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>V-Horn</td><td>PK</td><td>0.0</td><td>65.8</td><td></td><td></td><td>Antenna 0, Module vertical, Marker Delta Method: Peak 112.5 + -46.7 dBc = 65.8</td></tr><tr><td>2455.700</td><td>91.9</td><td>2.0</td><td>24.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>PK</td><td>0.0</td><td>113.9</td><td>74.0</td><td>-9.4</td><td>Fundamental, Antenna 0, Module on side</td></tr><tr><td>2483.500</td><td></td><td></td><td>24.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>PK</td><td>0.0</td><td>64.6</td><td></td><td></td><td>Antenna 0, Module on side, Marker Delta Method: Peak 113.9 + -49.3 dBc = 64.6</td></tr><tr><td>2483.500</td><td>31.4</td><td>2.2</td><td>280.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>AV</td><td>0.0</td><td>53.6</td><td>54.0</td><td>-0.4</td><td>Antenna 0, Module horizontal</td></tr><tr><td>2483.610</td><td>31.4</td><td>2.2</td><td>29.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>AV</td><td>0.0</td><td>53.6</td><td>54.0</td><td>-0.4</td><td>Antenna 0, Module on side</td></tr><tr><td>2483.735</td><td>51.3</td><td>2.2</td><td>279.0</td><td>1.1</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>PK</td><td>0.0</td><td>73.5</td><td>74.0</td><td>-0.5</td><td>Antenna 0, Module horizontal</td></tr><tr><td>2484.135</td><td>51.2</td><td>2.2</td><td>14.0</td><td>1.2</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>PK</td><td>0.0</td><td>73.4</td><td>74.0</td><td>-0.6</td><td>Antenna 1, Module on side</td></tr><tr><td>2483.523</td><td>30.9</td><td>2.2</td><td>14.0</td><td>1.2</td><td>3.0</td><td>20.0</td><td>H-Horn</td><td>AV</td><td>0.0</td><td>53.1</td><td>54.0</td><td>-0.9</td><td>Antenna 1, Module on side</td></tr></tbody></table>														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	2464.310	90.5	2.0	11.0	1.1	3.0	20.0	V-Horn	PK	0.0	112.5	74.0	-8.2	Fundamental, Antenna 0, Module vertical	2483.500			11.0	1.1	3.0	20.0	V-Horn	PK	0.0	65.8			Antenna 0, Module vertical, Marker Delta Method: Peak 112.5 + -46.7 dBc = 65.8	2455.700	91.9	2.0	24.0	1.1	3.0	20.0	H-Horn	PK	0.0	113.9	74.0	-9.4	Fundamental, Antenna 0, Module on side	2483.500			24.0	1.1	3.0	20.0	H-Horn	PK	0.0	64.6			Antenna 0, Module on side, Marker Delta Method: Peak 113.9 + -49.3 dBc = 64.6	2483.500	31.4	2.2	280.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.6	54.0	-0.4	Antenna 0, Module horizontal	2483.610	31.4	2.2	29.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.6	54.0	-0.4	Antenna 0, Module on side	2483.735	51.3	2.2	279.0	1.1	3.0	20.0	H-Horn	PK	0.0	73.5	74.0	-0.5	Antenna 0, Module horizontal	2484.135	51.2	2.2	14.0	1.2	3.0	20.0	H-Horn	PK	0.0	73.4	74.0	-0.6	Antenna 1, Module on side	2483.523	30.9	2.2	14.0	1.2	3.0	20.0	H-Horn	AV	0.0	53.1	54.0	-0.9	Antenna 1, Module on side
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																																																																																																																																												
2464.310	90.5	2.0	11.0	1.1	3.0	20.0	V-Horn	PK	0.0	112.5	74.0	-8.2	Fundamental, Antenna 0, Module vertical																																																																																																																																												
2483.500			11.0	1.1	3.0	20.0	V-Horn	PK	0.0	65.8			Antenna 0, Module vertical, Marker Delta Method: Peak 112.5 + -46.7 dBc = 65.8																																																																																																																																												
2455.700	91.9	2.0	24.0	1.1	3.0	20.0	H-Horn	PK	0.0	113.9	74.0	-9.4	Fundamental, Antenna 0, Module on side																																																																																																																																												
2483.500			24.0	1.1	3.0	20.0	H-Horn	PK	0.0	64.6			Antenna 0, Module on side, Marker Delta Method: Peak 113.9 + -49.3 dBc = 64.6																																																																																																																																												
2483.500	31.4	2.2	280.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.6	54.0	-0.4	Antenna 0, Module horizontal																																																																																																																																												
2483.610	31.4	2.2	29.0	1.1	3.0	20.0	H-Horn	AV	0.0	53.6	54.0	-0.4	Antenna 0, Module on side																																																																																																																																												
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2484.135	51.2	2.2	14.0	1.2	3.0	20.0	H-Horn	PK	0.0	73.4	74.0	-0.6	Antenna 1, Module on side																																																																																																																																												
2483.523	30.9	2.2	14.0	1.2	3.0	20.0	H-Horn	AV	0.0	53.1	54.0	-0.9	Antenna 1, Module on side																																																																																																																																												

SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT:	AVMD7500-07B	Work Order:	AVNE0032
Serial Number:	04	Date:	07/23/08
Customer:	Avnera	Temperature:	25°C
Attendees:	Fred Weiss	Humidity:	36%
Project:	None	Barometric Pres.:	1022.9 mb
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS

FCC 15.247 (DTS):2007

Test Method

ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS

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

Antenna 0, Module oriented vertical, Vertical receive antenna

EUT OPERATING MODES

Transmitting, high channel, 2462 MHz

DEVIATIONS FROM TEST STANDARD

No deviations.

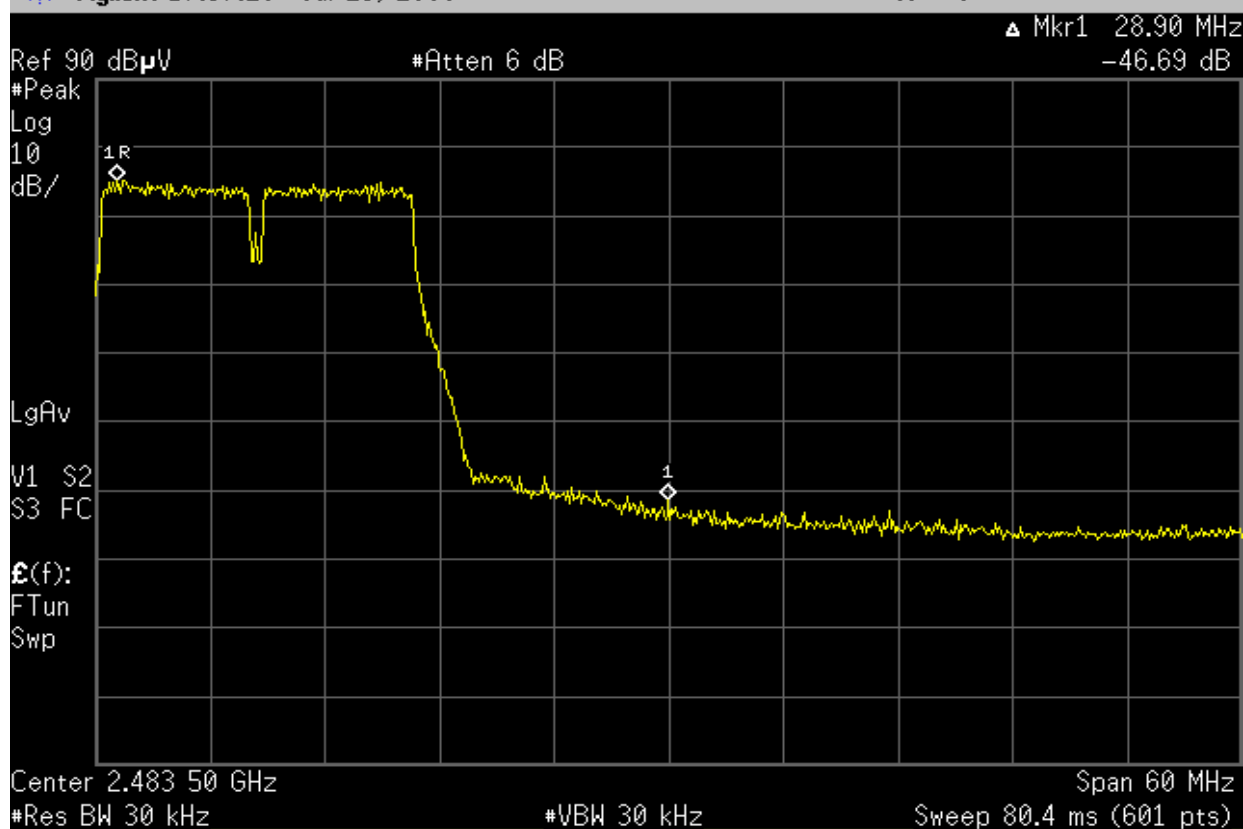
Run #	1
Configuration #	2
Results	NA

Signature

Rod L. Peloquin

Agilent 17:37:29 Jul 23, 2008

R T



SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT:	AVMD7500-07B	Work Order:	AVNE0032
Serial Number:	04	Date:	07/23/08
Customer:	Avnera	Temperature:	25°C
Attendees:	Fred Weiss	Humidity:	36%
Project:	None	Barometric Pres.:	1022.9 mb
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS

FCC 15.247 (DTS):2007

Test Method

ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS

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

COMMENTS

Antenna 0, Module oriented on side, Horizontal receive antenna

EUT OPERATING MODES

Transmitting, high channel, 2462 MHz

DEVIATIONS FROM TEST STANDARD

No deviations.

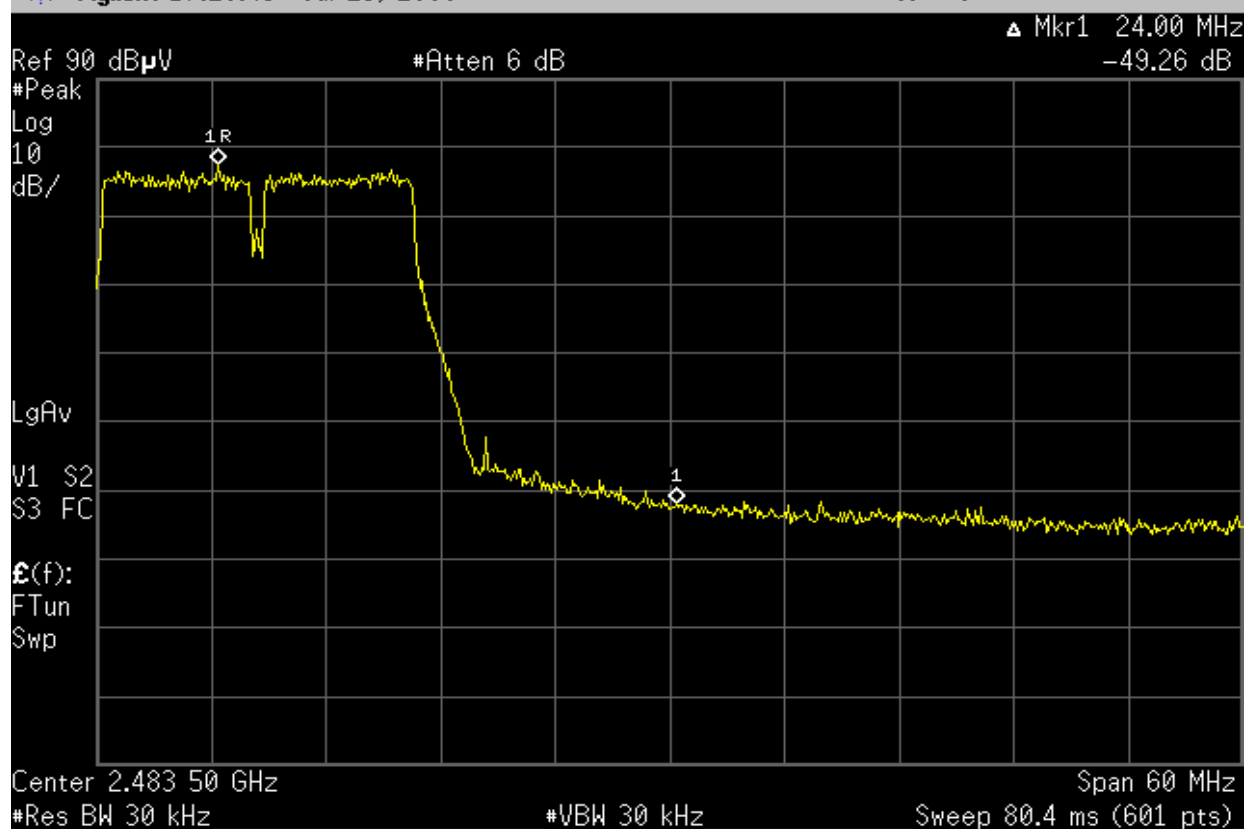
Run #	1
Configuration #	2
Results	NA

Signature

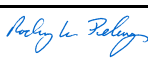
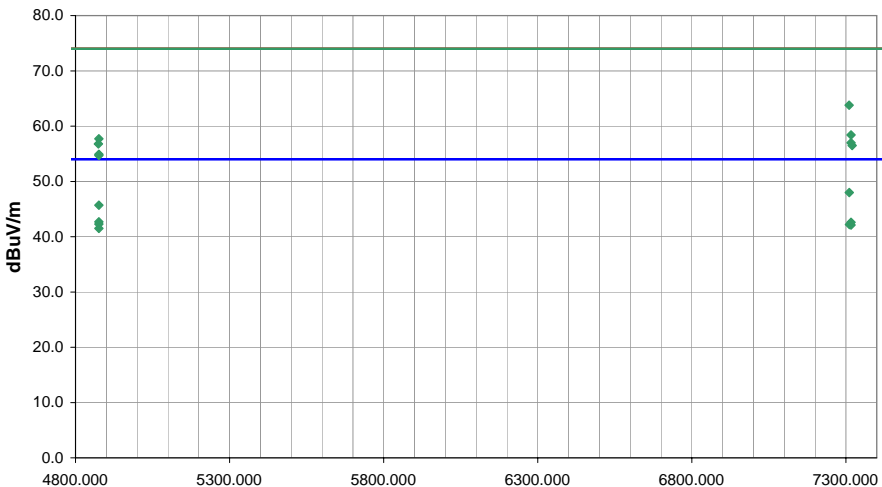
Rod Peloquin


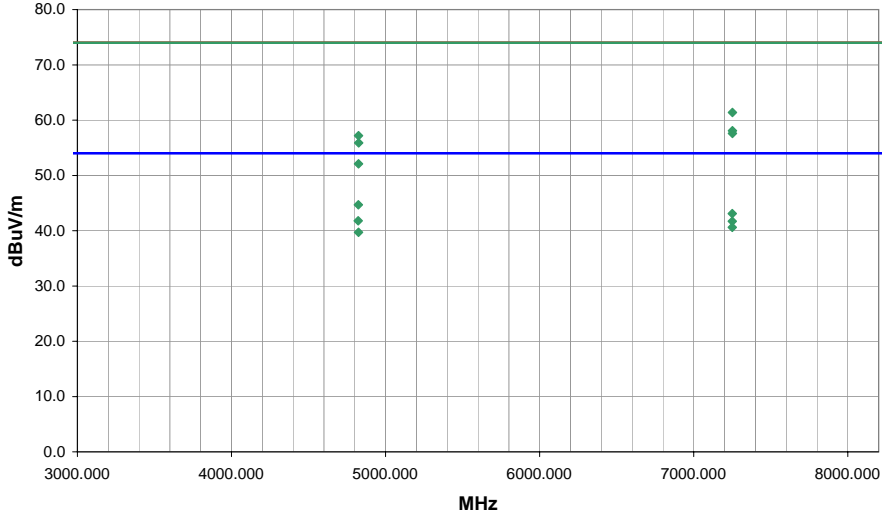
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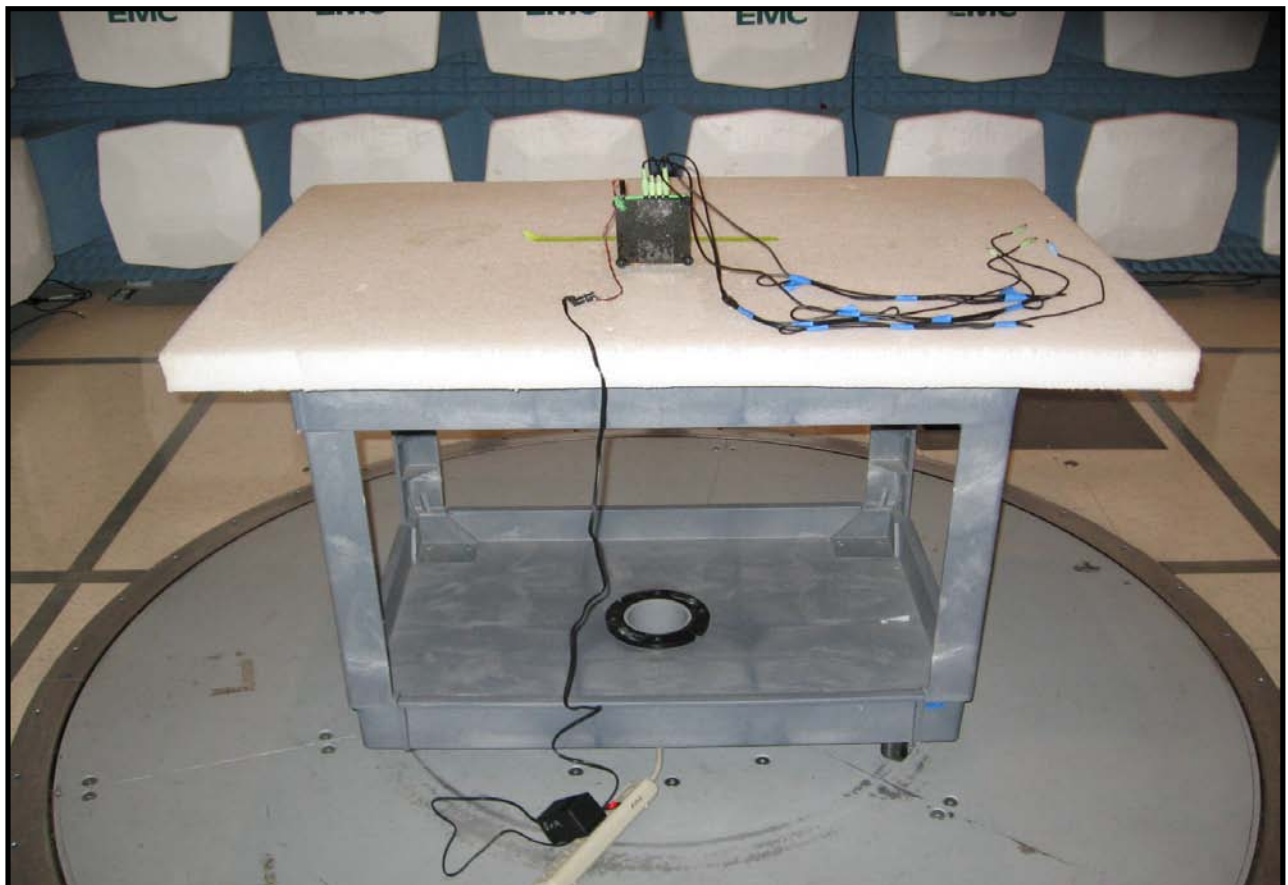
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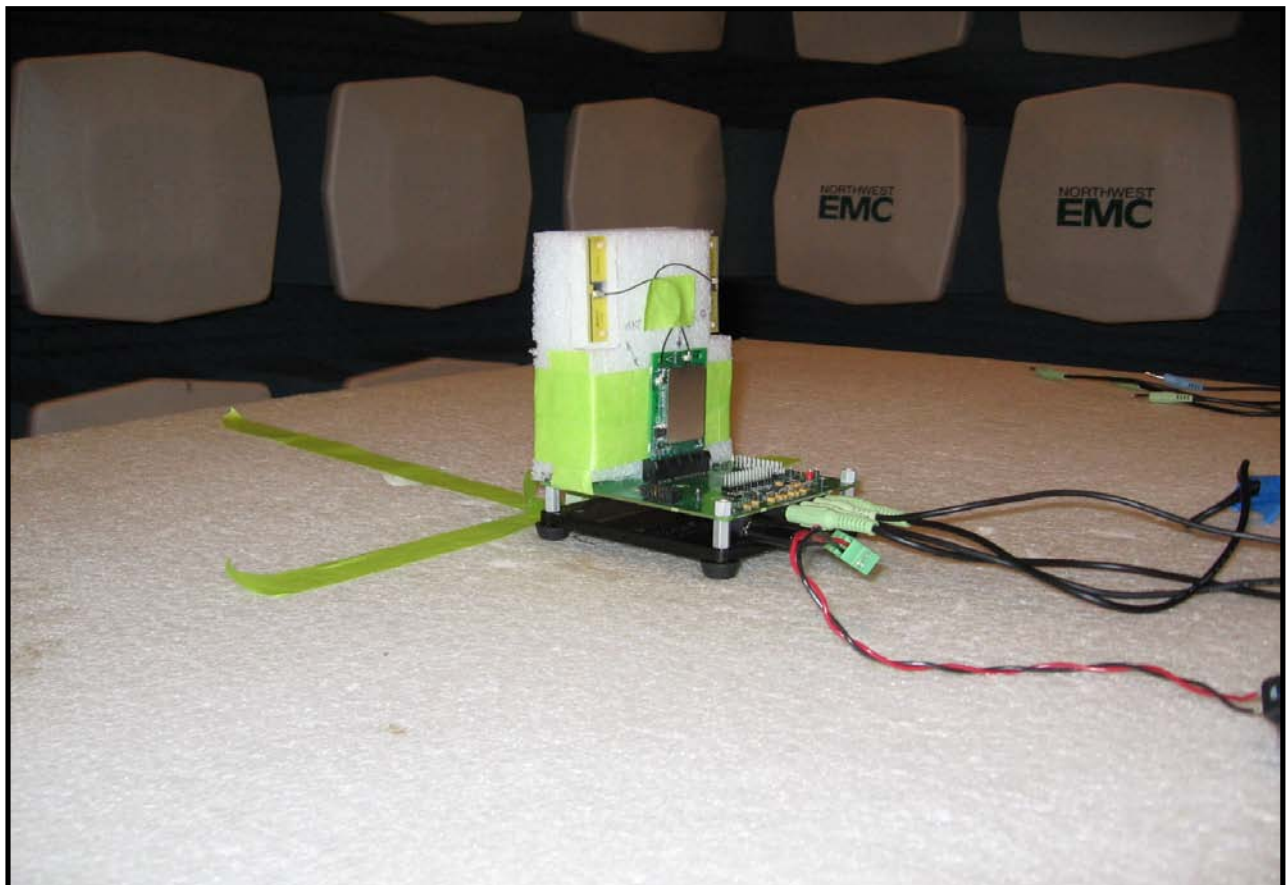
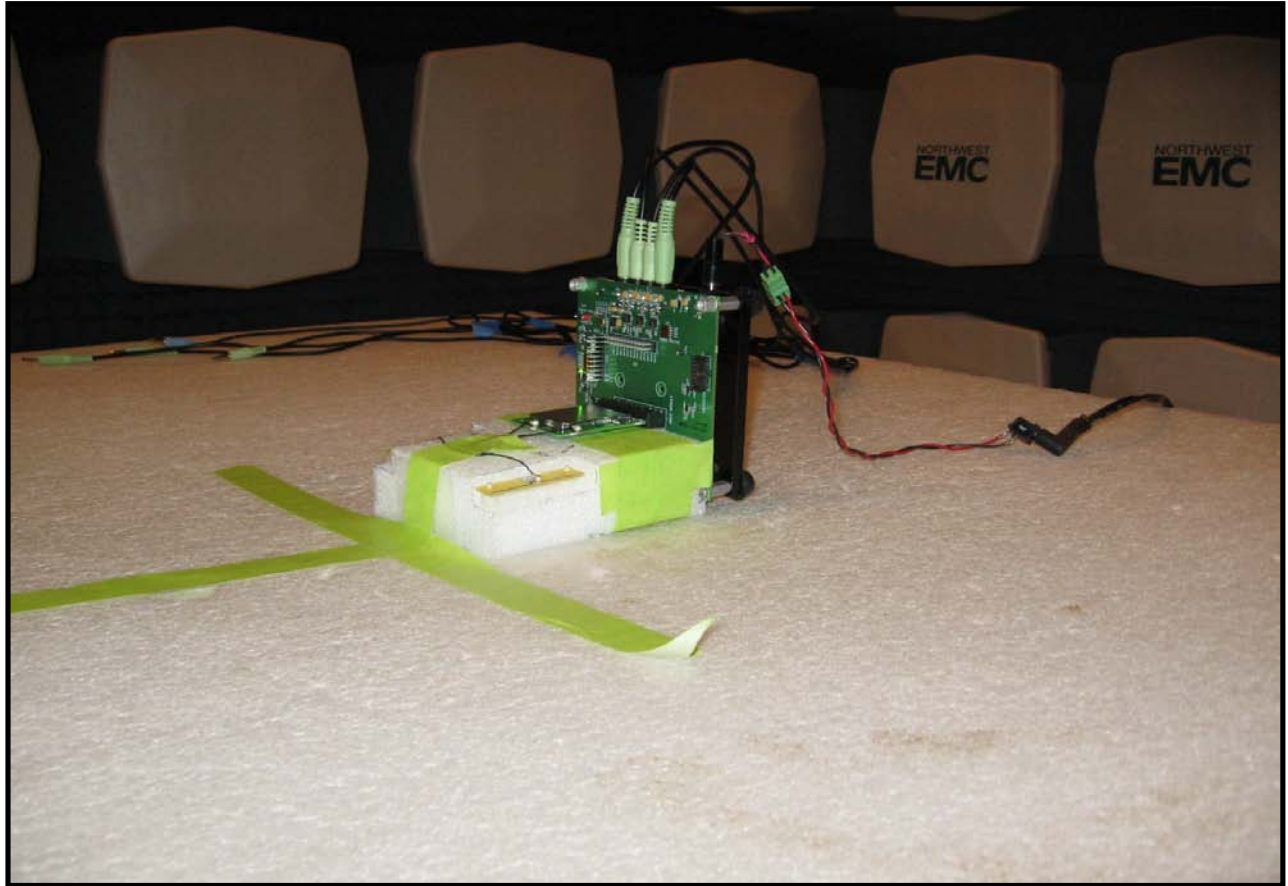


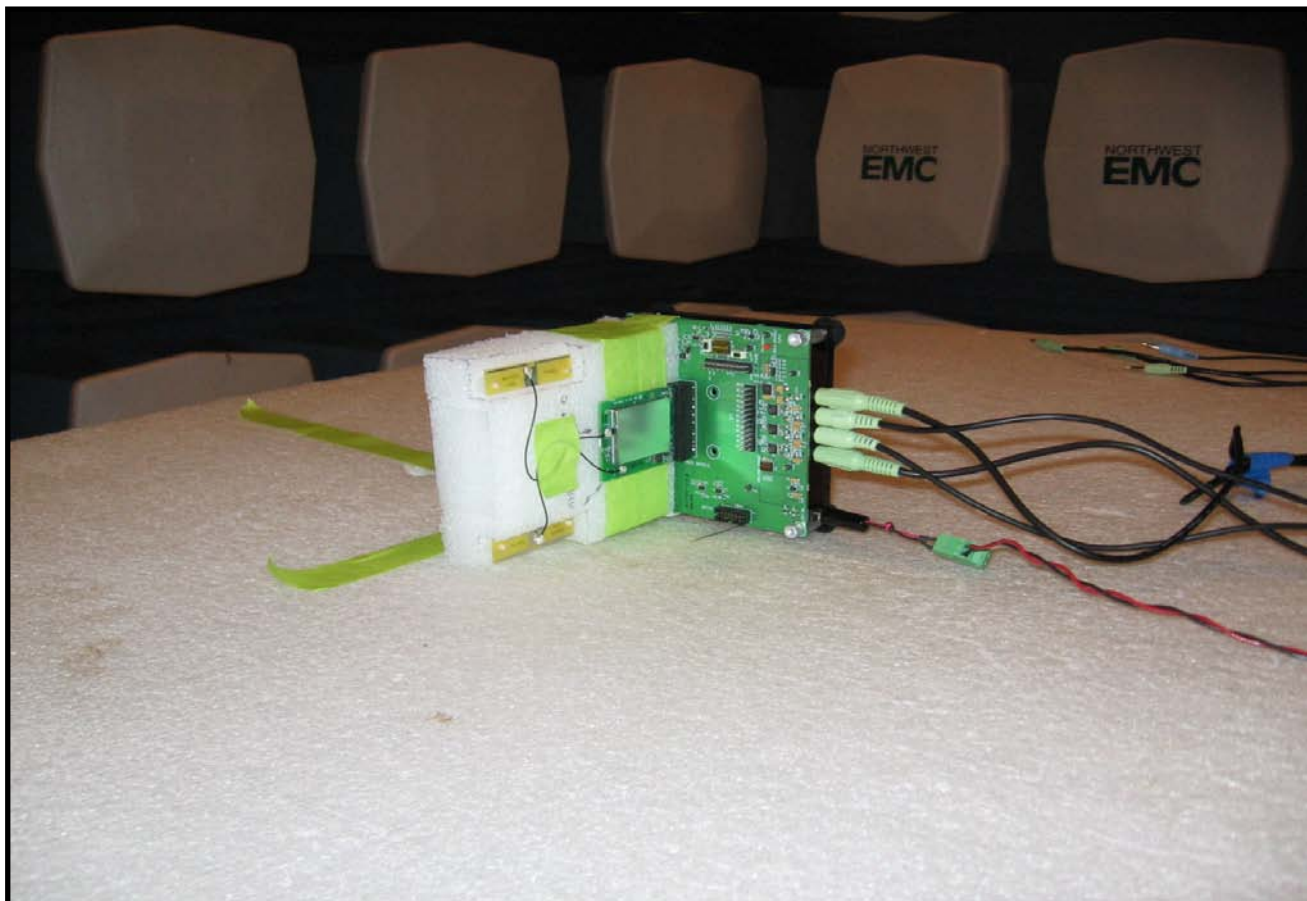
NORTHWEST		EMC		SPURIOUS RADIATED EMISSIONS DATA SHEET		PSA 2007.05.07							
EUT: AVMD7500-07B		Work Order: AVNE0032											
Serial Number: 04		Date: 07/24/08											
Customer: Avnera		Temperature: 25°C											
Attendees: Fred Weiss		Humidity: 36%											
Project: None		Barometric Pres.: 1022.9 mb											
Tested by: Rod Peloquin		Power: 120VAC/60Hz		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													
Module horizontal													
EUT OPERATING MODES													
Transmitting													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		2											
Configuration #		2											
Results		Pass		Signature		Rodry Le Peloquin							
MHz													
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
2496.050	30.0	2.2	10.0	1.1	3.0	20.0	V-Horn	AV	0.0	52.2	54.0	-1.8	Low channel, Antenna 0, Module vertical
2497.312	29.9	2.2	10.0	1.1	3.0	20.0	V-Horn	AV	0.0	52.1	54.0	-1.9	Low channel, Antenna 0, Module vertical
2485.710	29.5	2.2	23.0	1.1	3.0	20.0	V-Horn	AV	0.0	51.7	54.0	-2.3	High channel, Antenna 0, Module vertical
2491.717	29.1	2.2	131.0	1.1	3.0	20.0	V-Horn	AV	0.0	51.3	54.0	-2.7	Low channel, Antenna 1, Module vertical
2496.613	28.8	2.2	134.0	1.0	3.0	20.0	V-Horn	AV	0.0	51.0	54.0	-3.0	Low channel, Antenna 1, Module vertical
2496.397	28.7	2.2	301.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.9	54.0	-3.1	High channel, Antenna 0, Module vertical
2496.110	28.6	2.2	265.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.8	54.0	-3.2	Mid channel, Antenna 0, Module vertical
2492.377	28.5	2.2	309.0	1.1	3.0	20.0	V-Horn	AV	0.0	50.7	54.0	-3.3	Mid channel, Antenna 0, Module vertical
2495.705	28.5	2.2	132.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.7	54.0	-3.3	High channel, Antenna 1, Module vertical
2496.417	28.5	2.2	141.0	1.1	3.0	20.0	V-Horn	AV	0.0	50.7	54.0	-3.3	Mid channel, Antenna 1, Module vertical
2495.878	28.0	2.2	9.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.2	54.0	-3.8	Low channel, Antenna 0, Module vertical
2492.583	27.9	2.2	139.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.1	54.0	-3.9	Mid channel, Antenna 1, Module vertical
2496.852	27.9	2.2	117.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.1	54.0	-3.9	High channel, Antenna 1, Module vertical
2264.470	28.6	1.1	100.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.7	54.0	-4.3	High channel, Antenna 1, Module horizontal
2486.293	47.5	2.2	23.0	1.1	3.0	20.0	V-Horn	PK	0.0	69.7	74.0	-4.3	High channel, Antenna 0, Module vertical
2277.040	28.5	1.2	287.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.7	54.0	-4.3	Mid channel, Antenna 0, Module horizontal
2259.930	28.5	1.1	99.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.6	54.0	-4.4	High channel, Antenna 1, Module horizontal
2262.609	28.5	1.1	279.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.6	54.0	-4.4	High channel, Antenna 0, Module horizontal
2264.427	28.5	1.1	101.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.6	54.0	-4.4	Low channel, Antenna 1, Module horizontal
2275.740	28.4	1.2	107.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.6	54.0	-4.4	Mid channel, Antenna 1, Module horizontal

NORTHWEST		SPURIOUS RADIATED EMISSIONS DATA SHEET										PSA 2007.05.07 EMI 2008.7.3					
EUT: AVMD7500-07B												Work Order: AVNE0032					
Serial Number: 04												Date: 07/24/08					
Customer: Avnera												Temperature: 25°C					
Attendees: Fred Weiss												Humidity: 36%					
Project: None												Barometric Pres.: 1022.9 mb					
Tested by: Rod Peloquin												Power: 120VAC/60Hz		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																	
None																	
EUT OPERATING MODES																	
Transmitting mid channel																	
DEVIATIONS FROM TEST STANDARD																	
No deviations.																	
Run #		4		<div>Signature</div> 													
Configuration #		2															
Results		Pass															
<div></div>																	
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				
7310.630	32.5	15.5	47.0	1.0	3.0	0.0	V-Horn	AV	0.0	48.0	54.0	-6.0	Mid channel, Antenna 1, Module on side				
4875.800	35.9	9.8	316.0	1.0	3.0	0.0	V-Horn	AV	0.0	45.7	54.0	-8.3	Mid channel, Antenna 1, Module on side				
7310.130	48.3	15.5	47.0	1.0	3.0	0.0	V-Horn	PK	0.0	63.8	74.0	-10.2	Mid channel, Antenna 1, Module on side				
4875.930	33.0	9.7	40.0	1.0	3.0	0.0	V-Horn	AV	0.0	42.7	54.0	-11.3	Mid channel, Antenna 0, Module on side				
7316.200	27.0	15.6	109.0	1.0	3.0	0.0	V-Horn	AV	0.0	42.6	54.0	-11.4	Mid channel, Antenna 0, Module on side				
4875.900	32.5	9.8	8.0	1.0	3.0	0.0	H-Horn	AV	0.0	42.3	54.0	-11.7	Mid channel, Antenna 1, Module vertical				
7310.970	26.6	15.6	233.0	1.1	3.0	0.0	H-Horn	AV	0.0	42.2	54.0	-11.8	Mid channel, Antenna 0, Module vertical				
7316.600	26.6	15.5	7.0	1.2	3.0	0.0	H-Horn	AV	0.0	42.1	54.0	-11.9	Mid channel, Antenna 1, Module vertical				
4875.900	31.7	9.8	22.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.5	54.0	-12.5	Mid channel, Antenna 0, Module vertical				
7316.670	42.9	15.5	109.0	1.0	3.0	0.0	V-Horn	PK	0.0	58.4	74.0	-15.6	Mid channel, Antenna 0, Module on side				
4875.830	47.9	9.8	316.0	1.0	3.0	0.0	V-Horn	PK	0.0	57.7	74.0	-16.3	Mid channel, Antenna 1, Module on side				
7316.270	41.5	15.5	7.0	1.2	3.0	0.0	H-Horn	PK	0.0	57.0	74.0	-17.0	Mid channel, Antenna 1, Module vertical				
4874.330	47.0	9.8	40.0	1.0	3.0	0.0	V-Horn	PK	0.0	56.8	74.0	-17.2	Mid channel, Antenna 0, Module on side				
7319.830	41.0	15.5	233.0	1.1	3.0	0.0	H-Horn	PK	0.0	56.5	74.0	-17.5	Mid channel, Antenna 0, Module vertical				
4875.730	45.1	9.8	8.0	1.0	3.0	0.0	H-Horn	PK	0.0	54.9	74.0	-19.1	Mid channel, Antenna 1, Module vertical				
4875.600	44.9	9.8	24.0	1.0	3.0	0.0	H-Horn	PK	0.0	54.7	74.0	-19.3	Mid channel, Antenna 0, Module vertical				

NORTHWEST EMC		SPURIOUS RADIATED EMISSIONS DATA SHEET		PSA 2007.05.07 EMI 2008.7.3									
EUT: AVMD7500-07B		Work Order: AVNE0032											
Serial Number: 04		Date: 07/24/08											
Customer: Avnera		Temperature: 25°C											
Attendees: Fred Weiss		Humidity: 36%											
Project: None		Barometric Pres.: 1022.9 mb											
Tested by: Rod Peloquin		Power: 120VAC/60Hz		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													
None													
EUT OPERATING MODES													
Transmitting low channel													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #	5												
Configuration #	2												
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
4823.830	35.2	9.5	30.0	1.0	3.0	0.0	V-Horn	AV	0.0	44.7	54.0	-9.3	Low channel, Antenna 1, Module on side
7250.000	27.7	15.4	84.0	1.2	3.0	0.0	V-Horn	AV	0.0	43.1	54.0	-10.9	Low channel, Antenna 1, Module on side
4822.470	32.3	9.5	44.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.8	54.0	-12.2	Low channel, Antenna 0, Module on side
7250.000	26.3	15.4	15.0	1.2	3.0	0.0	H-Horn	AV	0.0	41.7	54.0	-12.3	Low channel, Antenna 1, Module vertical
7251.380	46.0	15.4	84.0	1.2	3.0	0.0	V-Horn	PK	0.0	61.4	74.0	-12.6	Low channel, Antenna 1, Module on side
7250.000	25.2	15.4	-1.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.6	54.0	-13.4	Low channel, Antenna 0, Module on side
4823.900	30.2	9.5	25.0	1.0	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	Low channel, Antenna 1, Module vertical
7251.200	42.7	15.4	15.0	1.2	3.0	0.0	H-Horn	PK	0.0	58.1	74.0	-15.9	Low channel, Antenna 1, Module vertical
7251.350	42.2	15.4	-1.0	1.1	3.0	0.0	V-Horn	PK	0.0	57.6	74.0	-16.4	Low channel, Antenna 1, Module on side
4823.970	47.7	9.5	30.0	1.0	3.0	0.0	V-Horn	PK	0.0	57.2	74.0	-16.8	Low channel, Antenna 1, Module on side
4825.570	46.4	9.5	44.0	1.0	3.0	0.0	V-Horn	PK	0.0	55.9	74.0	-18.1	Low channel, Antenna 0, Module on side
4823.870	42.6	9.5	25.0	1.0	3.0	0.0	H-Horn	PK	0.0	52.1	74.0	-21.9	Low channel, Antenna 1, Module vertical







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	E4407B	AAU	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	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

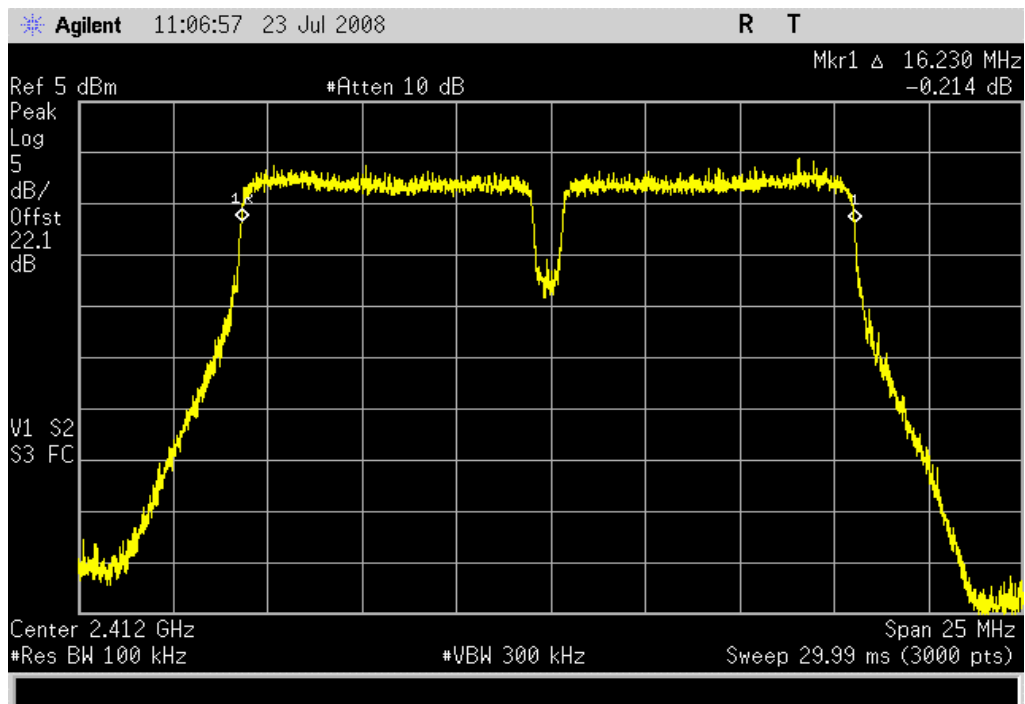
EUT: AVMD7500-07B		Work Order: AVNE0032	
Serial Number: 02		Date: 07/23/08	
Customer: Avnera		Temperature: 25°C	
Attendees: Fred Weiss		Humidity: 36%	
Project: None		Barometric Pres.: 1022.9 mb	
Tested by: Rod Peloquin		Power: 120VAC/60Hz	Job Site: EV06
TEST SPECIFICATIONS			
FCC 15.247 (DTS):2007		Test Method	
		ANSI C63.4:2003 KDB No. 558074	
COMMENTS			
Antenna port 1			
DEVIATIONS FROM TEST STANDARD			
No Deviations			
Configuration #	1	Signature 	
		Value	Limit
Low Channel, 2412 MHz		16.230 MHz	> 500 kHz
Mid Channel, 2438 MHz		16.247 MHz	> 500 kHz
High Channel, 2462 MHz		16.272 MHz	> 500 kHz
			Results
			Pass
			Pass
			Pass

Low Channel, 2412 MHz

Result: Pass

Value: 16.230 MHz

Limit: > 500 kHz

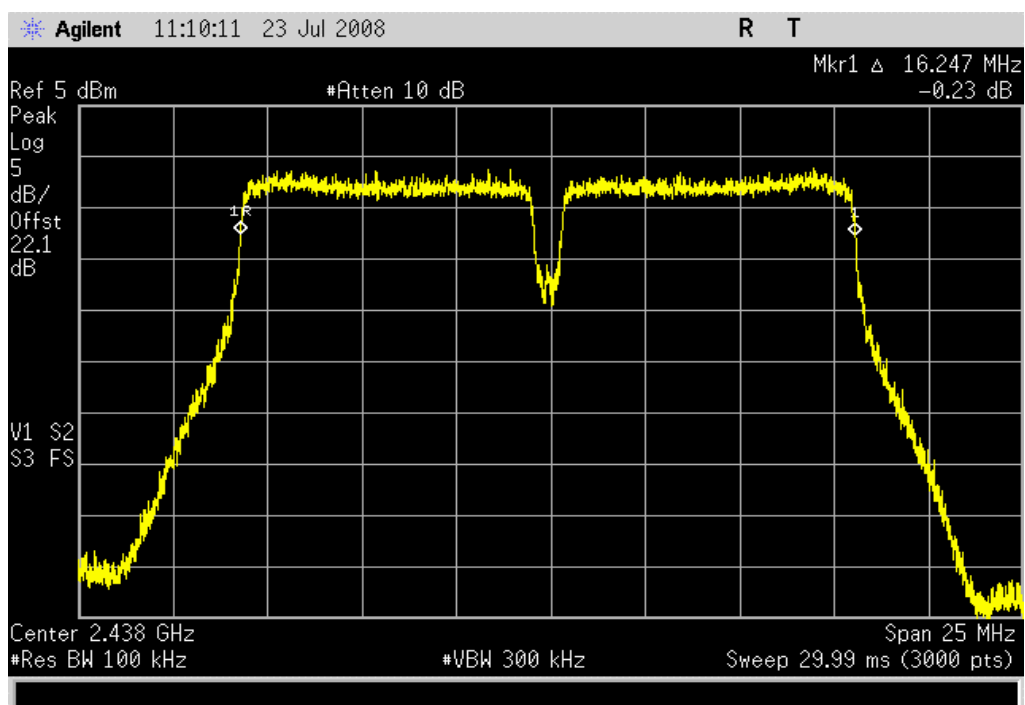


Mid Channel, 2438 MHz

Result: Pass

Value: 16.247 MHz

Limit: > 500 kHz

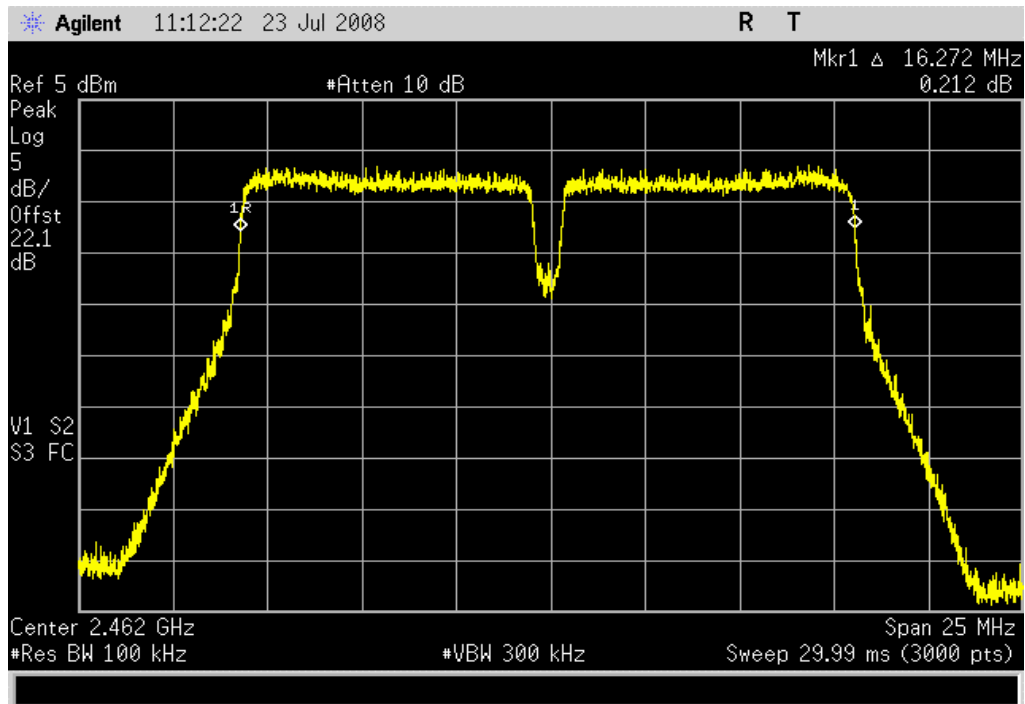


High Channel, 2462 MHz

Result: Pass

Value: 16.272 MHz

Limit: > 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
Attenuator		93459 3330A-6	AUF	2/18/2008	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13
RF Detector	RLC Electronics	CR-133-R	ZZA	NCR	0
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	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 EUT was transmitting at its maximum output power. The data rate of the radio was varied to determine the level that produced the highest output power.

The measurement was made using a direct connection between the RF output of the EUT and a RF detector diode. The DC output of the diode was measured with the oscilloscope. The signal generator, tuned to the transmit frequency, was then substituted for the EUT. The CW output of the signal generator was adjusted until the DC output of the RF detector diode match the peak level produced when connected to the EUT. To further reduce measurement error, the power meter and sensor were then used to measure the output power level of the signal generator.

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

EMC**PEAK OUTPUT POWER**

EUT: AVMD7500-07B		Work Order: AVNE0032	
Serial Number: 04		Date: 07/28/08	
Customer: Avnera		Temperature: 25°C	
Attendees: Fred Weiss		Humidity: 36%	
Project: None		Barometric Pres.: 1022.9 mb	
Tested by: Rod Peloquin		Power: 120VAC/60Hz	Job Site: EV06
TEST SPECIFICATIONS			
FCC 15.247 (DTS):2007		Test Method ANSI C63.4:2003 KDB No. 558074	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
No Deviations			
Configuration #	6	 Signature	

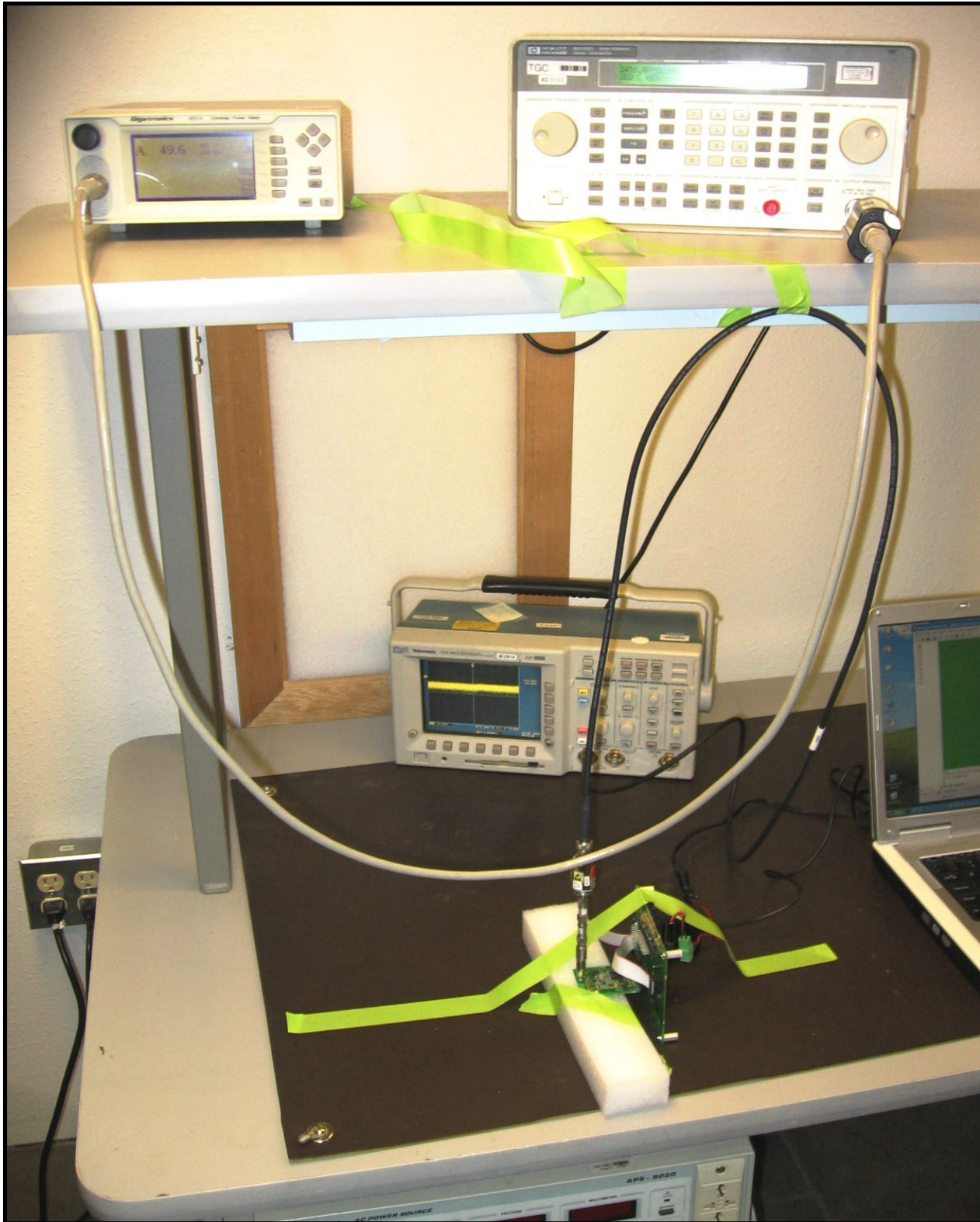
Peak Output Power, FCC Diode Detector Method

Antenna Port 0

Xmit Frequency (MHz)	DC on Scope (mV)	Sig Gen Output (dBm)	Power Meter (dBm)	Power Meter (mW)	Limit (W)
2412	-58.8	18.7	18.2	65.5	1.0
2438	-58.0	18.5	18.1	64.7	1.0
2462	-58.8	18.6	18.4	69.6	1.0

Antenna Port 1

Xmit Frequency (MHz)	DC on Scope (mV)	Sig Gen Output (dBm)	Power Meter (dBm)	Power Meter (mW)	Limit (W)
2412	-58.4	18.6	18.1	64.2	1.0
2438	-56.4	18.3	18.0	62.3	1.0
2462	-58.8	18.6	18.4	69.6	1.0



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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4407B	AAU	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	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 at the edges of the authorized band were 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 in a no hop mode. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 5 MHz below the band edge to 5 MHz above the band edge.

EMC

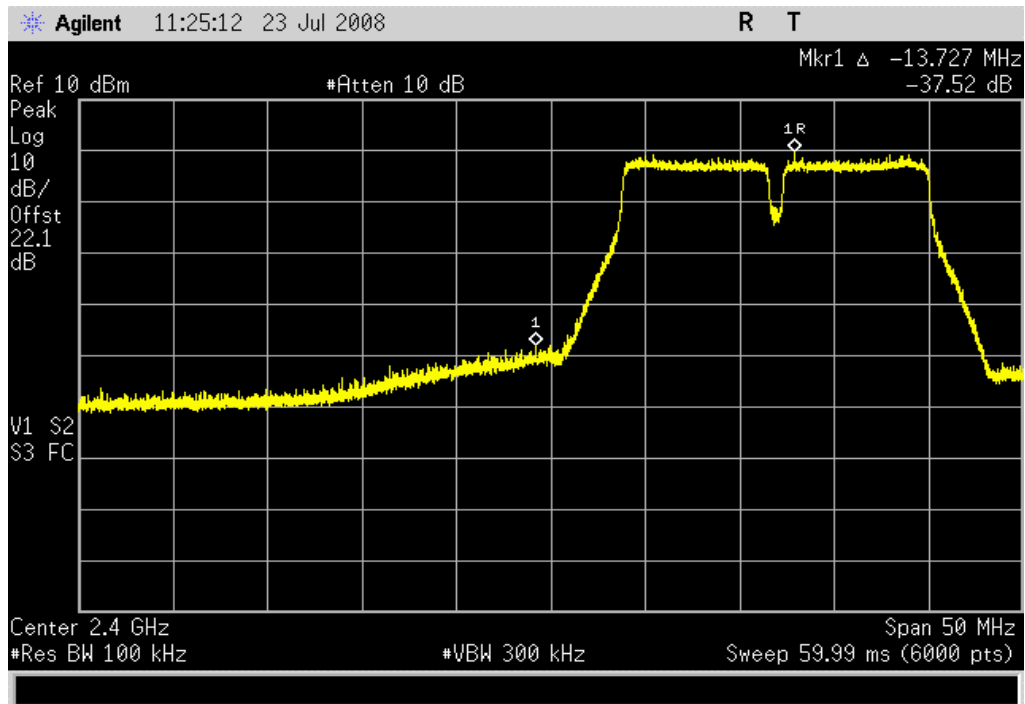
BAND EDGE COMPLIANCE

EUT: AVMD7500-07B		Work Order: AVNE0032	
Serial Number: 02		Date: 07/23/08	
Customer: Avnera		Temperature: 25°C	
Attendees: Fred Weiss		Humidity: 36%	
Project: None		Barometric Pres.: 1022.9 mb	
Tested by: Rod Peloquin		Power: 120VAC/60Hz	Job Site: EV06
TEST SPECIFICATIONS			
FCC 15.247 (DTS):2007		Test Method ANSI C63.4:2003 KDB No. 558074	
COMMENTS			
Antenna Port 1			
DEVIATIONS FROM TEST STANDARD			
No Deviations			
Configuration #	1	Signature 	
		Value	Limit Results
Low Channel, 2412 MHz		-37.5 dBc	≤ -20 dBc Pass
High Channel, 2462 MHz		-43.2 dBc	≤ -20 dBc Pass

Low Channel, 2412 MHz

Result: Pass

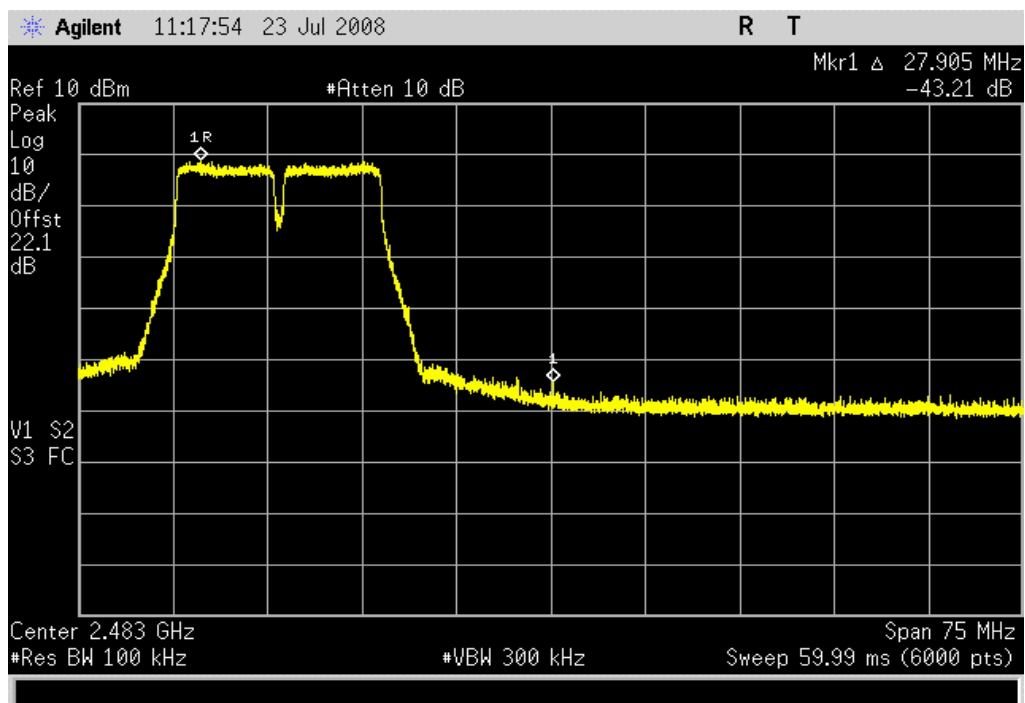
Value: -37.5 dBc

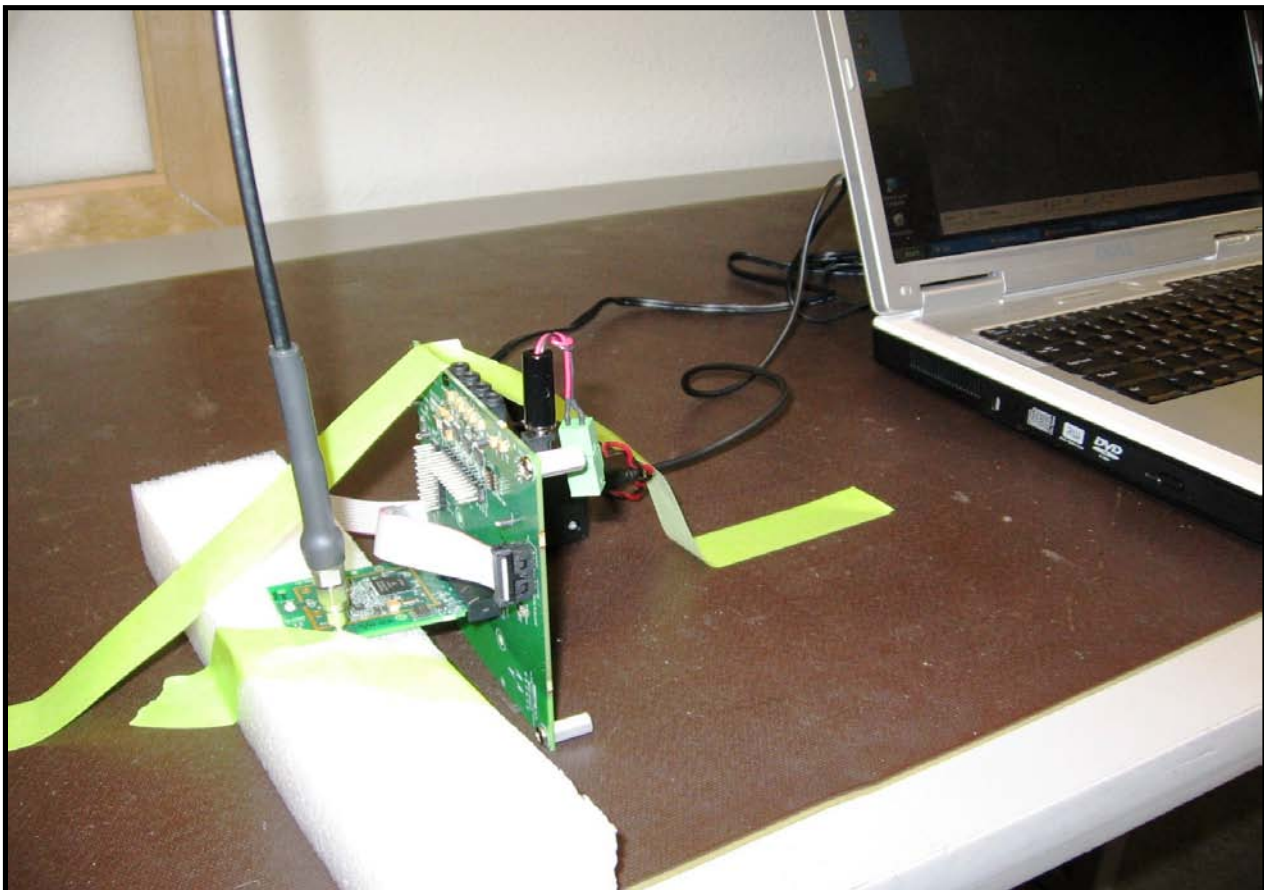
Limit: ≤ -20 dBc

High Channel, 2462 MHz

Result: Pass

Value: -43.2 dBc

Limit: ≤ -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	E4407B	AAU	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	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:	AVMD7500-07B	Work Order:	AVNE0032
Serial Number:	02	Date:	07/23/08
Customer:	Avnera	Temperature:	25°C
Attendees:	Fred Weiss	Humidity:	36%
Project:	None	Barometric Pres.:	1022.9 mb
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV06

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

COMMENTS

Antenna Port 1

DEVIATIONS FROM TEST STANDARD

No Deviations

Configuration #	1	Signature 
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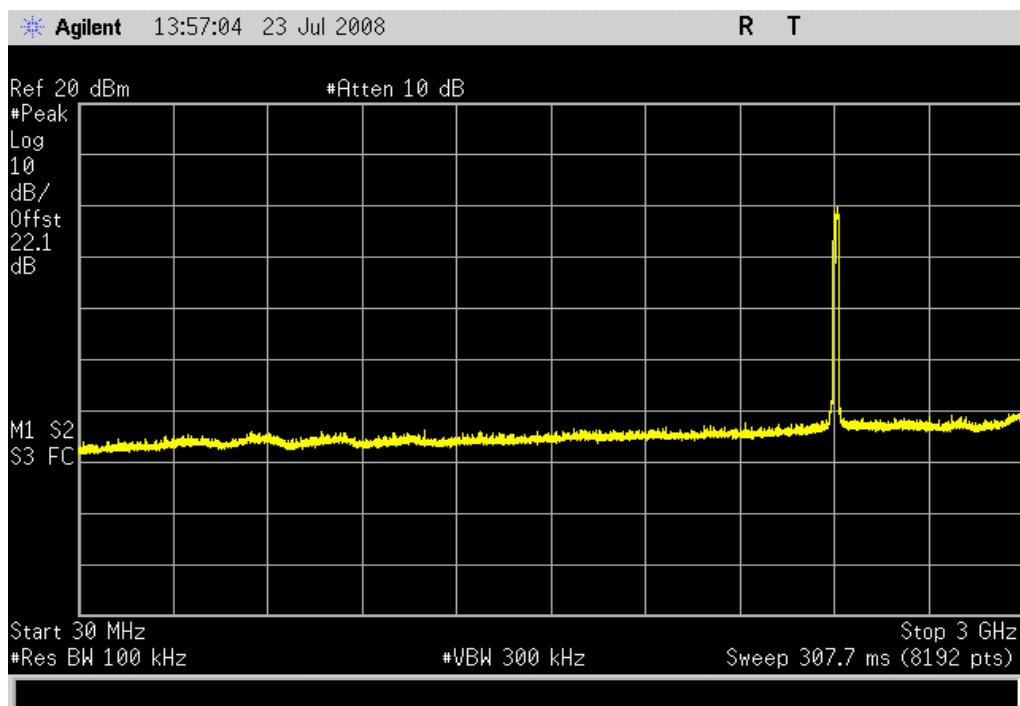
		Value	Limit	Results
Low Channel				
	0 - 3 GHz	< -40 dBc	≤ -20 dBc	Pass
	3 - 6.5 GHz	< -40 dBc	≤ -20 dBc	Pass
	6.5 - 12.8 GHz	< -40 dBc	≤ -20 dBc	Pass
	12.8 - 25 GHz	< -40 dBc	≤ -20 dBc	Pass
Mid Channel				
	0 - 3 GHz	< -40 dBc	≤ -20 dBc	Pass
	3 - 6.5 GHz	< -40 dBc	≤ -20 dBc	Pass
	6.5 - 12.8 GHz	< -40 dBc	≤ -20 dBc	Pass
	12.8 - 25 GHz	< -40 dBc	≤ -20 dBc	Pass
High Channel				
	0 - 3 GHz	< -40 dBc	≤ -20 dBc	Pass
	3 - 6.5 GHz	< -40 dBc	≤ -20 dBc	Pass
	6.5 - 12.8 GHz	< -40 dBc	≤ -20 dBc	Pass
	12.8 - 25 GHz	< -40 dBc	≤ -20 dBc	Pass

SPURIOUS CONDUCTED EMISSIONS

Low Channel, 0 - 3 GHz

Result: Pass

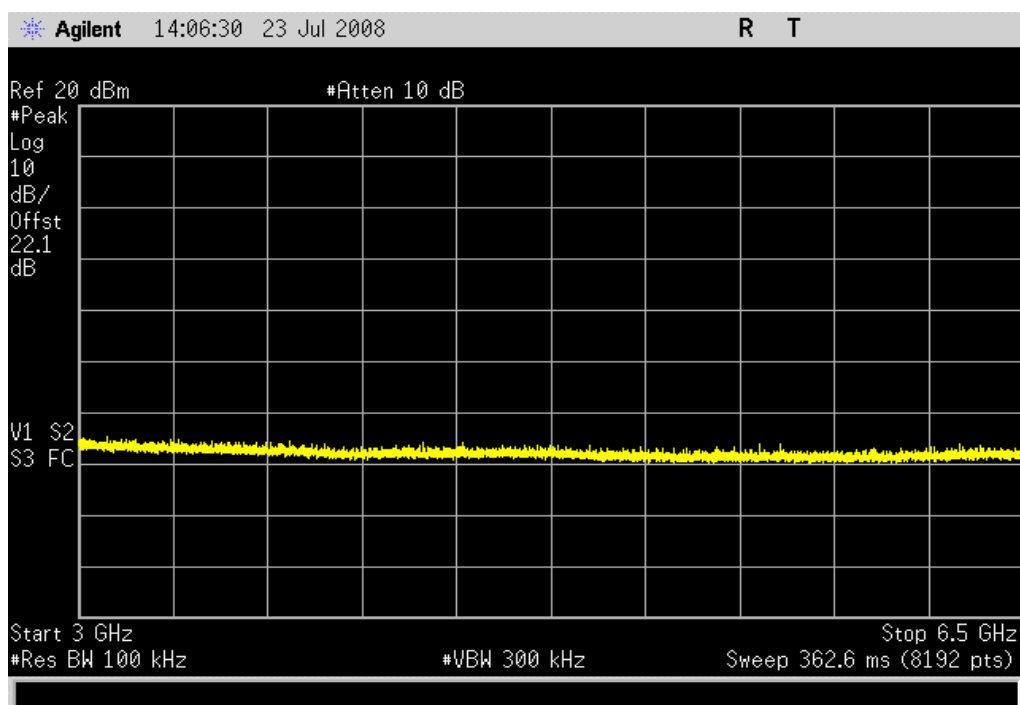
Value: < -40 dBc

Limit: ≤ -20 dBc

Low Channel, 3 - 6.5 GHz

Result: Pass

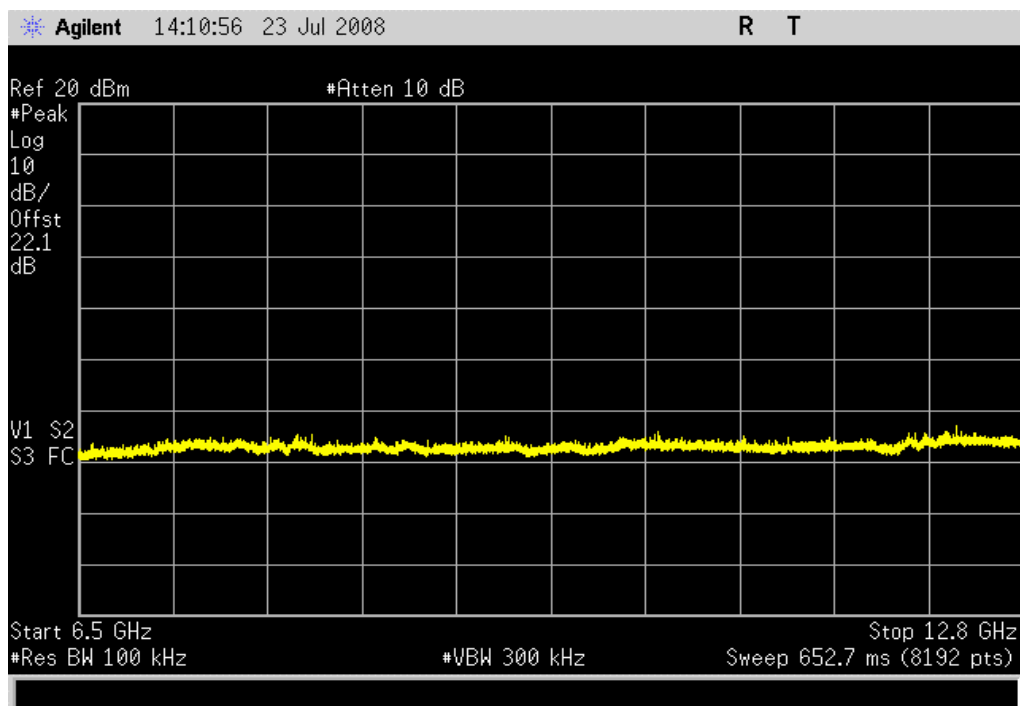
Value: < -40 dBc

Limit: ≤ -20 dBc

Low Channel, 6.5 - 12.8 GHz

Result: Pass

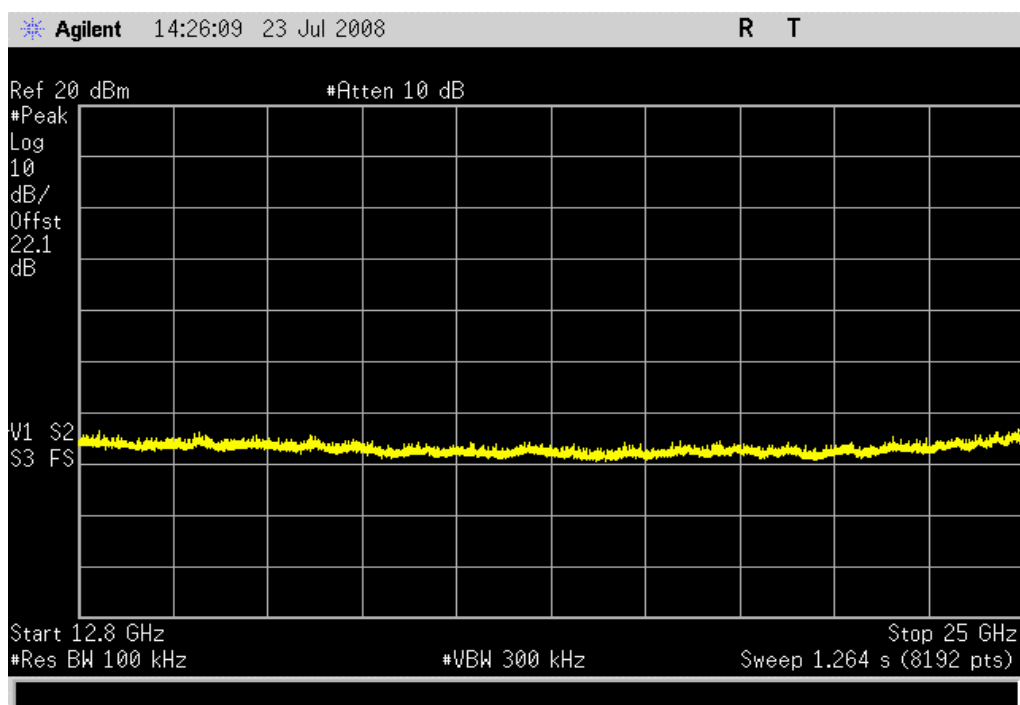
Value: < -40 dBc

Limit: ≤ -20 dBc

Low Channel, 12.8 - 25 GHz

Result: Pass

Value: < -40 dBc

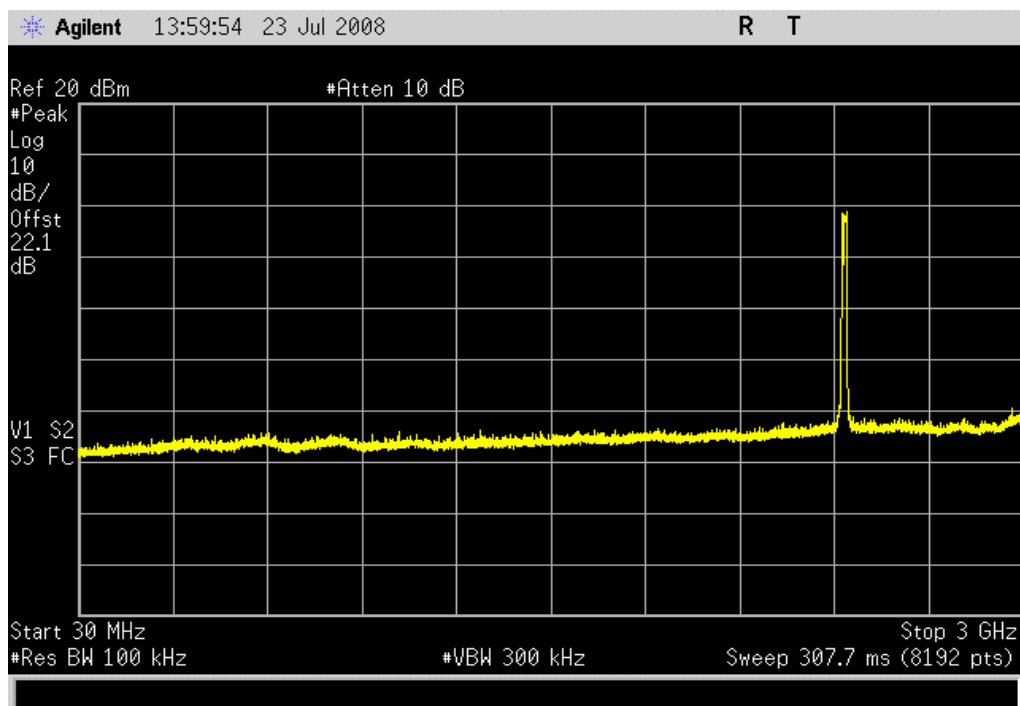
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

Mid Channel, 0 - 3 GHz

Result: Pass

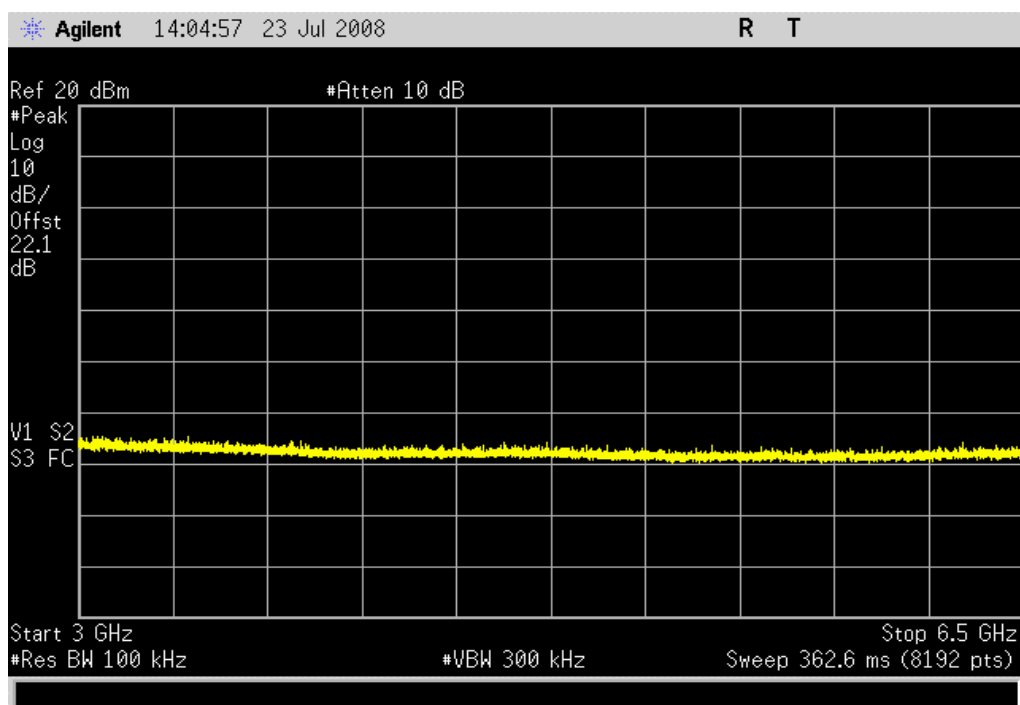
Value: < -40 dBc

Limit: ≤ -20 dBc

Mid Channel, 3 - 6.5 GHz

Result: Pass

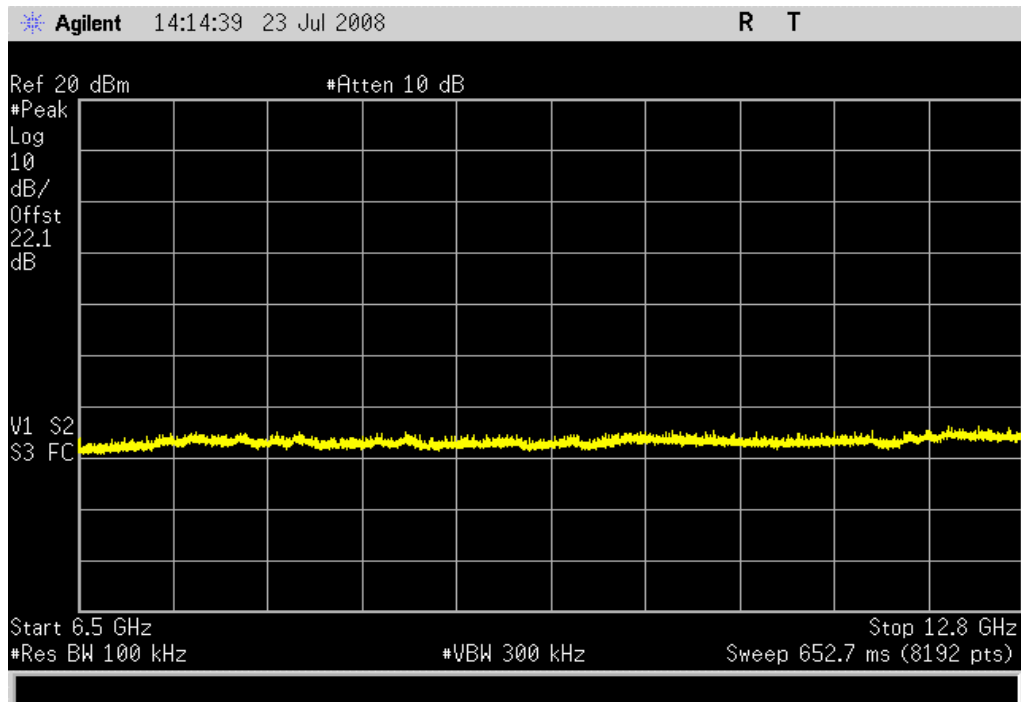
Value: < -40 dBc

Limit: ≤ -20 dBc

Mid Channel, 6.5 - 12.8 GHz

Result: Pass

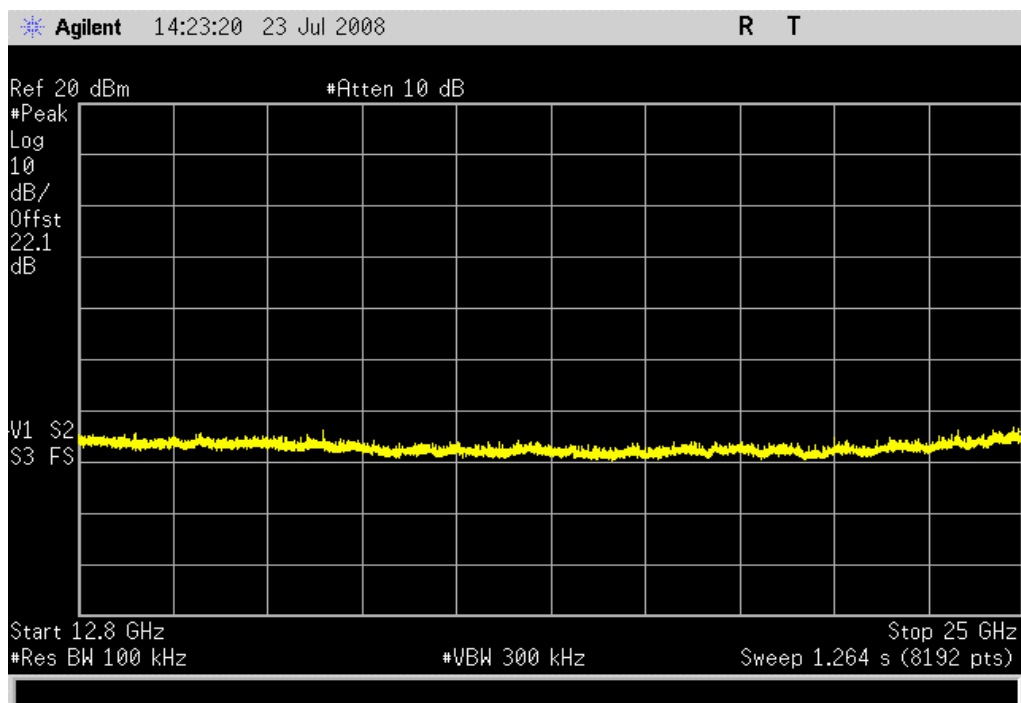
Value: < -40 dBc

Limit: ≤ -20 dBc

Mid Channel, 12.8 - 25 GHz

Result: Pass

Value: < -40 dBc

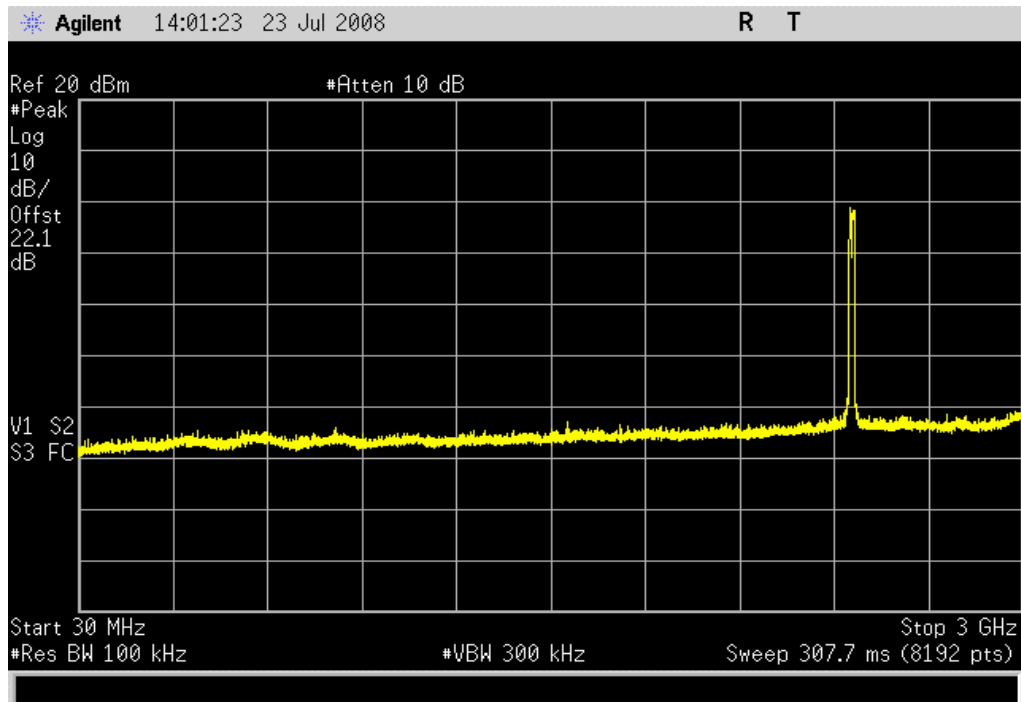
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

High Channel, 0 - 3 GHz

Result: Pass

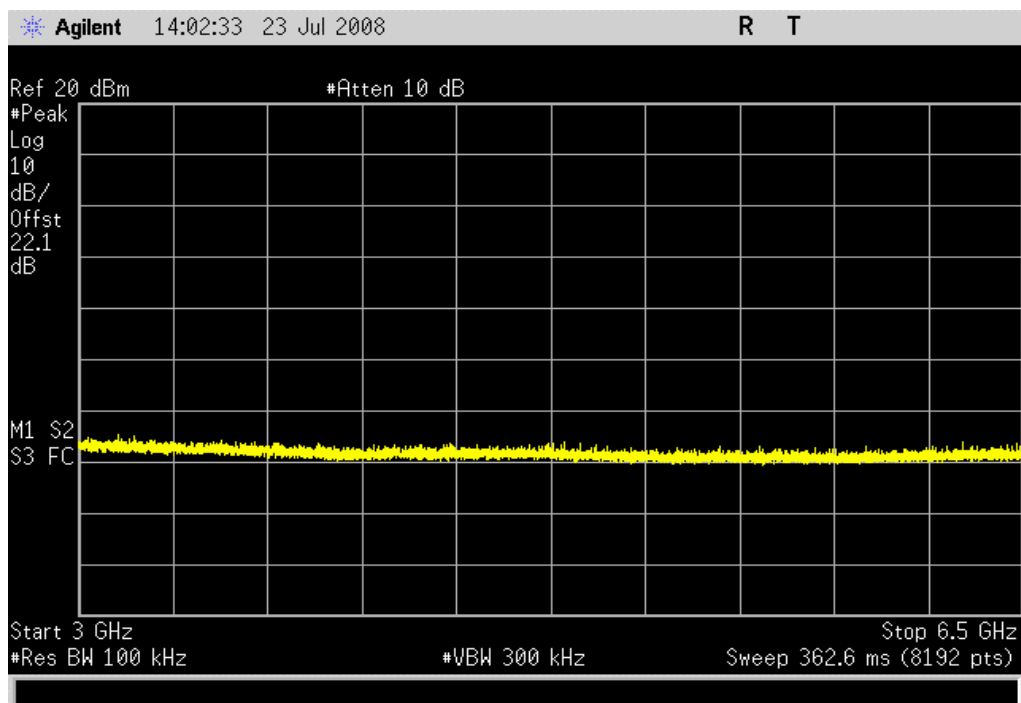
Value: < -40 dBc

Limit: ≤ -20 dBc

High Channel, 3 - 6.5 GHz

Result: Pass

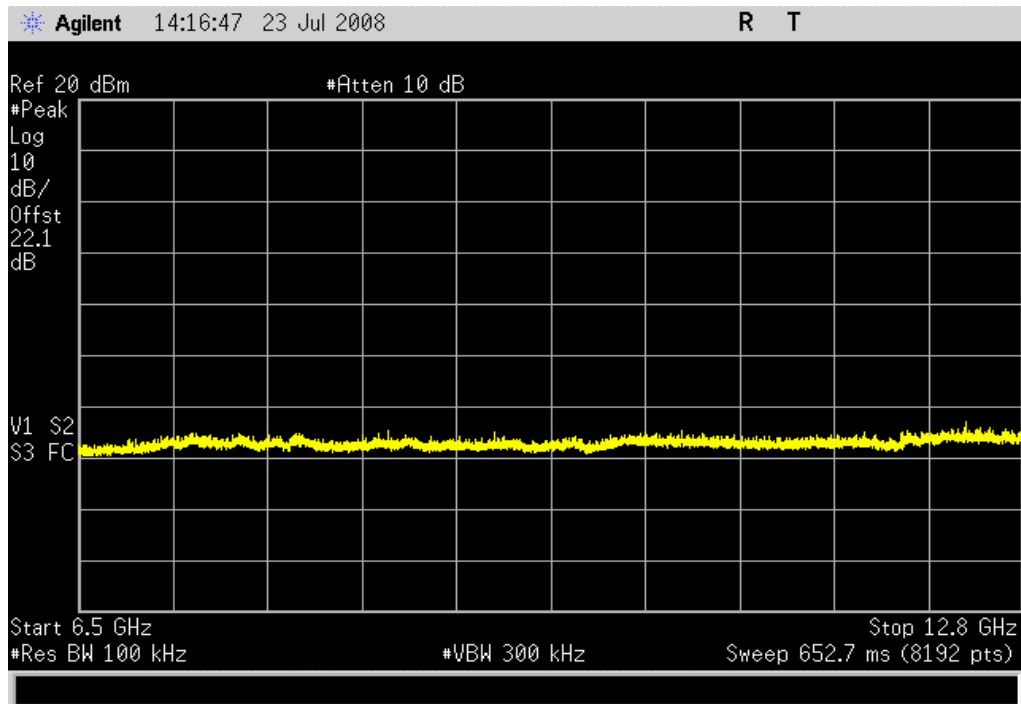
Value: < -40 dBc

Limit: ≤ -20 dBc

High Channel, 6.5 - 12.8 GHz

Result: Pass

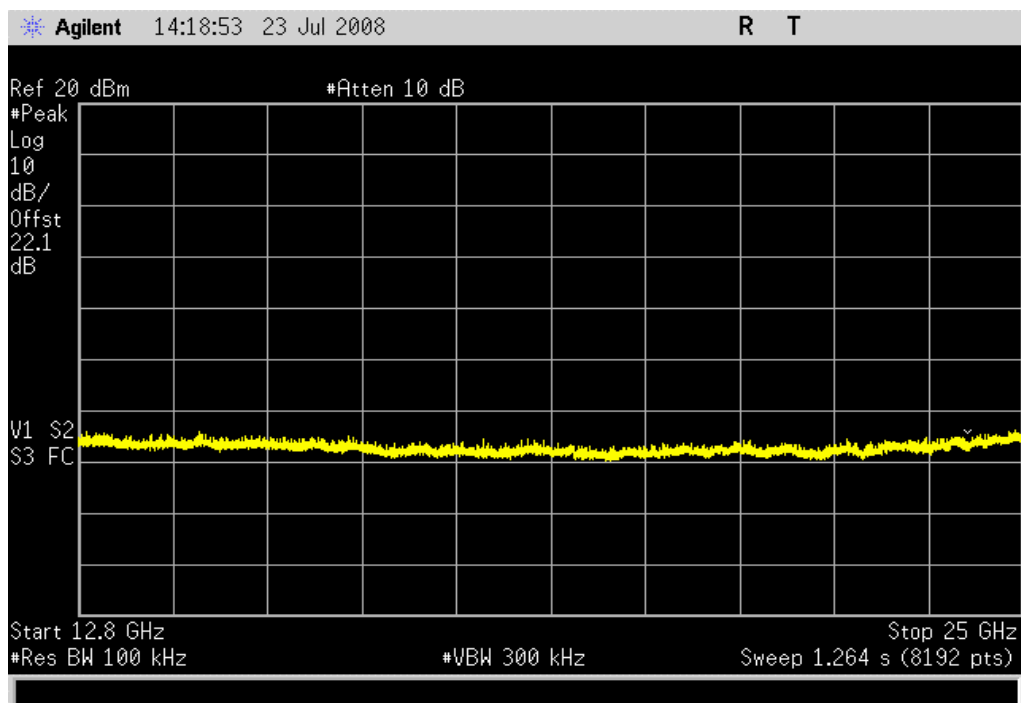
Value: < -40 dBc

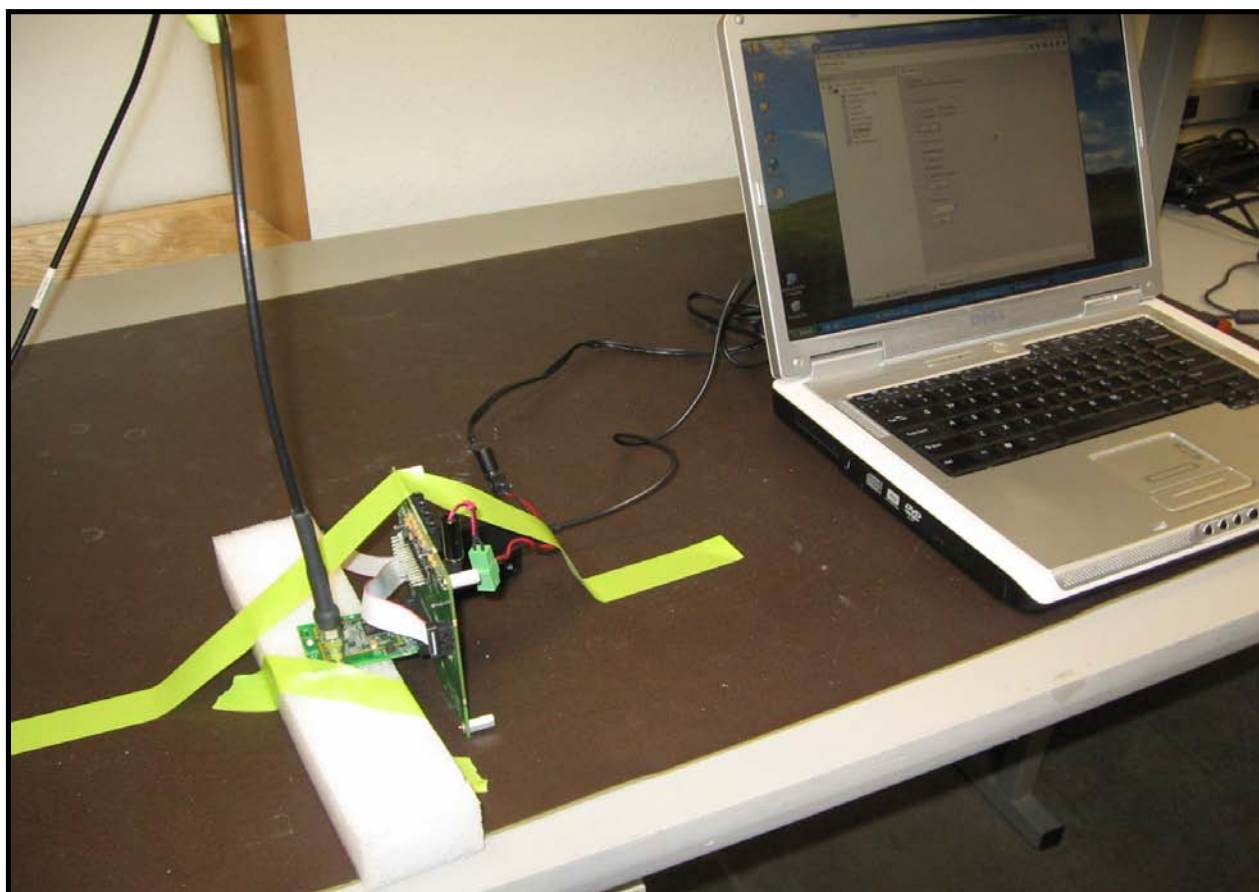
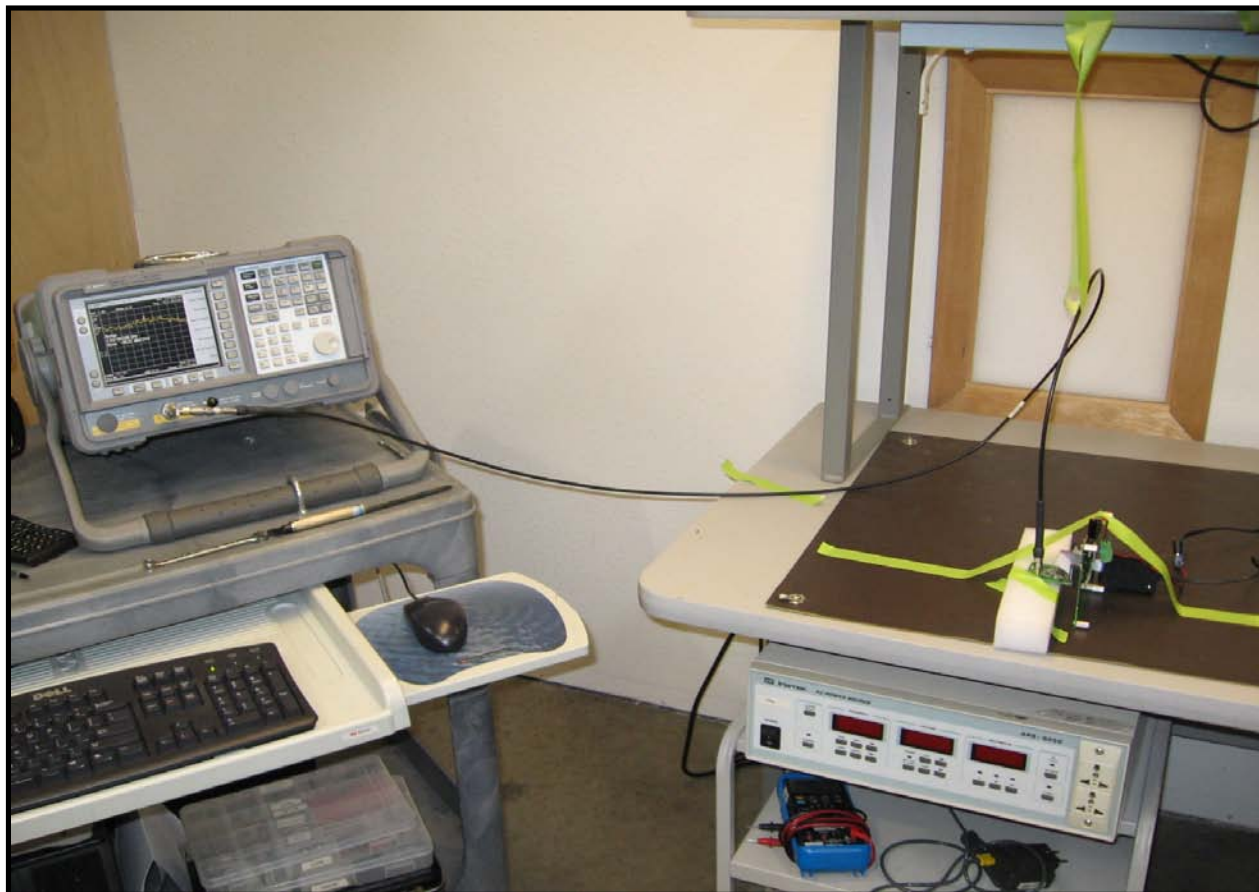
Limit: ≤ -20 dBc

High Channel, 12.8 - 25 GHz

Result: Pass

Value: < -40 dBc

Limit: ≤ -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	E4407B	AAU	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	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 KDB 558074, 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 35 dB for correction to 3 kHz."

EMC

POWER SPECTRAL DENSITY

EUT:	AVMD7500-07B	Work Order:	AVNE0032
Serial Number:	04	Date:	07/28/08
Customer:	Avnera	Temperature:	25°C
Attendees:	Fred Weiss	Humidity:	36%
Project:	None	Barometric Pres.:	1022.9 mb
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV06

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

COMMENTS

Antenna Port 1

DEVIATIONS FROM TEST STANDARD

No Deviations

Configuration #	6	Signature
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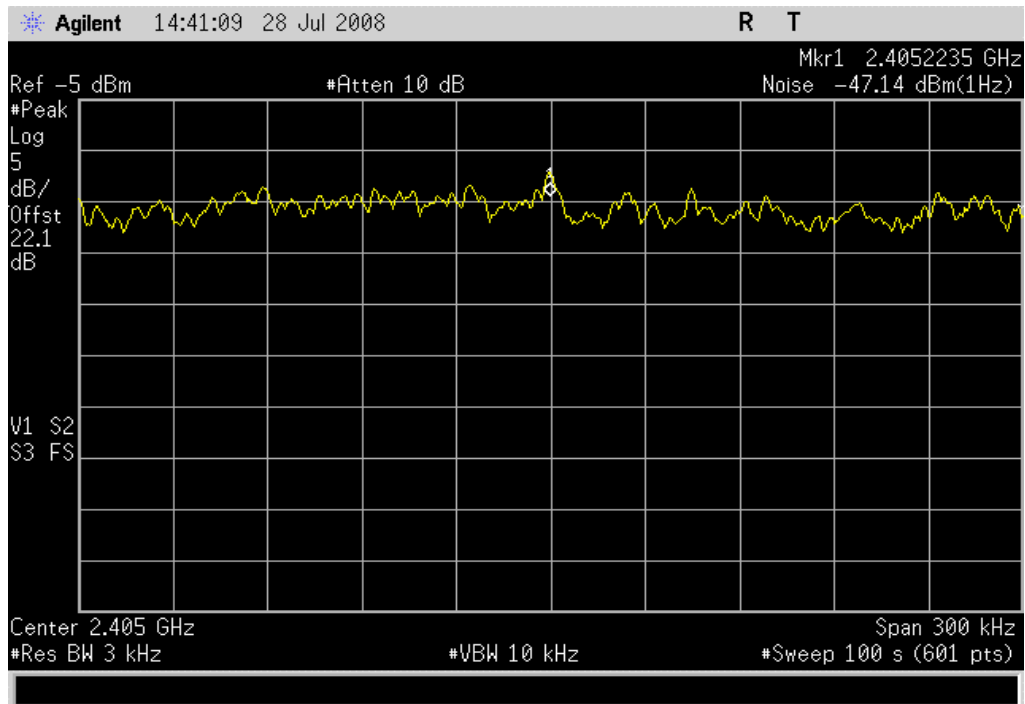
	Value	Limit	Results
Low Channel, 2412 MHz	-12.14 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel, 2438 MHz	-12.21 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel, 2462 MHz	-12.52 dBm / 3 kHz	8 dBm / 3 kHz	Pass

Low Channel, 2412 MHz

Result: Pass

Value: -12.14 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

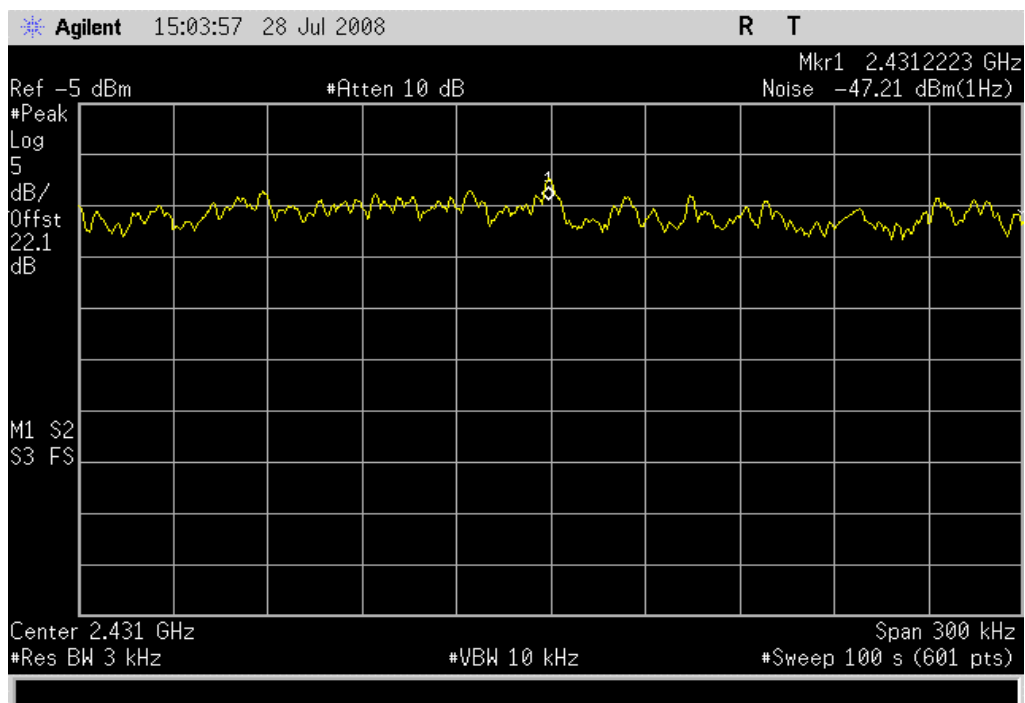


Mid Channel, 2438 MHz

Result: Pass

Value: -12.21 dBm / 3 kHz

Limit: 8 dBm / 3 kHz



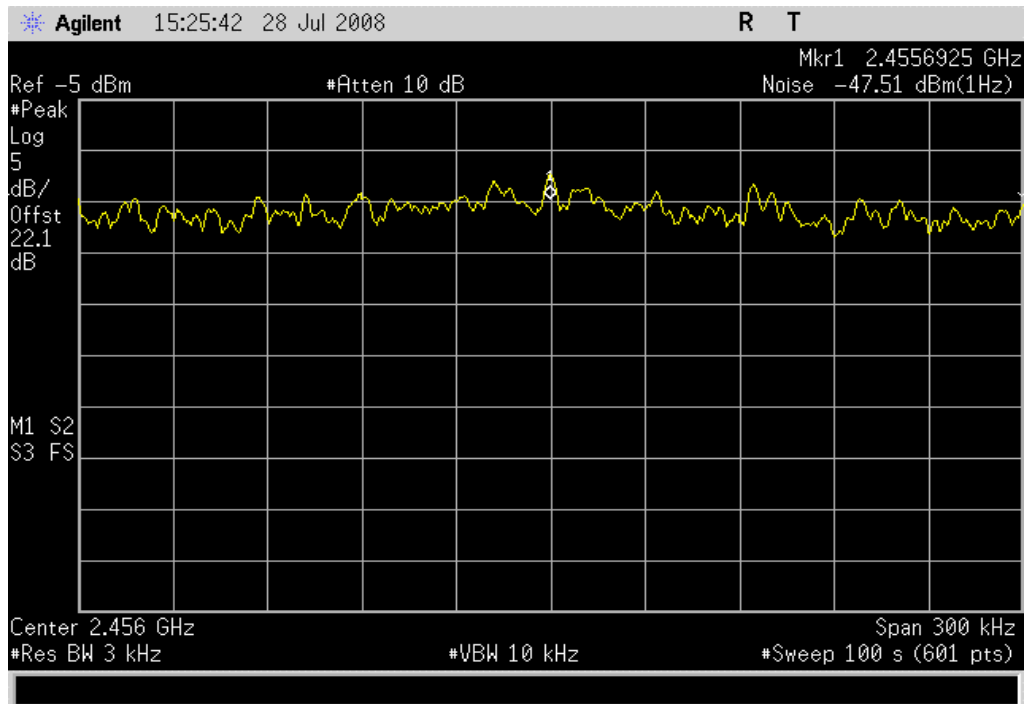
POWER SPECTRAL DENSITY

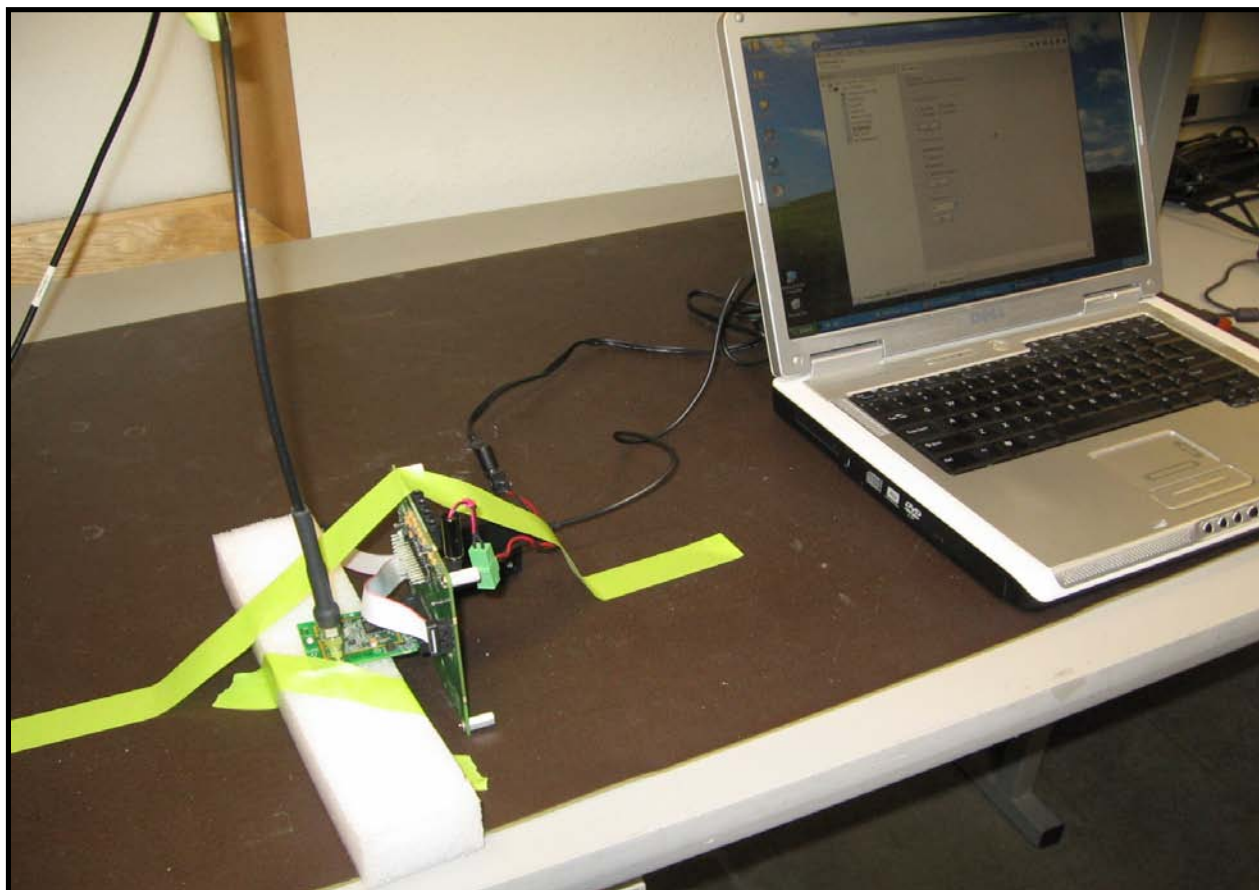
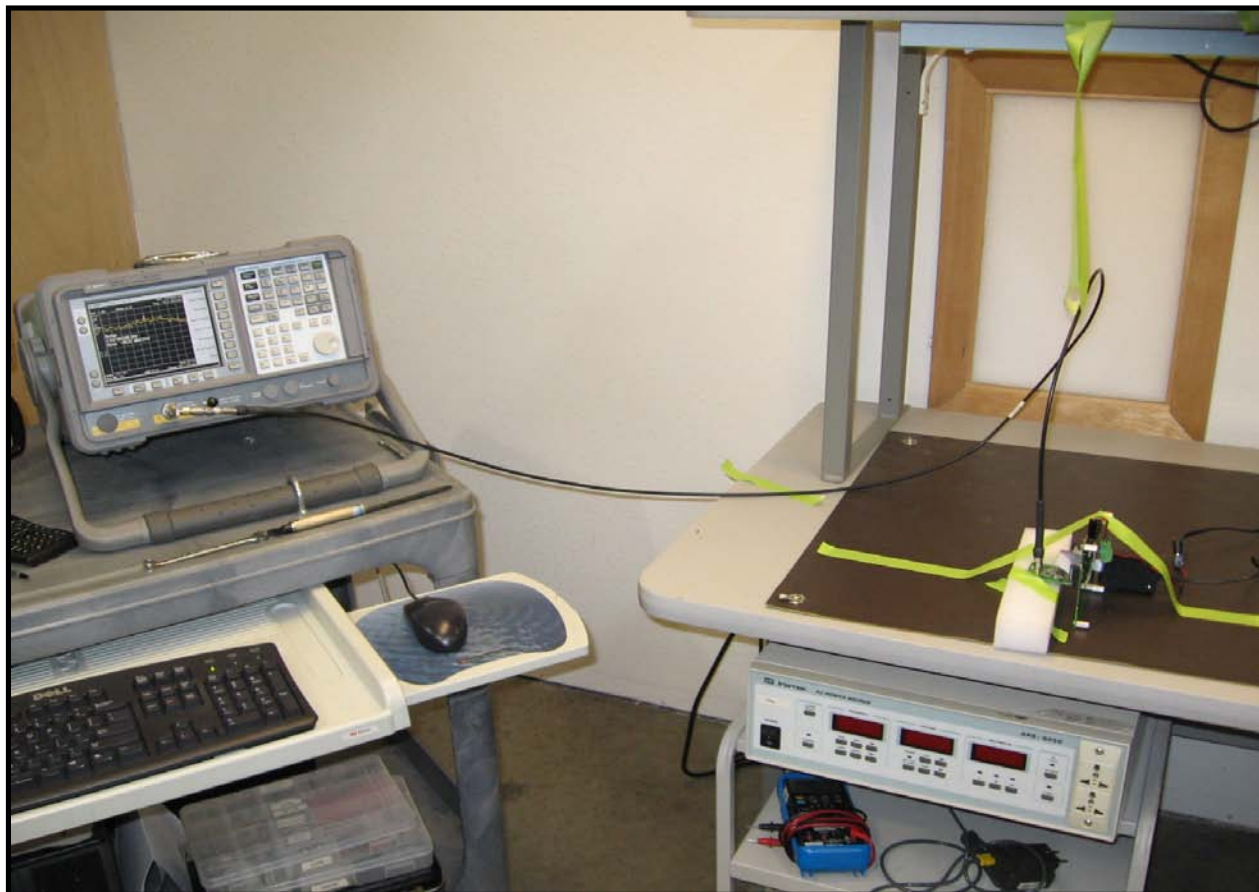
High Channel, 2462 MHz

Result: Pass

Value: -12.52 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

Continuous transmit, high channel
 Continuous transmit, mid channel
 Continuous transmit, low channel
 Radio configured as client with no transmit

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

4

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARG	12/7/2007	13 mo
Attenuator	Coaxicom	66702 2910-20	ATO	6/30/2008	13 mo
High Pass Filter	T.T.E.	7766	HFG	2/5/2008	13 mo
EV07 Cables		Conducted Cables	EVG	5/2/2008	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	1/4/2008	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.

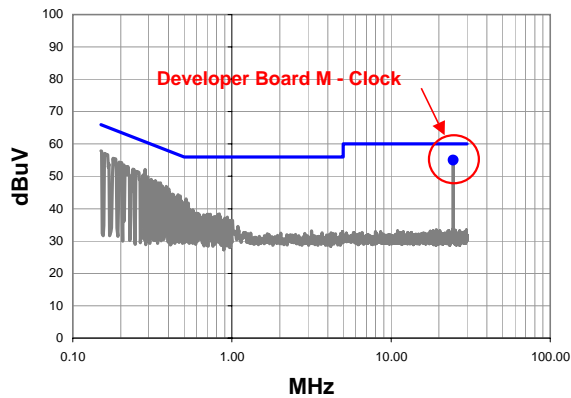
TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, 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.

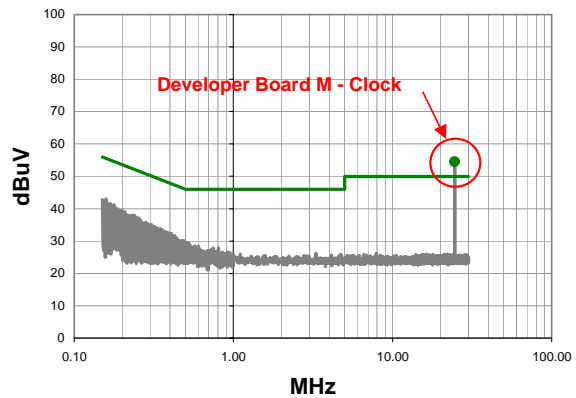
Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i>
Project:	None	Temperature:	25°C	
Job Site:	EV07	Humidity:	36	
Serial Number:	04	Barometric Pres.:	1022.9 mb	Tested by: Rod Peloquin
EUT:	AVMD7500-07B			
Configuration:	4 - Transmitter AC Conducted Emissions			
Customer:	Avnera			
Attendees:	Fred Weiss			
EUT Power:	120VAC/60Hz			
Operating Mode:	Radio configured as client with no transmit			
Comments:				

Test Specifications FCC 15.207:2007	Test Method ANSI C63.4:2003		
Run # 2	Line: High Line	Ext. Attenuation: 20	Results NA

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)
24.576	34.2	20.8	55.0	60.0	-5.0

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	33.7	20.8	54.5	50.0	4.5

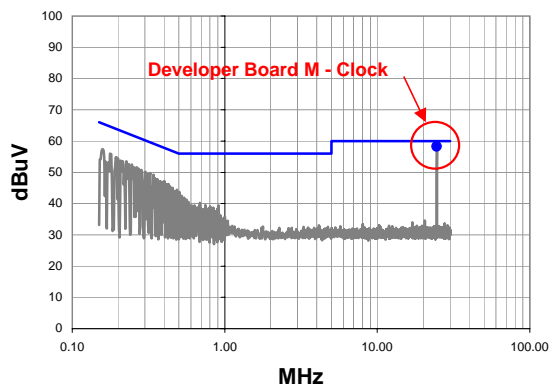
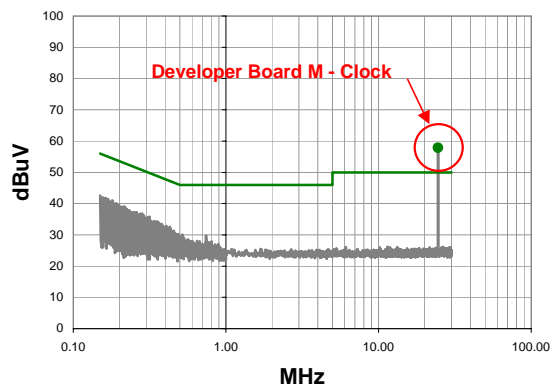
EMC**AC POWERLINE CONDUCTED EMISSIONS**

Work Order:	AVNE0032	Date:	07/25/08	
Project:	None	Temperature:	25°C	
Job Site:	EV07	Humidity:	36	
Serial Number:	04	Barometric Pres.:	1022.9 mb	
EUT:	AVMD7500-07B			
Configuration:	4 - Transmitter AC Conducted Emissions			
Customer:	Avnera			
Attendees:	Fred Weiss			
EUT Power:	120VAC/60Hz			
Operating Mode:	Radio configured as client with no transmit			
Comments:				

Test Specifications
 FCC 15.207:2007

Test Method
 ANSI C63.4:2003

Run #	3	Line:	Neutral	Ext. Attenuation:	20	Results	NA
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Quasi Peak Data - vs - Quasi Peak Limit**Average Data - vs - Average Limit****Quasi Peak Data - vs - Quasi Peak Limit**

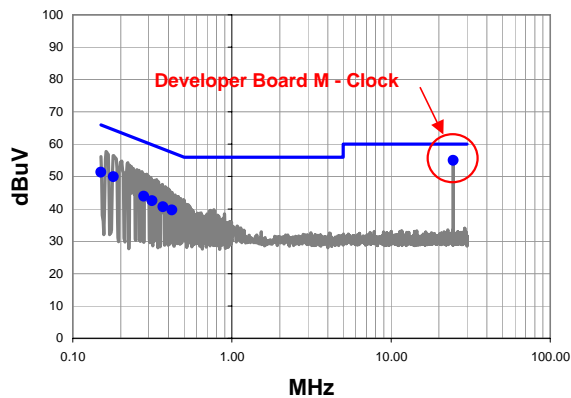
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.4	20.8	58.2	60.0	-1.8

Average Data - vs - Average Limit

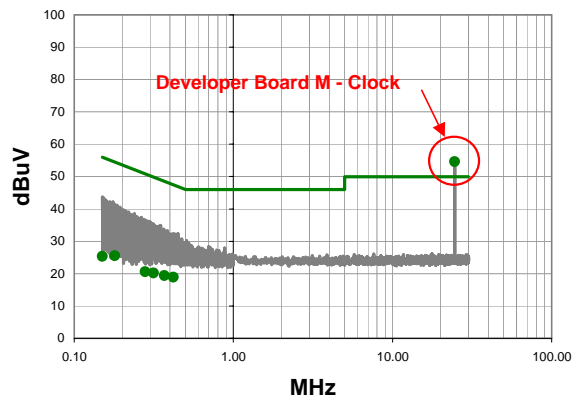
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.0	20.8	57.8	50.0	7.8

Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i>			
Project:	None	Temperature:	25°C				
Job Site:	EV07	Humidity:	36				
Serial Number:	04	Barometric Pres.:	1022.9 mb	Tested by: Rod Peloquin			
EUT:	AVMD7500-07B						
Configuration:	4 - Transmitter AC Conducted Emissions						
Customer:	Avnera						
Attendees:	Fred Weiss						
EUT Power:	120VAC/60Hz						
Operating Mode:	Continuous transmit, low channel						
Deviations:	No deviations						
Comments:							
Test Specifications FCC 15.207:2007			Test Method ANSI C63.4:2003				
Run #	4	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

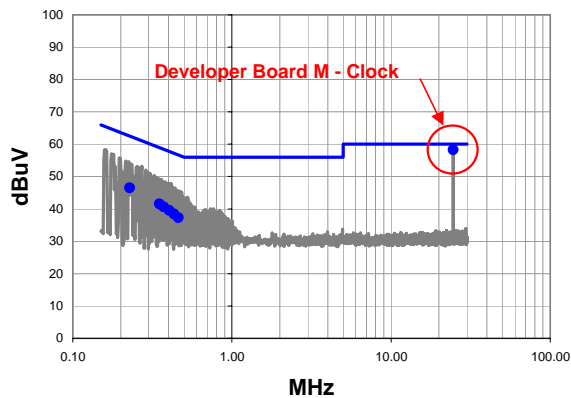
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	34.2	20.8	55.0	60.0	-5.0
0.180	28.5	21.5	50.0	64.5	-14.5
0.150	29.3	22.1	51.4	66.0	-14.6
0.279	22.9	21.0	43.9	60.8	-16.9
0.315	21.5	21.0	42.5	59.8	-17.3
0.420	18.7	20.9	39.6	57.4	-17.8
0.369	19.7	21.0	40.7	58.5	-17.9

Average Data - vs - Average Limit

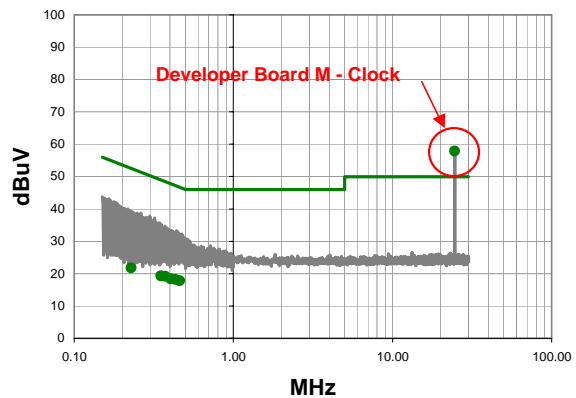
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	33.8	20.8	54.6	50.0	4.6
0.420	-2.0	20.9	18.9	47.4	-28.5
0.180	4.1	21.5	25.6	54.5	-28.9
0.369	-1.6	21.0	19.4	48.5	-29.2
0.315	-0.8	21.0	20.2	49.8	-29.6
0.279	-0.4	21.0	20.6	50.8	-30.2
0.150	3.3	22.1	25.4	56.0	-30.6

Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i> Tested by: Rod Peloquin			
Project:	None	Temperature:	25°C				
Job Site:	EV07	Humidity:	36				
Serial Number:	04	Barometric Pres.:	1022.9 mb				
EUT:	AVMD7500-07B						
Configuration:	4 - Transmitter AC Conducted Emissions						
Customer:	Avnera						
Attendees:	Fred Weiss						
EUT Power:	120VAC/60Hz						
Operating Mode:	Continuous transmit, low channel						
Deviations:	No deviations						
Comments:							
Test Specifications FCC 15.207:2007			Test Method ANSI C63.4:2003				
Run #	5	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

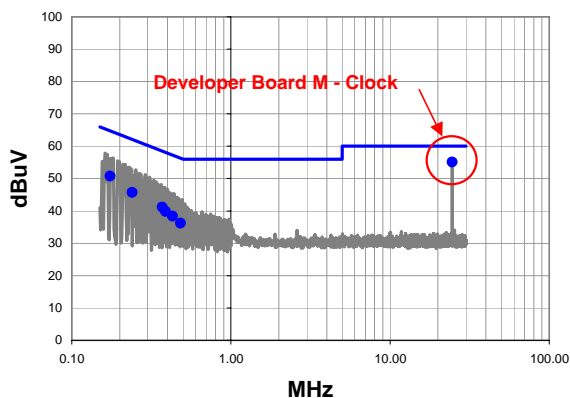
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.4	20.8	58.2	60.0	-1.8
0.228	25.4	21.1	46.5	62.5	-16.1
0.351	20.6	21.0	41.6	58.9	-17.4
0.372	19.7	21.0	40.7	58.5	-17.8
0.403	18.6	20.9	39.5	57.8	-18.2
0.431	17.6	20.9	38.5	57.2	-18.7
0.461	16.4	20.9	37.3	56.7	-19.4

Average Data - vs - Average Limit

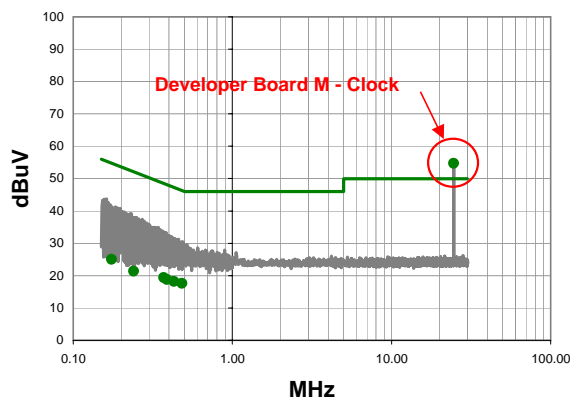
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.0	20.8	57.8	50.0	7.8
0.461	-3.1	20.9	17.8	46.7	-28.9
0.431	-2.7	20.9	18.2	47.2	-29.0
0.372	-1.8	21.0	19.2	48.5	-29.3
0.403	-2.5	20.9	18.4	47.8	-29.3
0.351	-1.7	21.0	19.3	48.9	-29.7
0.228	0.7	21.1	21.8	52.5	-30.8

Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i> Tested by: Rod Peloquin	
Project:	None	Temperature:	25°C		
Job Site:	EV07	Humidity:	36		
Serial Number:	04	Barometric Pres.:	1022.9 mb		
EUT:	AVMD7500-07B				
Configuration:	4 - Transmitter AC Conducted Emissions				
Customer:	Avnera				
Attendees:	Fred Weiss				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuous transmit, mid channel				
Deviations:	No deviations				
Comments:					
Test Specifications FCC 15.207:2007			Test Method ANSI C63.4:2003		
Run #	6	Line:	High Line	Ext. Attenuation: 20	Results Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

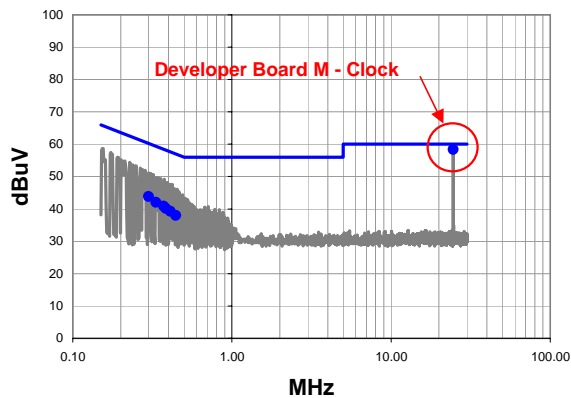
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	34.3	20.8	55.1	60.0	-4.9
0.174	29.2	21.6	50.8	64.8	-14.0
0.240	24.7	21.0	45.7	62.1	-16.4
0.370	20.2	21.0	41.2	58.5	-17.3
0.388	18.9	21.0	39.9	58.1	-18.3
0.429	17.5	20.9	38.4	57.3	-18.8
0.483	15.3	20.9	36.2	56.3	-20.1

Average Data - vs - Average Limit

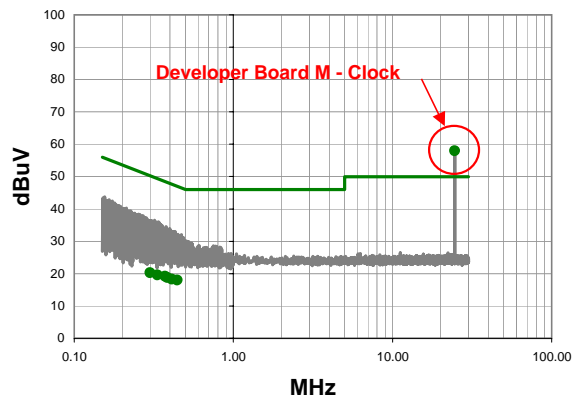
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	33.9	20.8	54.7	50.0	4.7
0.483	-3.3	20.9	17.6	46.3	-28.7
0.429	-2.7	20.9	18.2	47.3	-29.0
0.370	-1.6	21.0	19.4	48.5	-29.1
0.388	-2.2	21.0	18.8	48.1	-29.4
0.174	3.4	21.6	25.0	54.8	-29.8
0.240	0.3	21.0	21.3	52.1	-30.8

Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i>	
Project:	None	Temperature:	25°C		
Job Site:	EV07	Humidity:	36		
Serial Number:	04	Barometric Pres.:	1022.9 mb	Tested by: Rod Peloquin	
EUT:	AVMD7500-07B				
Configuration:	4 - Transmitter AC Conducted Emissions				
Customer:	Avnera				
Attendees:	Fred Weiss				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuous transmit, mid channel				
Deviations:	No deviations				
Comments:					
Test Specifications FCC 15.207:2007			Test Method ANSI C63.4:2003		
Run #	7	Line:	Neutral	Ext. Attenuation: 20	Results Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

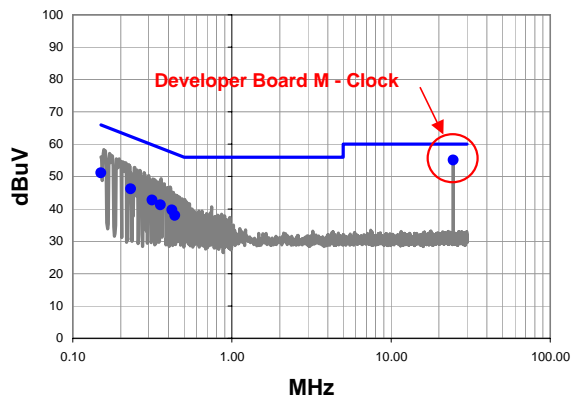
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.5	20.8	58.3	60.0	-1.7
0.300	22.8	21.0	43.8	60.2	-16.4
0.334	21.1	21.0	42.1	59.4	-17.3
0.372	19.9	21.0	40.9	58.5	-17.6
0.385	19.2	21.0	40.2	58.2	-18.0
0.410	18.3	20.9	39.2	57.6	-18.4
0.445	17.1	20.9	38.0	57.0	-19.0

Average Data - vs - Average Limit

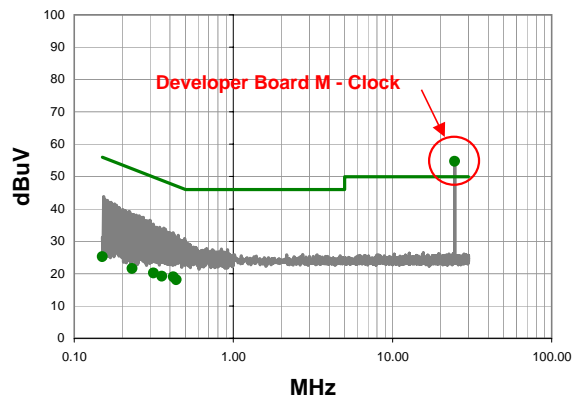
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.1	20.8	57.9	50.0	7.9
0.445	-2.9	20.9	18.0	47.0	-29.0
0.372	-1.8	21.0	19.2	48.5	-29.3
0.410	-2.6	20.9	18.3	47.6	-29.3
0.385	-2.2	21.0	18.8	48.2	-29.4
0.334	-1.4	21.0	19.6	49.4	-29.8
0.300	-0.7	21.0	20.3	50.2	-29.9

Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i>			
Project:	None	Temperature:	25°C				
Job Site:	EV07	Humidity:	36				
Serial Number:	04	Barometric Pres.:	1022.9 mb	Tested by: Rod Peloquin			
EUT:	AVMD7500-07B						
Configuration:	4 - Transmitter AC Conducted Emissions						
Customer:	Avnera						
Attendees:	Fred Weiss						
EUT Power:	120VAC/60Hz						
Operating Mode:	Continuous transmit, high channel						
Deviations:	No deviations						
Comments:							
Test Specifications FCC 15.207:2007			Test Method ANSI C63.4:2003				
Run #	8	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

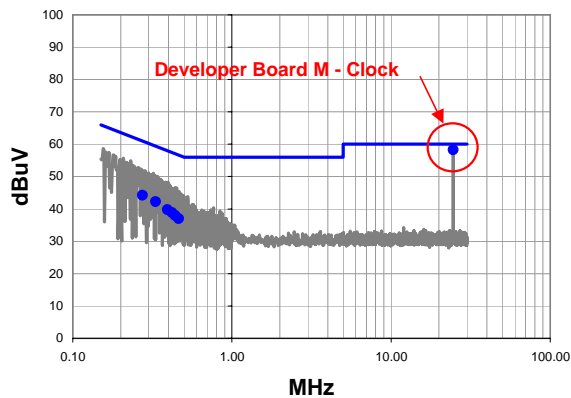
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	34.3	20.8	55.1	60.0	-4.9
0.150	29.1	22.1	51.2	66.0	-14.8
0.231	25.1	21.1	46.2	62.4	-16.3
0.315	21.7	21.0	42.7	59.8	-17.1
0.355	20.3	21.0	41.3	58.8	-17.6
0.420	18.7	20.9	39.6	57.4	-17.8
0.437	17.1	20.9	38.0	57.1	-19.1

Average Data - vs - Average Limit

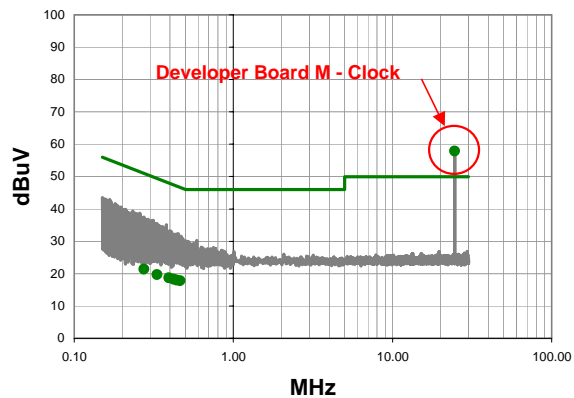
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	33.9	20.8	54.7	50.0	4.7
0.420	-1.9	20.9	19.0	47.4	-28.4
0.437	-2.8	20.9	18.1	47.1	-29.0
0.315	-0.8	21.0	20.2	49.8	-29.6
0.355	-1.8	21.0	19.2	48.8	-29.7
0.150	3.2	22.1	25.3	56.0	-30.7
0.231	0.5	21.1	21.6	52.4	-30.9

Work Order:	AVNE0032	Date:	07/25/08	<i>Rod Peloquin</i> Tested by: Rod Peloquin	
Project:	None	Temperature:	25°C		
Job Site:	EV07	Humidity:	36		
Serial Number:	04	Barometric Pres.:	1022.9 mb		
EUT:	AVMD7500-07B				
Configuration:	4 - Transmitter AC Conducted Emissions				
Customer:	Avnera				
Attendees:	Fred Weiss				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuous transmit, high channel				
Deviations:	No deviations				
Comments:					
Test Specifications FCC 15.207:2007			Test Method ANSI C63.4:2003		
Run #	9	Line:	Neutral	Ext. Attenuation: 20	Results Pass

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)
24.576	37.4	20.8	58.2	60.0	-1.8
0.274	23.2	21.0	44.2	61.0	-16.8
0.332	21.2	21.0	42.2	59.4	-17.2
0.393	18.8	20.9	39.7	58.0	-18.3
0.421	17.9	20.9	38.8	57.4	-18.6
0.439	17.1	20.9	38.0	57.1	-19.1
0.463	16.1	20.9	37.0	56.6	-19.6

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.576	37.0	20.8	57.8	50.0	7.8
0.463	-3.1	20.9	17.8	46.6	-28.8
0.439	-2.9	20.9	18.0	47.1	-29.1
0.421	-2.6	20.9	18.3	47.4	-29.1
0.393	-2.3	20.9	18.6	48.0	-29.4
0.274	0.3	21.0	21.3	51.0	-29.7
0.332	-1.3	21.0	19.7	49.4	-29.7

