Avnera

AVMD7211

March 06, 2008

Report No. AVNE0019

Report Prepared By

www.nwemc.com
1-888-EMI-CERT

EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Issue Date: March 06, 2008
Avnera
Model: AVMD7211

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**
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**
Power Spectral Density	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**
AC Powerline Conducted Emissions	FCC 15.207:2007	ANSI C63.4:2003	**Pass**

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

Test Facility

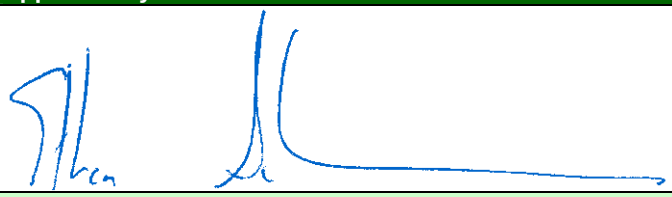
The measurement facility used to collect the data is located at:

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.

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		

Accreditations and Authorizations

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 TUV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TUV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TUV's current Listing of CARAT Laboratories, available from TUV. A certificate was issued to represent that this laboratory continues to meet TUV'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).*

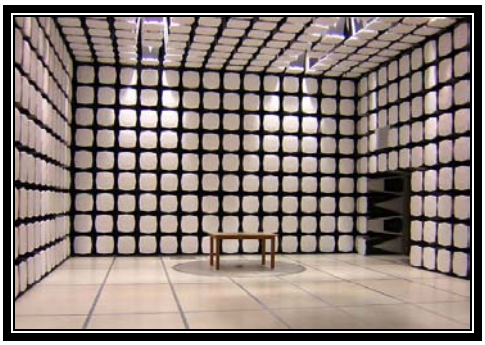
BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.

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)*

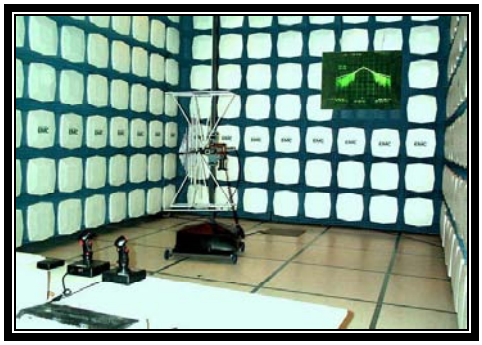
SCOPE

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 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:	AVMD7211
First Date of Test:	February 27, 2008
Last Date of Test:	March 4, 2008
Receipt Date of Samples:	February 25, 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):
DTS device operating in the 2.4 GHz band (2405 - 2477 MHz).

Testing Objective:
Seeking TCB certification under 15.247.

CONFIGURATION 1 AVNE0019

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.009

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module (with PA)	Avnera	AVMD7211	1

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF33-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	28
Laptop	IBM	1161-230	AA-G0F29
Laptop to AC Adapter	IBM	02K6543	1Z0RN0537Y7
Test fixture AC Adapter	Zip	RSP480505-1	Unknown

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Control	No	10 cm	No	Test Fixture	Radio module
SPI	No	10cm	No	Test Fixture	USB to SPI converter
USB	Yes	1.2m	No	USB to SPI converter	Laptop
DC	Yes	1.2m	Yes	Laptop	Laptop AC Adapter
AC	No	1.8m	No	Laptop AC Adapter	AC Mains
DC	No	1.6m	No	Test fixture	Test fixture AC Adapter
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 AVNE0019

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.009

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module (with out PA)	Avnera	AVMD7211	4

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF33-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	28
Laptop	IBM	1161-230	AA-G0F29
Laptop to AC Adapter	IBM	02K6543	1Z0RN0537Y7
Test fixture AC Adapter	Zip	RSP480505-1	Unknown

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Control	No	10 cm	No	Test Fixture	Radio module
SPI	No	10cm	No	Test Fixture	USB to SPI converter
USB	Yes	1.2m	No	USB to SPI converter	Laptop
DC	Yes	1.2m	Yes	Laptop	Laptop AC Adapter
AC	No	1.8m	No	Laptop AC Adapter	AC Mains
DC	No	1.6m	No	Test fixture	Test fixture AC Adapter
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 3 AVNE0019

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.009

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module	Avnera	AVMD7211	7

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF33-01B	Unknown
Test fixture AC Adapter	Zip	RSP480505-1	Unknown

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
USB to SPI converter	Avnera	USB to SPI Converter	28
Laptop	IBM	1161-230	AA-G0F29
Laptop to AC Adapter	IBM	02K6543	1Z0RN0537Y7

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Control	No	10 cm	No	Test Fixture	Radio module
SPI	No	10cm	No	Test Fixture	USB to SPI converter
USB	Yes	1.2m	No	USB to SPI converter	Laptop
DC	Yes	1.2m	Yes	Laptop	Laptop AC Adapter
AC	No	1.8m	No	Laptop AC Adapter	AC Mains
DC	No	1.6m	No	Test fixture	Test fixture AC Adapter
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 4 AVNE0019

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.009

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module	Avnera	AVMD7211	7

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF33-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	28
Laptop	IBM	1161-230	AA-G0F29
Laptop to AC Adapter	IBM	02K6543	1Z0RN0537Y7
Test fixture AC Adapter	Zip	RSP480505-1	Unknown

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Control	No	10 cm	No	Test Fixture	Radio module
SPI	No	10cm	No	Test Fixture	USB to SPI converter
USB	Yes	1.2m	No	USB to SPI converter	Laptop
DC	Yes	1.2m	Yes	Laptop	Laptop AC Adapter
AC	No	1.8m	No	Laptop AC Adapter	AC Mains
DC	No	1.6m	No	Test fixture	Test fixture AC Adapter
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	2/27/2008	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	2/27/2008	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.
3	2/27/2008	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.
4	2/27/2008	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.
5	2/27/2008	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.
6	3/3/2008	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.
7	3/4/2008	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

RADIATED SPURIOUS 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
Transmit, PA enabled, High diversity antenna, low channel
Transmit, PA enabled, High diversity antenna, mid channel
Transmit, PA enabled, High diversity antenna, high channel
Transmit, PA enabled, Low diversity antenna, low channel
Transmit, PA enabled, Low diversity antenna, mid channel
Transmit, PA enabled, Low diversity antenna, hgh channel

POWER SETTINGS INVESTIGATED
120VAC/60Hz

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
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
High Pass Filter	Micro-Tronics	HPM50111	HFO	1/16/2008	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		6GHz Standard Gain Horn C	EVD	7/25/2007	13

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

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.

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	02/29/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

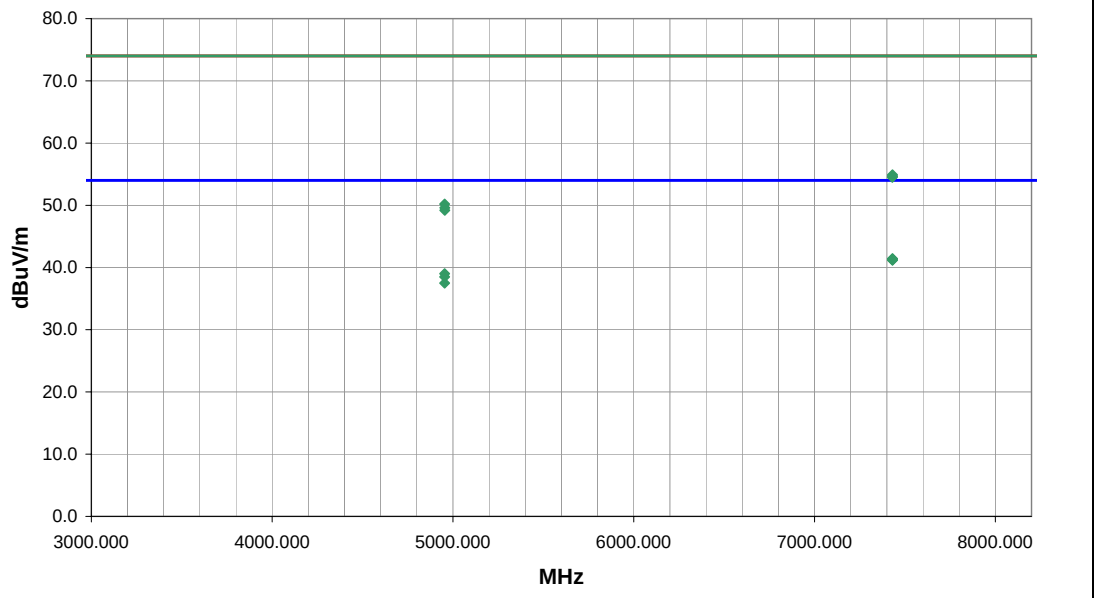
Transmit, Low diversity antenna, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	3
Results	Pass

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
7431.005	23.8	17.6	313.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.4	54.0	-12.6	EUT horizontal
7431.045	23.8	17.6	248.0	1.2	3.0	0.0	H-Horn	AV	0.0	41.4	54.0	-12.6	EUT horizontal
7430.815	23.6	17.6	173.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.2	54.0	-12.8	EUT on side
7431.035	23.6	17.6	118.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.2	54.0	-12.8	EUT on side
4953.970	28.0	11.0	233.0	1.3	3.0	0.0	H-Horn	AV	0.0	39.0	54.0	-15.0	EUT on side
4953.995	27.5	11.0	297.0	1.0	3.0	0.0	V-Horn	AV	0.0	38.5	54.0	-15.5	EUT on side
4953.980	26.5	11.0	166.0	1.5	3.0	0.0	H-Horn	AV	0.0	37.5	54.0	-16.5	EUT horizontal
7430.870	37.3	17.6	173.0	1.0	3.0	0.0	H-Horn	PK	0.0	54.9	74.0	-19.1	EUT on side
7430.515	37.1	17.6	248.0	1.2	3.0	0.0	H-Horn	PK	0.0	54.7	74.0	-19.3	EUT horizontal
7431.295	37.0	17.6	118.0	1.0	3.0	0.0	V-Horn	PK	0.0	54.6	74.0	-19.4	EUT on side
7430.390	36.9	17.6	313.0	1.0	3.0	0.0	V-Horn	PK	0.0	54.5	74.0	-19.5	EUT horizontal
4954.070	39.2	11.0	233.0	1.3	3.0	0.0	H-Horn	PK	0.0	50.2	74.0	-23.8	EUT on side
4954.455	38.6	11.0	297.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.6	74.0	-24.4	EUT on side
4954.525	38.2	11.0	166.0	1.5	3.0	0.0	H-Horn	PK	0.0	49.2	74.0	-24.8	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	02/29/08
Customer:	Avnera	Temperature:	22
Attendees:	None	Humidity:	32%
Project:	None	Barometric Pres.:	30.32
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

EUT OPERATING MODES

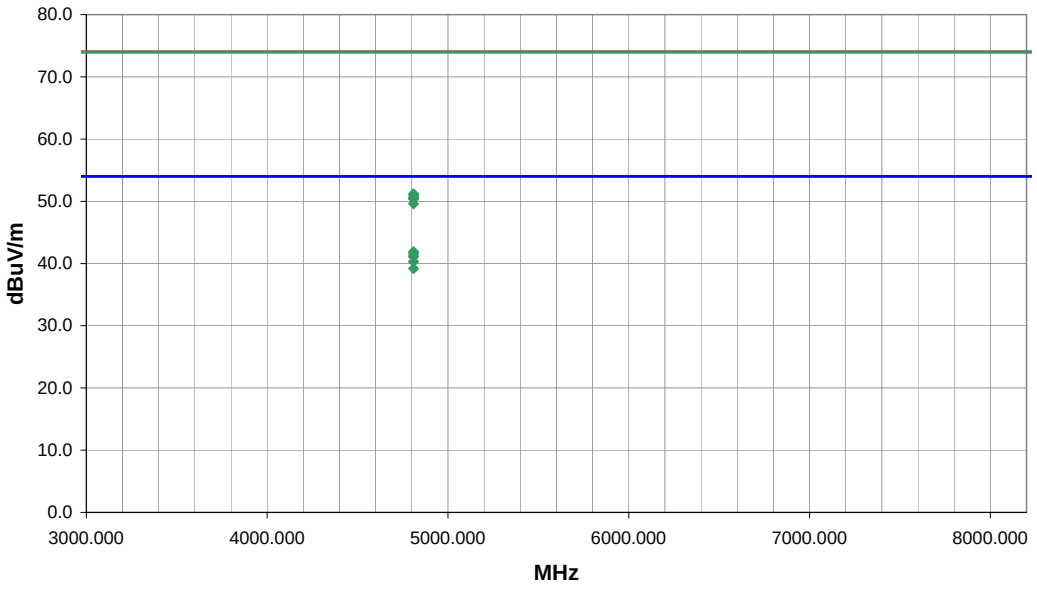
Transmitting PA enabled, low diversity, Low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	3
Results	Pass

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
4810.073	31.8	10.1	332.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	EUT on side
4810.045	31.5	10.1	144.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.6	54.0	-12.4	EUT vertical
4810.009	31.1	10.1	347.0	1.4	3.0	0.0	H-Horn	AV	0.0	41.2	54.0	-12.8	EUT horizontal
4810.006	31.0	10.1	232.0	1.4	3.0	0.0	H-Horn	AV	0.0	41.1	54.0	-12.9	EUT on side
4809.964	30.2	10.1	276.0	1.0	3.0	0.0	H-Horn	AV	0.0	40.3	54.0	-13.7	EUT vertical
4810.017	29.1	10.1	168.0	1.0	3.0	0.0	V-Horn	AV	0.0	39.2	54.0	-14.8	EUT horizontal
4809.835	41.1	10.1	332.0	1.1	3.0	0.0	V-Horn	PK	0.0	51.2	74.0	-22.8	EUT on side
4810.285	40.8	10.1	144.0	1.1	3.0	0.0	V-Horn	PK	0.0	50.9	74.0	-23.1	EUT vertical
4810.240	40.4	10.1	347.0	1.4	3.0	0.0	H-Horn	PK	0.0	50.5	74.0	-23.5	EUT horizontal
4810.315	40.4	10.1	276.0	1.0	3.0	0.0	H-Horn	PK	0.0	50.5	74.0	-23.5	EUT vertical
4809.780	40.3	10.1	232.0	1.4	3.0	0.0	H-Horn	PK	0.0	50.4	74.0	-23.6	EUT on side
4809.680	39.5	10.1	168.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.6	74.0	-24.4	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	02/29/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

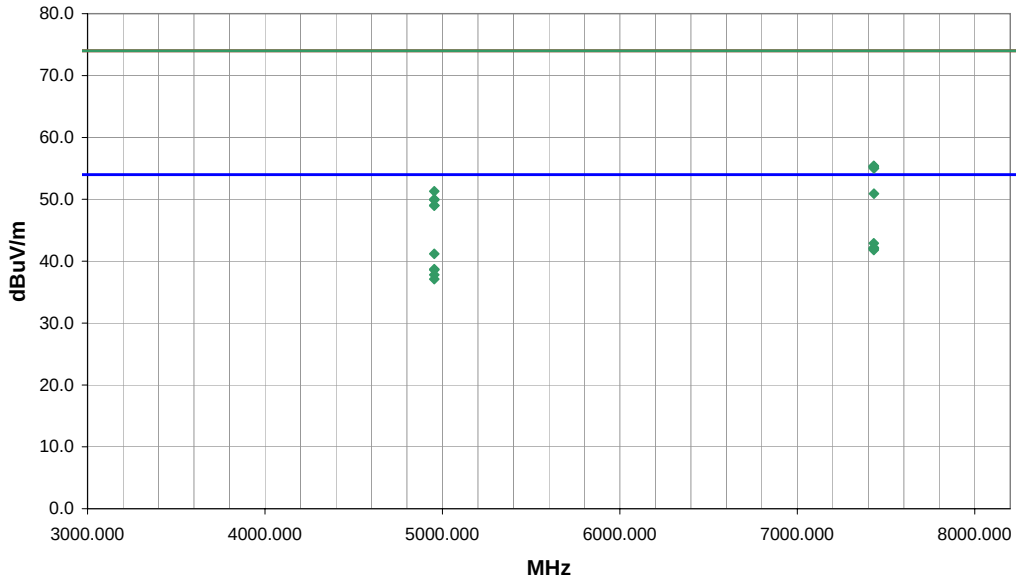
Transmit, High diversity antenna, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4
Configuration #	3
Results	Pass

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
7430.930	25.3	17.6	82.0	1.5	3.0	0.0	V-Horn	AV	0.0	42.9	54.0	-11.1	EUT vertical
7431.010	24.6	17.6	172.0	1.5	3.0	0.0	H-Horn	AV	0.0	42.2	54.0	-11.8	EUT horizontal
7431.035	24.5	17.6	17.0	1.4	3.0	0.0	H-Horn	AV	0.0	42.1	54.0	-11.9	EUT on side
7430.970	24.4	17.6	102.0	1.3	3.0	0.0	H-Horn	AV	0.0	42.0	54.0	-12.0	EUT vertical
7431.015	24.4	17.6	147.0	1.5	3.0	0.0	V-Horn	AV	0.0	42.0	54.0	-12.0	EUT on side
7430.890	24.2	17.6	46.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.8	54.0	-12.2	EUT horizontal
4954.020	30.2	11.0	5.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.2	54.0	-12.8	EUT on side
4953.980	27.7	11.0	305.0	1.2	3.0	0.0	H-Horn	AV	0.0	38.7	54.0	-15.3	EUT on side
4954.025	27.6	11.0	53.0	1.2	3.0	0.0	H-Horn	AV	0.0	38.6	54.0	-15.4	EUT horizontal
4954.000	26.8	11.0	166.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.8	54.0	-16.2	EUT vertical
4954.025	26.1	11.0	44.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.1	54.0	-16.9	EUT horizontal
7430.945	37.8	17.6	17.0	1.4	3.0	0.0	H-Horn	PK	0.0	55.4	74.0	-18.6	EUT on side
7430.900	37.7	17.6	172.0	1.5	3.0	0.0	H-Horn	PK	0.0	55.3	74.0	-18.7	EUT horizontal
7430.735	37.6	17.6	147.0	1.5	3.0	0.0	V-Horn	PK	0.0	55.2	74.0	-18.8	EUT on side
7430.940	37.6	17.6	102.0	1.3	3.0	0.0	H-Horn	PK	0.0	55.2	74.0	-18.8	EUT vertical
7431.490	37.4	17.6	46.0	1.4	3.0	0.0	V-Horn	PK	0.0	55.0	74.0	-19.0	EUT horizontal
4953.510	40.3	11.0	5.0	1.1	3.0	0.0	V-Horn	PK	0.0	51.3	74.0	-22.7	EUT on side
7431.475	33.3	17.6	82.0	1.5	3.0	0.0	V-Horn	PK	0.0	50.9	74.0	-23.1	EUT vertical
4954.085	39.0	11.0	305.0	1.2	3.0	0.0	H-Horn	PK	0.0	50.0	74.0	-24.0	EUT on side
4953.895	38.9	11.0	53.0	1.2	3.0	0.0	H-Horn	PK	0.0	49.9	74.0	-24.1	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	02/29/08
Customer:	Avnera	Temperature:	22
Attendees:	None	Humidity:	32%
Project:	None	Barometric Pres.:	30.32
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

EUT OPERATING MODES

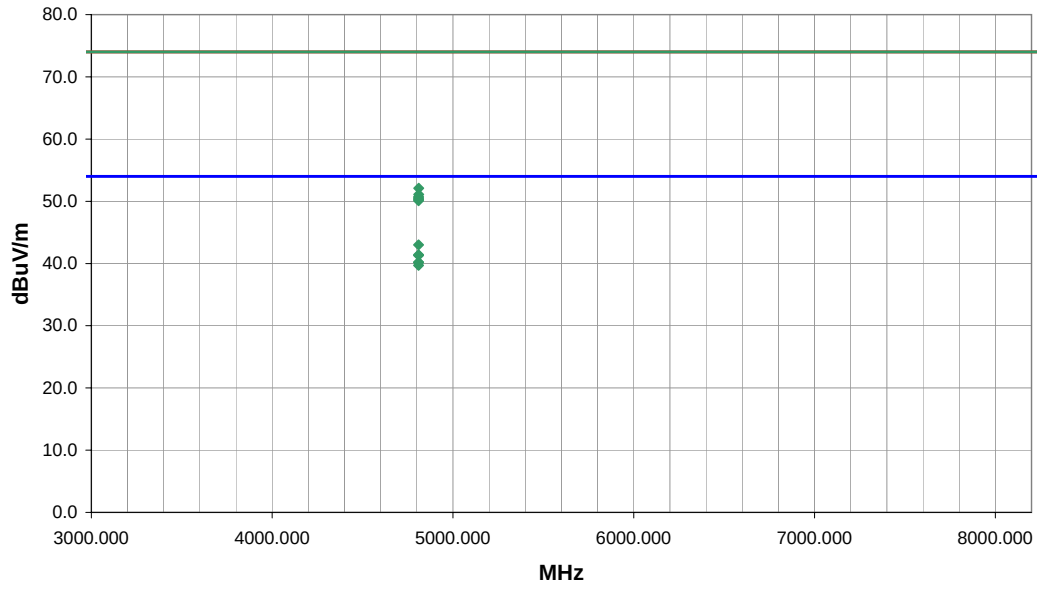
Transmitting PA enabled, High diversity, Low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5
Configuration #	3
Results	Pass

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
4809.975	32.9	10.1	232.0	1.3	3.0	0.0	H-Horn	AV	0.0	43.0	54.0	-11.0	EUT vertical
4809.960	31.3	10.1	242.0	1.3	3.0	0.0	H-Horn	AV	0.0	41.4	54.0	-12.6	EUT horizontal
4810.020	31.2	10.1	323.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.3	54.0	-12.7	EUT on side
4809.985	30.1	10.1	250.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.2	54.0	-13.8	EUT horizontal
4810.015	30.1	10.1	43.0	1.3	3.0	0.0	H-Horn	AV	0.0	40.2	54.0	-13.8	EUT on side
4809.990	29.6	10.1	138.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.7	54.0	-14.3	EUT vertical
4810.250	42.0	10.1	232.0	1.3	3.0	0.0	H-Horn	PK	0.0	52.1	74.0	-21.9	EUT vertical
4810.300	41.0	10.1	242.0	1.3	3.0	0.0	H-Horn	PK	0.0	51.1	74.0	-22.9	EUT horizontal
4809.695	40.6	10.1	323.0	1.1	3.0	0.0	V-Horn	PK	0.0	50.7	74.0	-23.3	EUT on side
4809.910	40.4	10.1	43.0	1.3	3.0	0.0	H-Horn	PK	0.0	50.5	74.0	-23.5	EUT on side
4810.020	40.2	10.1	250.0	1.1	3.0	0.0	V-Horn	PK	0.0	50.3	74.0	-23.7	EUT horizontal
4810.020	40.0	10.1	138.0	1.1	3.0	0.0	V-Horn	PK	0.0	50.1	74.0	-23.9	EUT vertical

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	22
Attendees:	None	Humidity:	32%
Project:	None	Barometric Pres.:	30.32
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

EUT OPERATING MODES

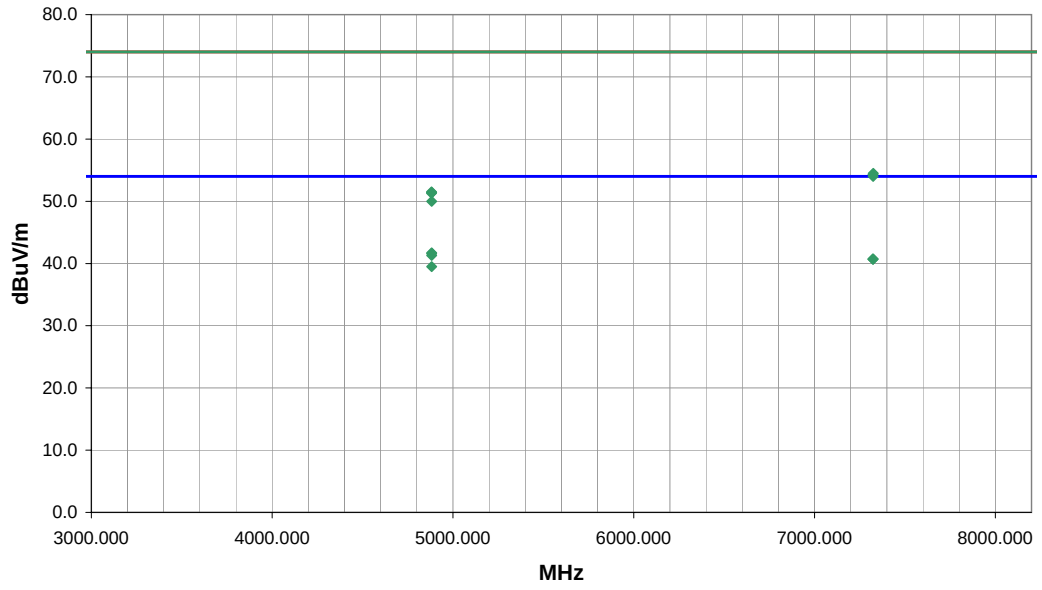
Transmitting PA enabled, High diversity, mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6
Configuration #	3
Results	Pass

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
4881.985	31.2	10.5	329.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.7	54.0	-12.3	EUT on side
4882.005	31.1	10.5	170.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.6	54.0	-12.4	EUT vertical
4882.045	30.8	10.5	324.0	1.3	3.0	0.0	H-Horn	AV	0.0	41.3	54.0	-12.7	EUT vertical
7323.145	23.6	17.1	68.0	1.2	3.0	0.0	V-Horn	AV	0.0	40.7	54.0	-13.3	EUT vertical
7323.335	23.6	17.1	314.0	1.0	3.0	0.0	V-Horn	AV	0.0	40.7	54.0	-13.3	EUT on side
7324.210	23.6	17.1	203.0	1.5	3.0	0.0	H-Horn	AV	0.0	40.7	54.0	-13.3	EUT horizontal
4882.050	29.0	10.5	90.0	1.0	3.0	0.0	H-Horn	AV	0.0	39.5	54.0	-14.5	EUT horizontal
7324.470	37.4	17.1	203.0	1.5	3.0	0.0	H-Horn	PK	0.0	54.5	74.0	-19.5	EUT horizontal
7322.985	37.2	17.1	68.0	1.2	3.0	0.0	V-Horn	PK	0.0	54.3	74.0	-19.7	EUT vertical
7323.570	36.9	17.1	314.0	1.0	3.0	0.0	V-Horn	PK	0.0	54.0	74.0	-20.0	EUT on side
4881.610	41.0	10.5	329.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.5	74.0	-22.5	EUT on side
4882.565	40.9	10.5	324.0	1.3	3.0	0.0	H-Horn	PK	0.0	51.4	74.0	-22.6	EUT vertical
4881.780	40.8	10.5	170.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.3	74.0	-22.7	EUT vertical
4882.125	39.5	10.5	90.0	1.0	3.0	0.0	H-Horn	PK	0.0	50.0	74.0	-24.0	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

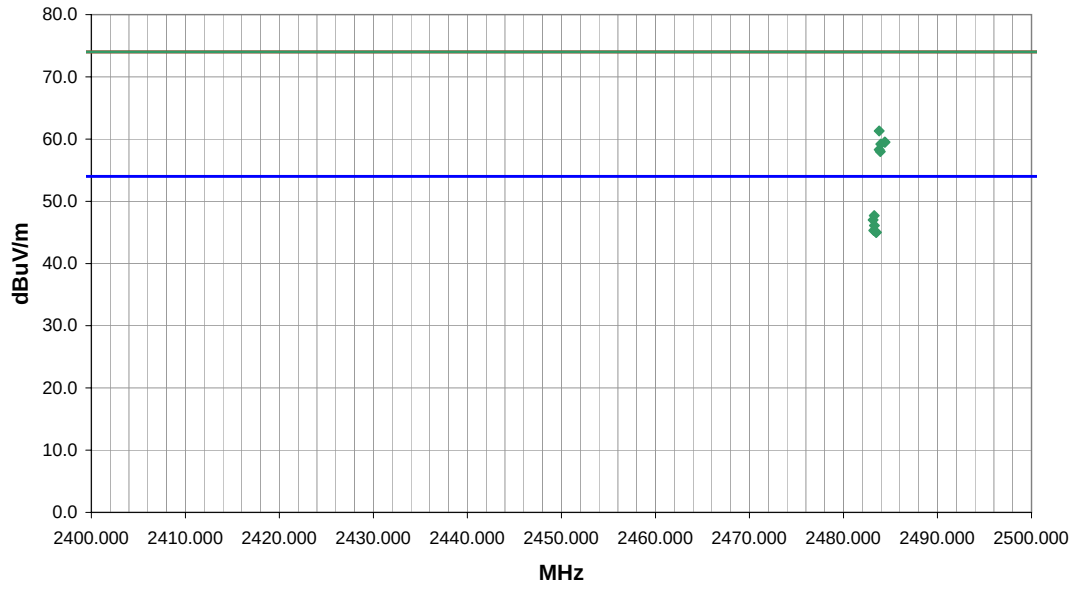
Transmit, Low diversity antenna, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7
Configuration #	3
Results	Pass

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
2483.265	25.5	2.2	121.0	1.4	3.0	20.0	H-Horn	AV	0.0	47.7	54.0	-6.3	EUT on side
2483.160	24.8	2.2	109.0	1.3	3.0	20.0	H-Horn	AV	0.0	47.0	54.0	-7.0	EUT horizontal
2483.295	23.9	2.2	103.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.1	54.0	-7.9	EUT vertical
2483.223	23.1	2.2	141.0	1.4	3.0	20.0	H-Horn	AV	0.0	45.3	54.0	-8.7	EUT vertical
2483.482	22.8	2.2	349.0	1.0	3.0	20.0	V-Horn	AV	0.0	45.0	54.0	-9.0	EUT horizontal
2483.497	22.8	2.2	357.0	1.0	3.0	20.0	V-Horn	AV	0.0	45.0	54.0	-9.0	EUT on side
2483.798	39.1	2.2	121.0	1.4	3.0	20.0	H-Horn	PK	0.0	61.3	74.0	-12.7	EUT on side
2484.395	37.3	2.2	109.0	1.3	3.0	20.0	H-Horn	PK	0.0	59.5	74.0	-14.5	EUT horizontal
2484.408	37.3	2.2	141.0	1.4	3.0	20.0	H-Horn	PK	0.0	59.5	74.0	-14.5	EUT vertical
2483.968	37.0	2.2	103.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.2	74.0	-14.8	EUT vertical
2483.800	36.1	2.2	349.0	1.0	3.0	20.0	V-Horn	PK	0.0	58.3	74.0	-15.7	EUT horizontal
2483.912	35.8	2.2	357.0	1.0	3.0	20.0	V-Horn	PK	0.0	58.0	74.0	-16.0	EUT on side

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

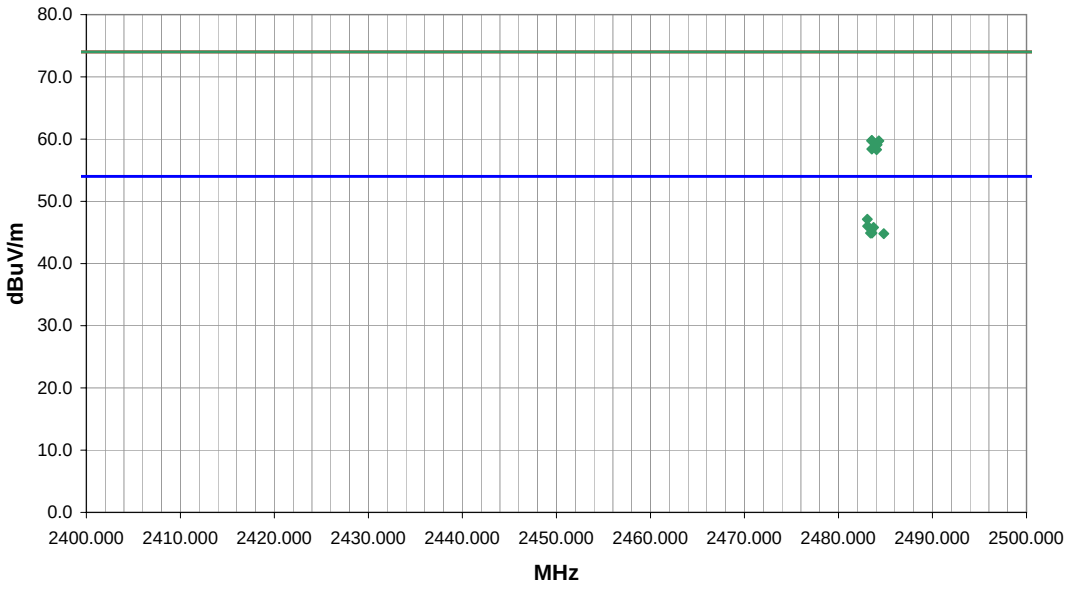
Transmit, High diversity antenna, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
Configuration #	3
Results	Pass

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
2483.068	24.9	2.2	114.0	1.1	3.0	20.0	H-Horn	AV	0.0	47.1	54.0	-6.9	EUT on side
2483.093	23.8	2.2	127.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	EUT vertical
2483.730	23.6	2.2	157.0	1.5	3.0	20.0	H-Horn	AV	0.0	45.8	54.0	-8.2	EUT horizontal
2483.400	22.7	2.2	237.0	2.3	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	EUT horizontal
2483.563	22.7	2.2	0.0	1.0	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	EUT on side
2484.822	22.6	2.2	273.0	1.1	3.0	20.0	H-Horn	AV	0.0	44.8	54.0	-9.2	EUT vertical
2483.540	37.6	2.2	157.0	1.5	3.0	20.0	H-Horn	PK	0.0	59.8	74.0	-14.2	EUT horizontal
2483.540	37.5	2.2	127.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.7	74.0	-14.3	EUT vertical
2484.298	37.5	2.2	114.0	1.1	3.0	20.0	H-Horn	PK	0.0	59.7	74.0	-14.3	EUT on side
2484.112	36.9	2.2	0.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.1	74.0	-14.9	EUT on side
2483.535	36.2	2.2	273.0	1.1	3.0	20.0	H-Horn	PK	0.0	58.4	74.0	-15.6	EUT vertical
2484.055	36.1	2.2	237.0	2.3	3.0	20.0	V-Horn	PK	0.0	58.3	74.0	-15.7	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

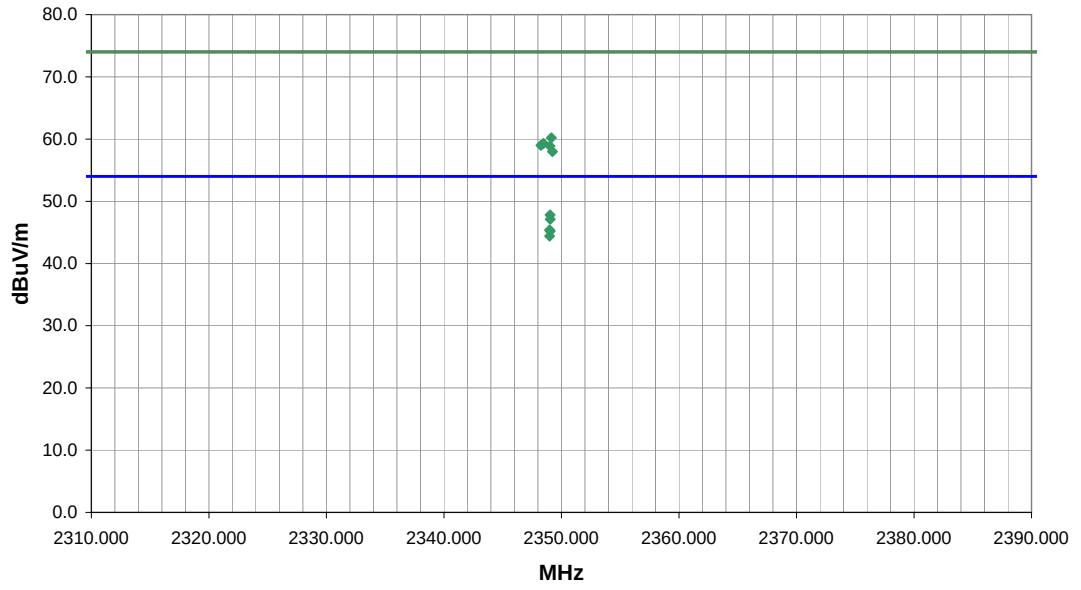
Transmit, Low diversity antenna, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9
Configuration #	3
Results	Pass

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
2349.028	26.3	1.5	98.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.8	54.0	-6.2	EUT vertical
2349.045	25.6	1.5	112.0	1.1	3.0	20.0	H-Horn	AV	0.0	47.1	54.0	-6.9	EUT horizontal
2348.988	23.9	1.5	60.0	1.2	3.0	20.0	H-Horn	AV	0.0	45.4	54.0	-8.6	EUT on side
2349.051	23.7	1.5	146.0	1.4	3.0	20.0	V-Horn	AV	0.0	45.2	54.0	-8.8	EUT on side
2348.998	22.9	1.5	237.0	1.4	3.0	20.0	V-Horn	AV	0.0	44.4	54.0	-9.6	EUT horizontal
2349.141	38.7	1.5	98.0	1.0	3.0	20.0	V-Horn	PK	0.0	60.2	74.0	-13.8	EUT vertical
2348.478	37.8	1.5	112.0	1.1	3.0	20.0	H-Horn	PK	0.0	59.3	74.0	-14.7	EUT horizontal
2348.251	37.5	1.5	146.0	1.4	3.0	20.0	V-Horn	PK	0.0	59.0	74.0	-15.0	EUT on side
2349.015	37.4	1.5	237.0	1.4	3.0	20.0	V-Horn	PK	0.0	58.9	74.0	-15.1	EUT horizontal
2349.235	36.5	1.5	60.0	1.2	3.0	20.0	H-Horn	PK	0.0	58.0	74.0	-16.0	EUT on side

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

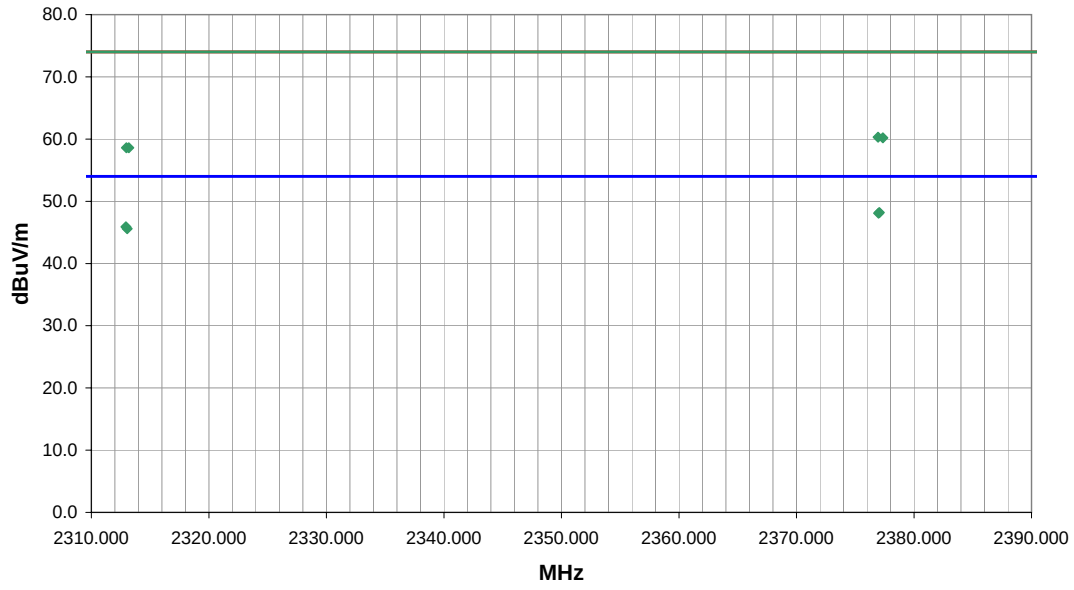
Transmit, Low diversity antenna, mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	10
Configuration #	3
Results	Pass

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
2377.050	26.6	1.6	94.0	1.0	3.0	20.0	V-Horn	AV	0.0	48.2	54.0	-5.8	EUT vertical
2376.980	26.5	1.6	231.0	1.1	3.0	20.0	H-Horn	AV	0.0	48.1	54.0	-5.9	EUT horizontal
2312.938	24.6	1.3	234.0	1.1	3.0	20.0	H-Horn	AV	0.0	45.9	54.0	-8.1	EUT horizontal
2313.048	24.3	1.3	91.0	1.0	3.0	20.0	V-Horn	AV	0.0	45.6	54.0	-8.4	EUT vertical
2376.940	38.7	1.6	231.0	1.1	3.0	20.0	H-Horn	PK	0.0	60.3	74.0	-13.7	EUT horizontal
2377.352	38.6	1.6	94.0	1.0	3.0	20.0	V-Horn	PK	0.0	60.2	74.0	-13.8	EUT vertical
2312.978	37.3	1.3	234.0	1.1	3.0	20.0	H-Horn	PK	0.0	58.6	74.0	-15.4	EUT horizontal
2313.190	37.3	1.3	91.0	1.0	3.0	20.0	V-Horn	PK	0.0	58.6	74.0	-15.4	EUT vertical

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

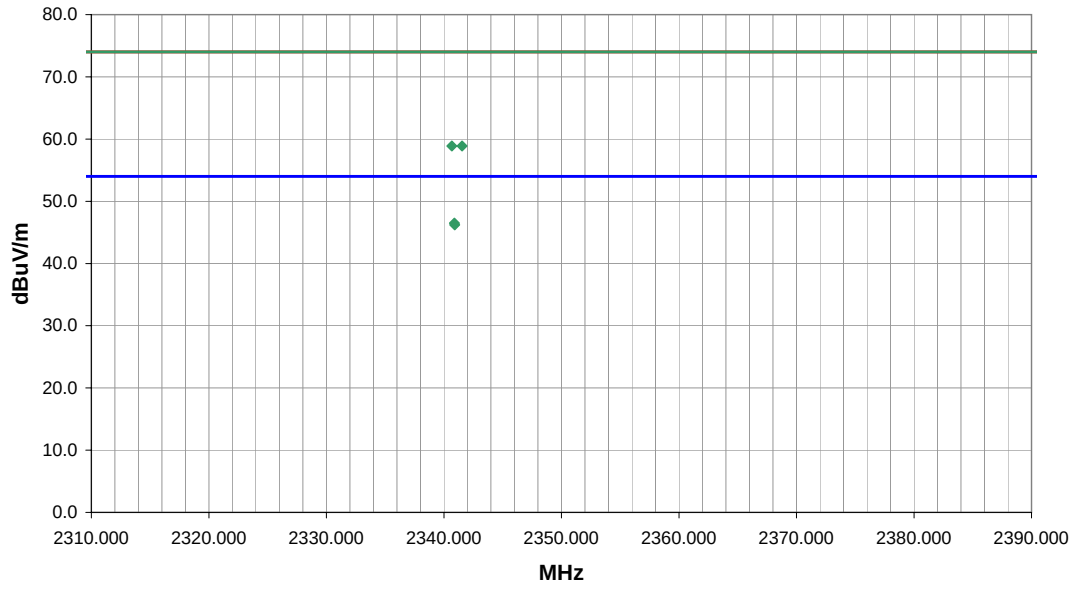
Transmit, Low diversity antenna, low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	11
Configuration #	3
Results	Pass

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
2340.889	25.0	1.5	219.0	1.1	3.0	20.0	H-Horn	AV	0.0	46.5	54.0	-7.5	EUT horizontal
2340.924	24.7	1.5	84.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.2	54.0	-7.8	EUT vertical
2340.672	37.4	1.5	84.0	1.0	3.0	20.0	V-Horn	PK	0.0	58.9	74.0	-15.1	EUT vertical
2341.546	37.4	1.5	219.0	1.1	3.0	20.0	H-Horn	PK	0.0	58.9	74.0	-15.1	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

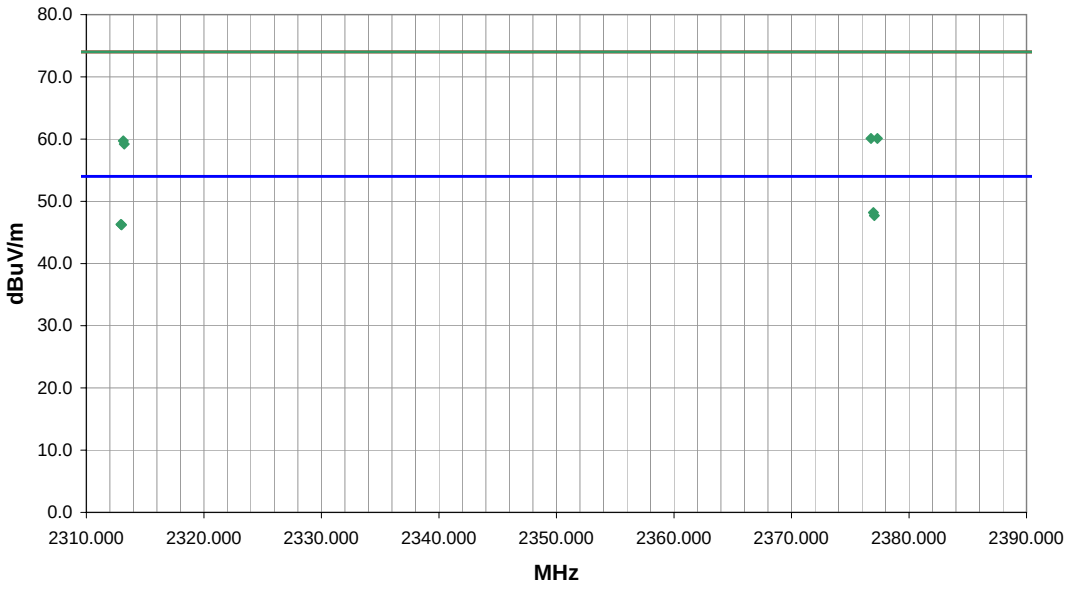
Transmit, High diversity antenna, mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	12
Configuration #	3
Results	Pass

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
2376.968	26.6	1.6	297.0	1.1	3.0	20.0	H-Horn	AV	0.0	48.2	54.0	-5.8	EUT horizontal
2377.050	26.1	1.6	169.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.7	54.0	-6.3	EUT vertical
2312.945	25.0	1.3	151.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.3	54.0	-7.7	EUT vertical
2312.990	24.9	1.3	296.0	1.1	3.0	20.0	H-Horn	AV	0.0	46.2	54.0	-7.8	EUT horizontal
2376.772	38.5	1.6	297.0	1.1	3.0	20.0	H-Horn	PK	0.0	60.1	74.0	-13.9	EUT horizontal
2377.310	38.5	1.6	169.0	1.0	3.0	20.0	V-Horn	PK	0.0	60.1	74.0	-13.9	EUT vertical
2313.140	38.4	1.3	296.0	1.1	3.0	20.0	H-Horn	PK	0.0	59.7	74.0	-14.3	EUT horizontal
2313.225	37.9	1.3	151.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.2	74.0	-14.8	EUT vertical

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211	Work Order:	AVNE0019
Serial Number:	7	Date:	03/03/08
Customer:	Avnera	Temperature:	24
Attendees:	None	Humidity:	29%
Project:	None	Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

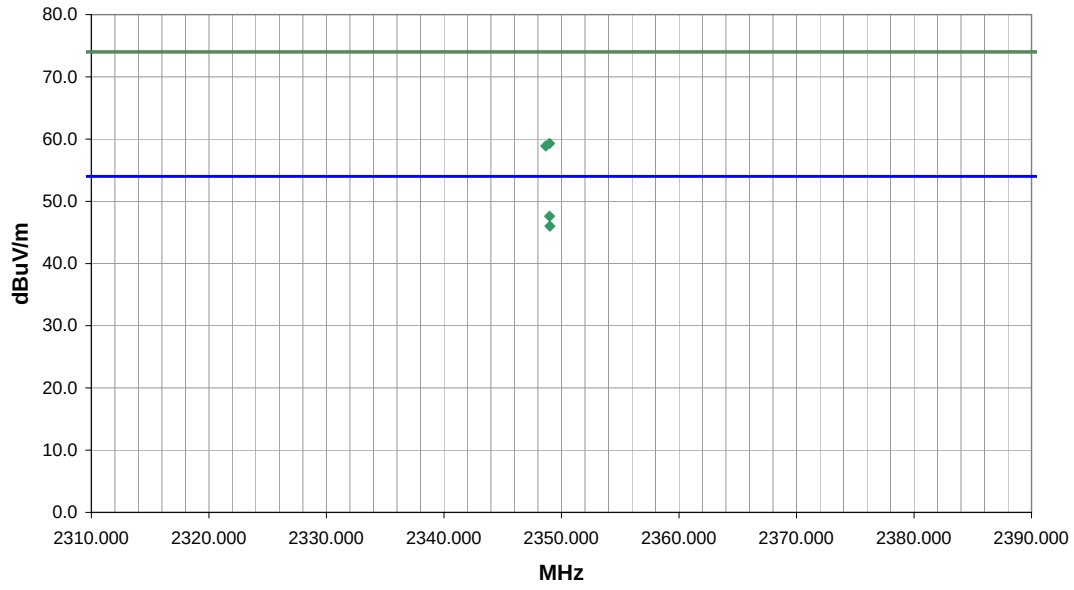
Transmit, High diversity antenna, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	13
Configuration #	3
Results	Pass

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
2348.993	26.1	1.5	127.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.6	54.0	-6.4	EUT vertical
2349.020	24.5	1.5	231.0	1.1	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	EUT horizontal
2348.996	37.8	1.5	127.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.3	74.0	-14.7	EUT vertical
2348.668	37.4	1.5	231.0	1.1	3.0	20.0	H-Horn	PK	0.0	58.9	74.0	-15.1	EUT horizontal

NORTHWEST EMC

RADIATED SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7211			Work Order:	AVNE0019
Serial Number:	7			Date:	03/03/08
Customer:	Avnera			Temperature:	24
Attendees:	None			Humidity:	29%
Project:	None			Barometric Pres.:	1023.8mb
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

EUT OPERATING MODES

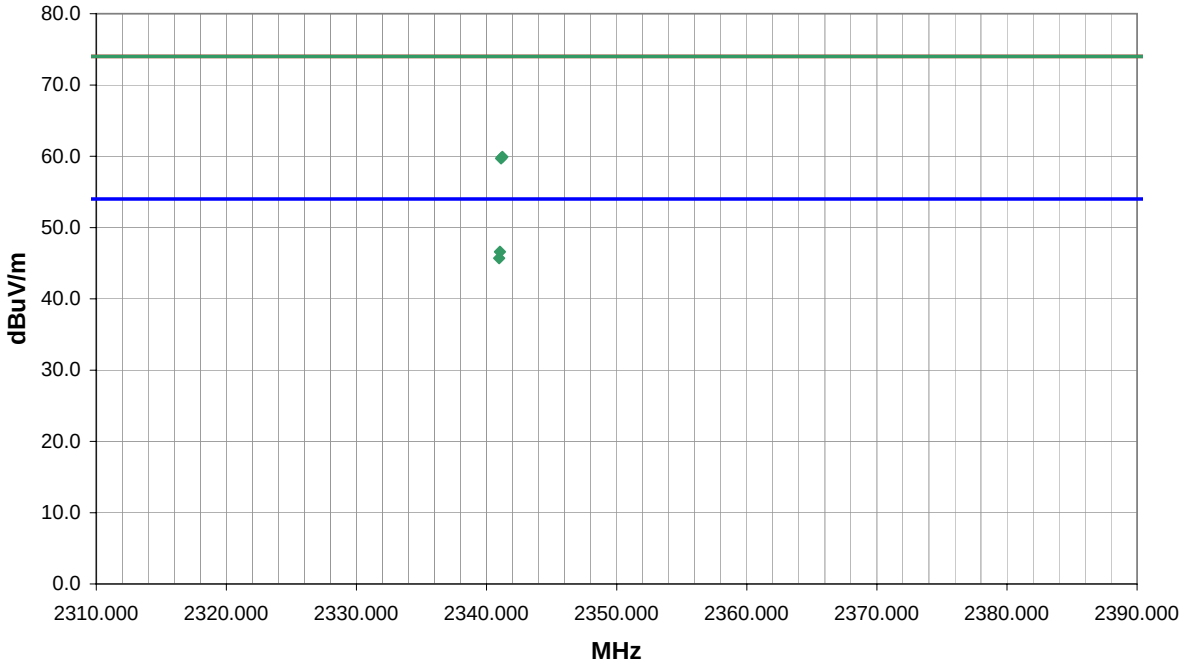
Transmit, High diversity antenna, low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	14
Configuration #	3
Results	Pass

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)
2341.026	25.1	1.5	110.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.6	54.0	-7.4
2340.964	24.2	1.5	104.0	1.1	3.0	20.0	H-Horn	AV	0.0	45.7	54.0	-8.3
2341.216	38.4	1.5	110.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.9	74.0	-14.1
2341.119	38.2	1.5	104.0	1.1	3.0	20.0	H-Horn	PK	0.0	59.7	74.0	-14.3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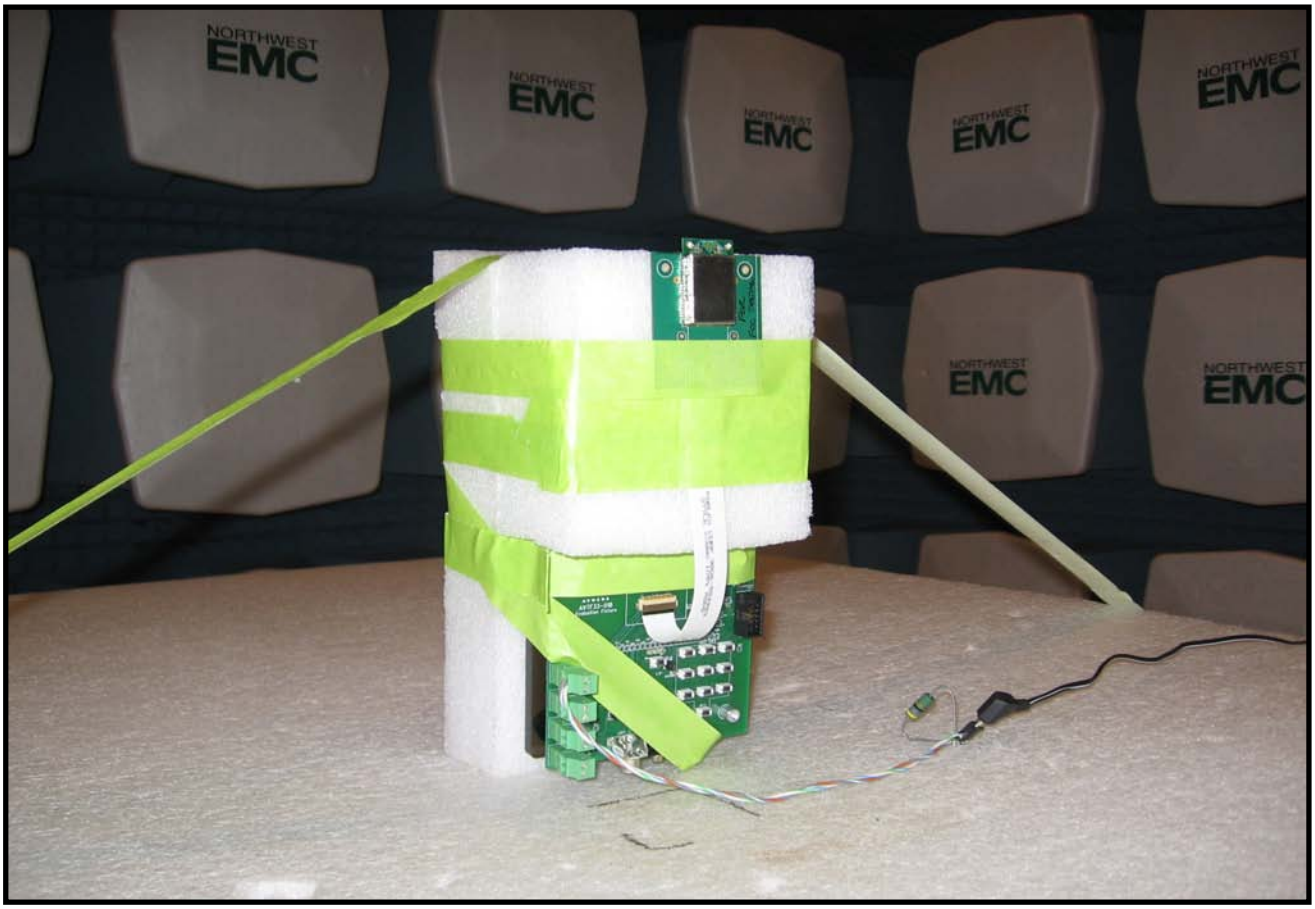

NORTHWEST
EMC

Occupied Bandwidth

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 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12

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.

NORTHWEST EMC

Occupied Bandwidth

XMit 2007.06.13

EUT:	AVMD7211			**Work Order:**	AVNE0019
Serial Number:	1 (with PA), 4 (without PA)			**Date:**	02/27/08
Customer:	Avnera			**Temperature:**	24°C
Attendees:	Fred Weiss			**Humidity:**	27%
Project:	None			**Barometric Pres.:**	1025.3mb
Tested by:	Holly Ashkannejhad	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Please note, configuration 1 refers to unit with PA; configuration 2 refers to unit with out PA. Testing performed on low antenna port only; Antenna port outputs are within 0.5dB of each other (see output power measurements).

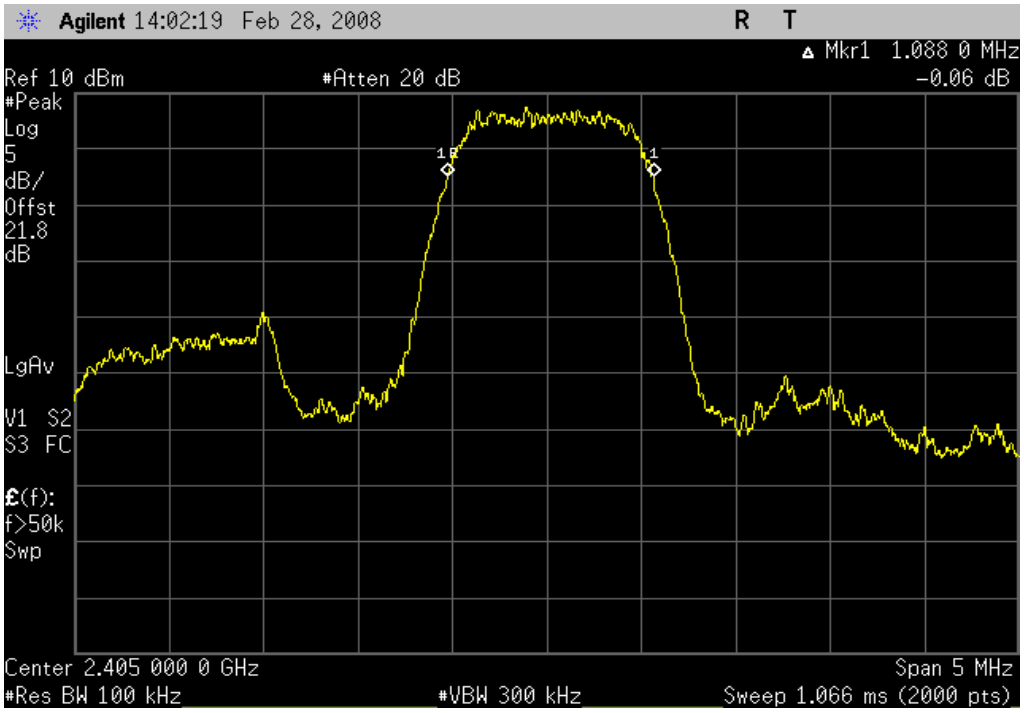
DEVIATIONS FROM TEST STANDARD

No Deviations

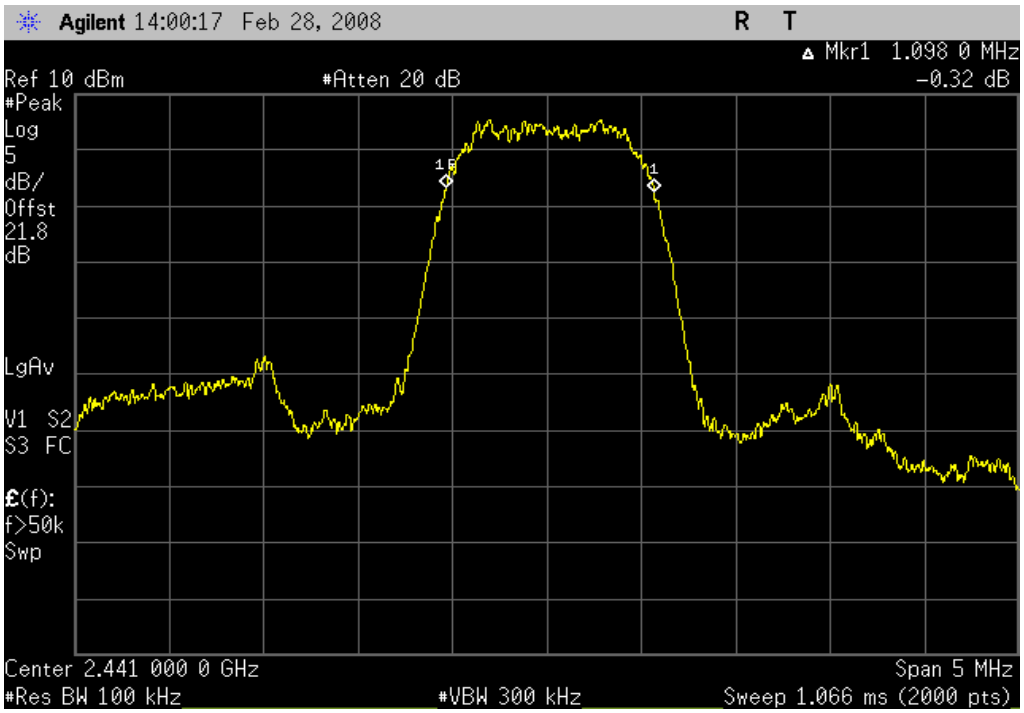
Configuration #	1, 2	Signature

		Value	Limit	Results
AVMD7211 with PA, S/N: 1				
pi/4-DQPSK				
Low diversity antenna				
	Low channel, Ch. 2, 2405MHz	1.088 MHz	≥ 500 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	1.098 MHz	≥ 500 kHz	Pass
	High channel, Ch. 38, 2477MHz	1.0855 MHz	≥ 500 kHz	Pass
AVMD7211 with out PA, S/N: 4				
pi/4-DQPSK				
Low diversity antenna				
	Low channel, Ch. 2, 2405MHz	1.0905 MHz	≥ 500 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	1.098 MHz	≥ 500 kHz	Pass
	High channel, Ch. 38, 2477MHz	1.083 MHz	≥ 500 kHz	Pass

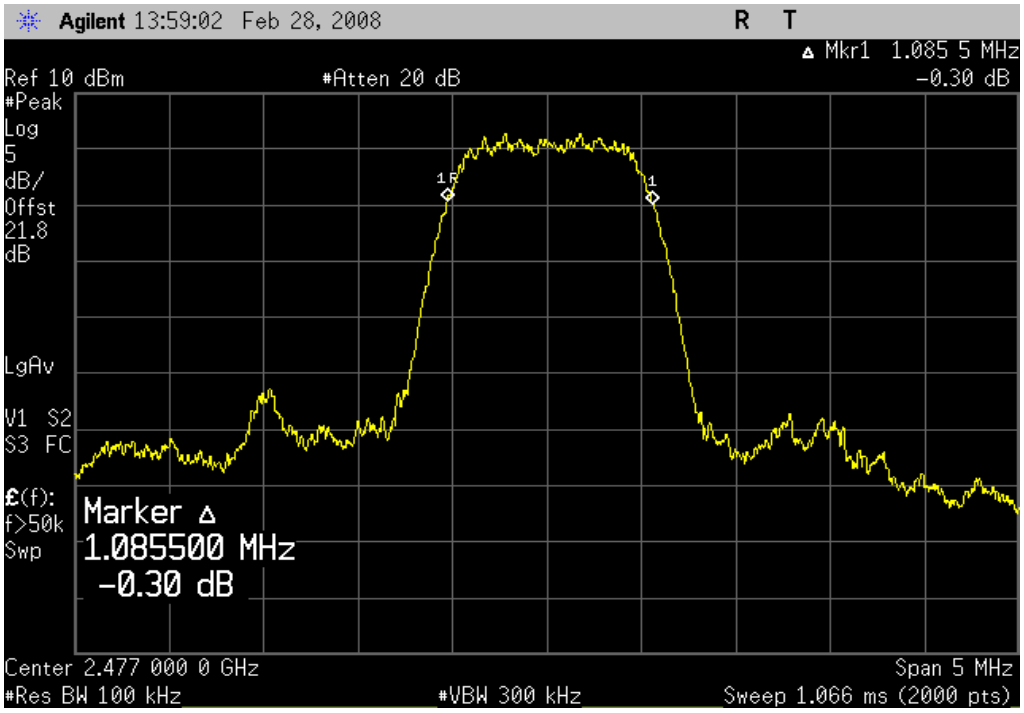
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.088 MHz	**Limit:**	≥ 500 kHz



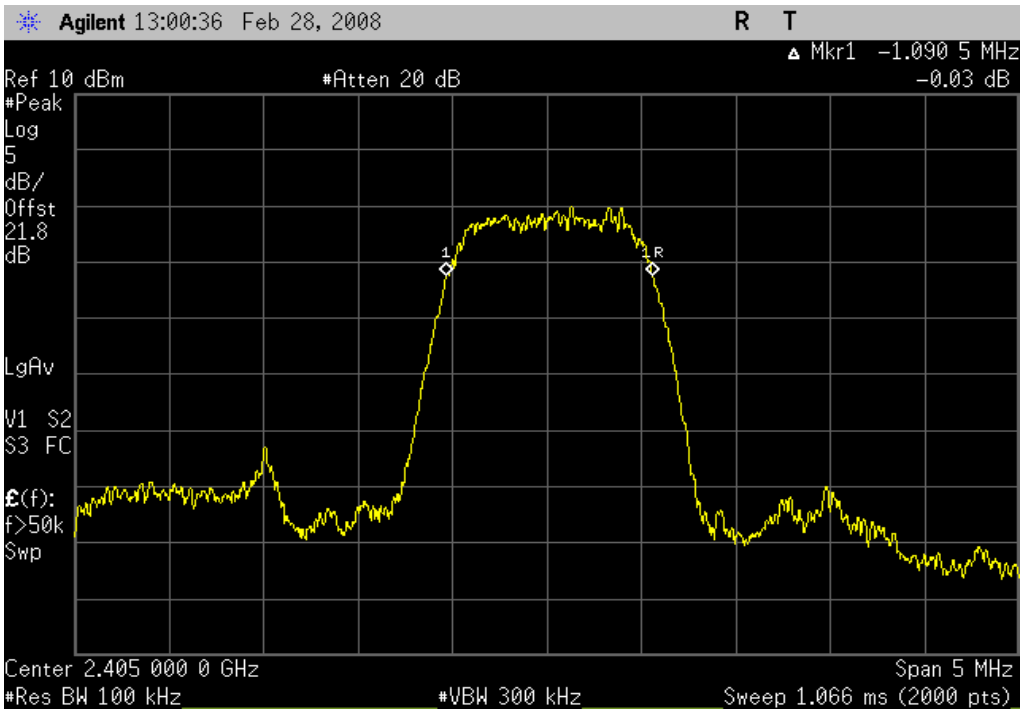
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.098 MHz	**Limit:**	≥ 500 kHz



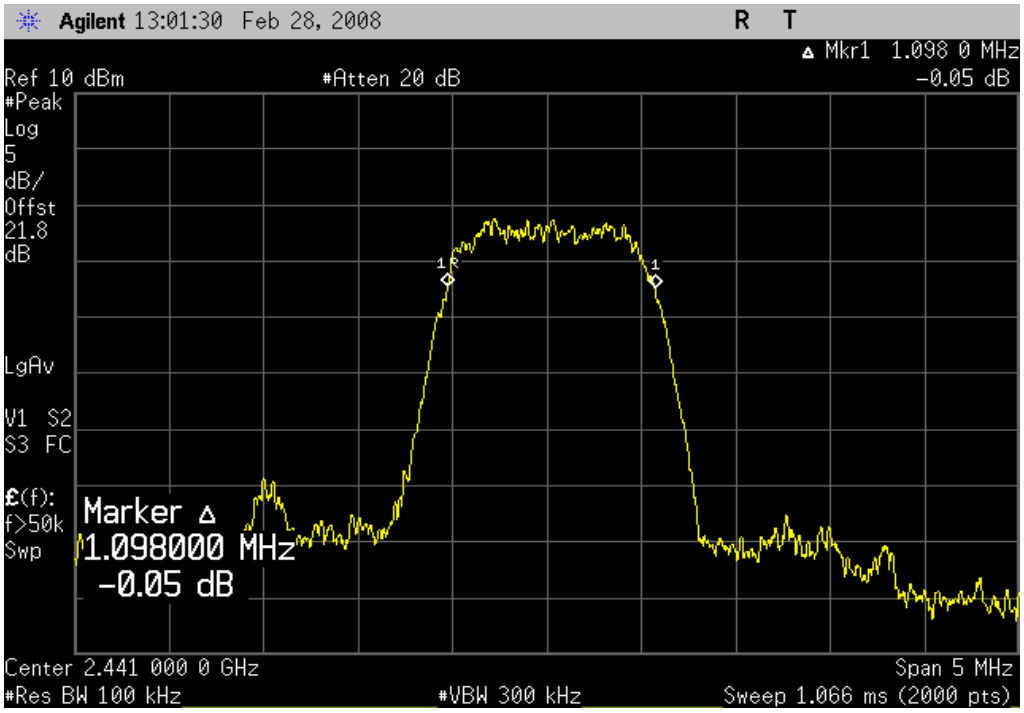
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	1.0855 MHz	**Limit:**	≥ 500 kHz



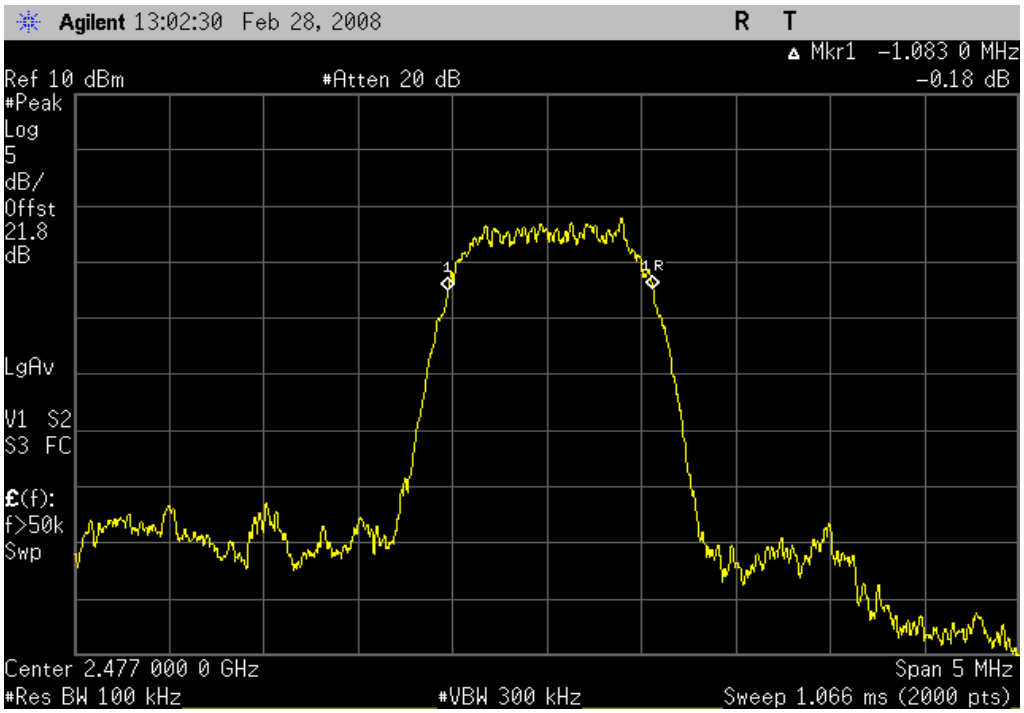
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.0905 MHz	**Limit:**	≥ 500 kHz

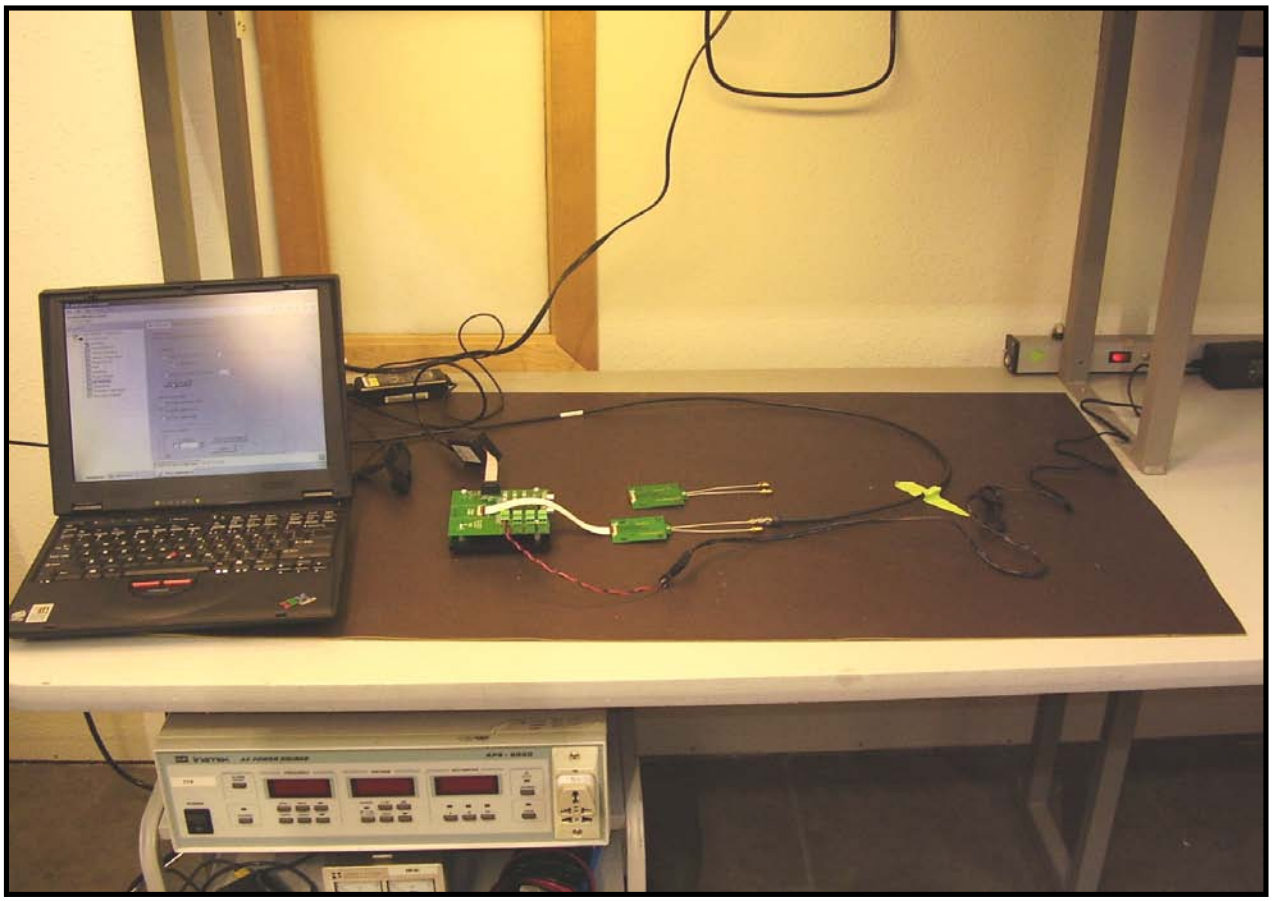


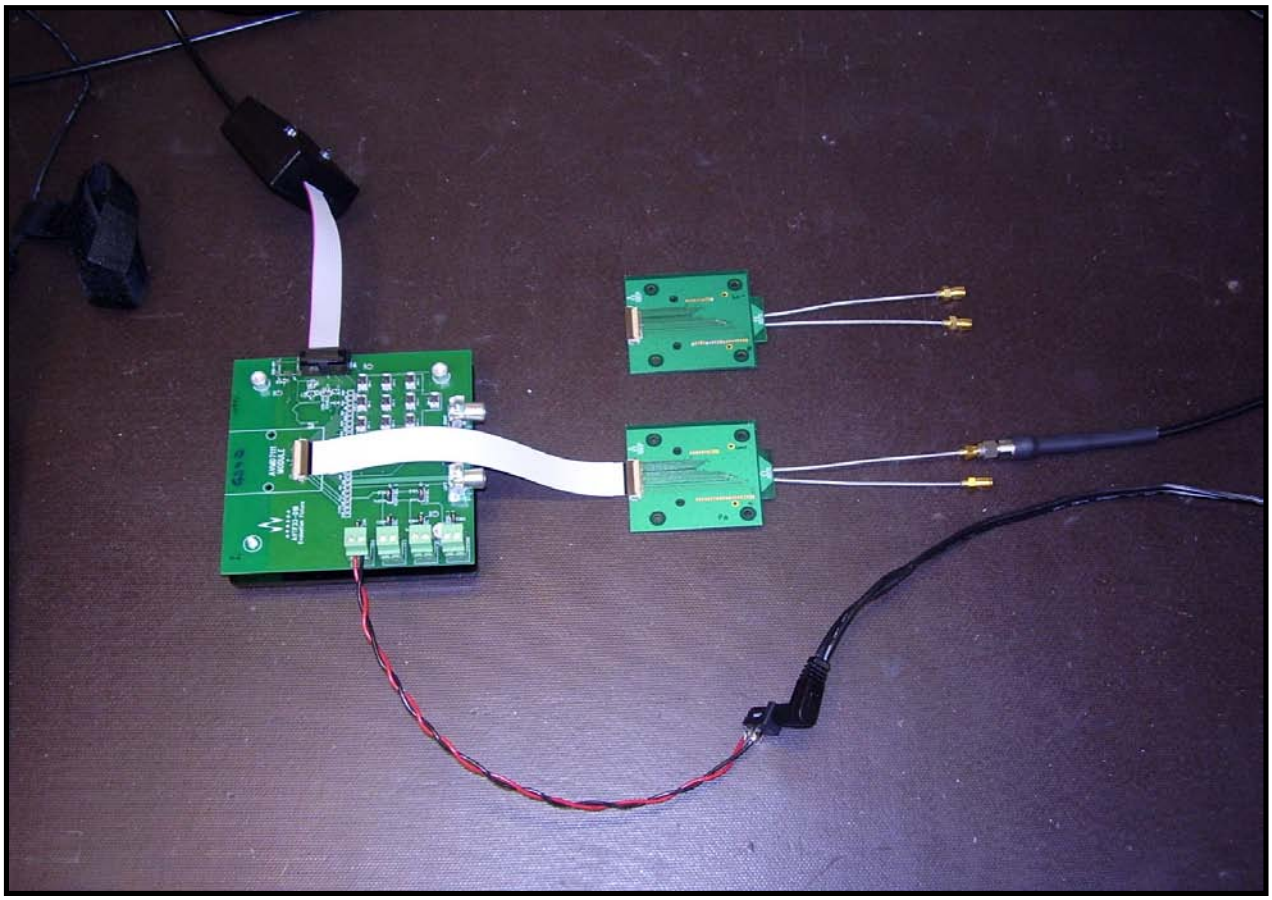
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.098 MHz	**Limit:**	≥ 500 kHz



AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	1.083 MHz	**Limit:**	≥ 500 kHz







Output Power

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 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12

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.

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

NORTHWEST EMC

Output Power

XMit 2007.06.13

EUT:	AVMD7211			**Work Order:**	AVNE0019
Serial Number:	1 (with PA), 4 (without PA)			**Date:**	02/27/08
Customer:	Avnera			**Temperature:**	24°C
Attendees:	Fred Weiss			**Humidity:**	27%
Project:	None			**Barometric Pres.:**	1025.3mb
Tested by:	Holly Ashkannejhad	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Please note, configuration 1 refers to unit with PA; configuration 2 refers to unit with out PA.

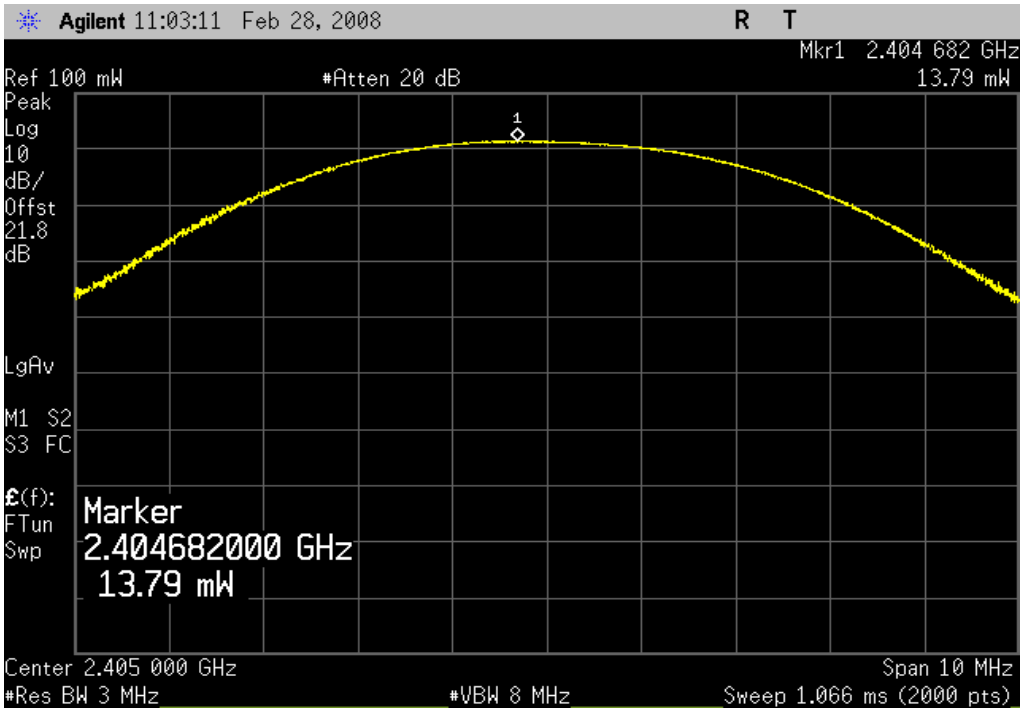
DEVIATIONS FROM TEST STANDARD

No Deviations

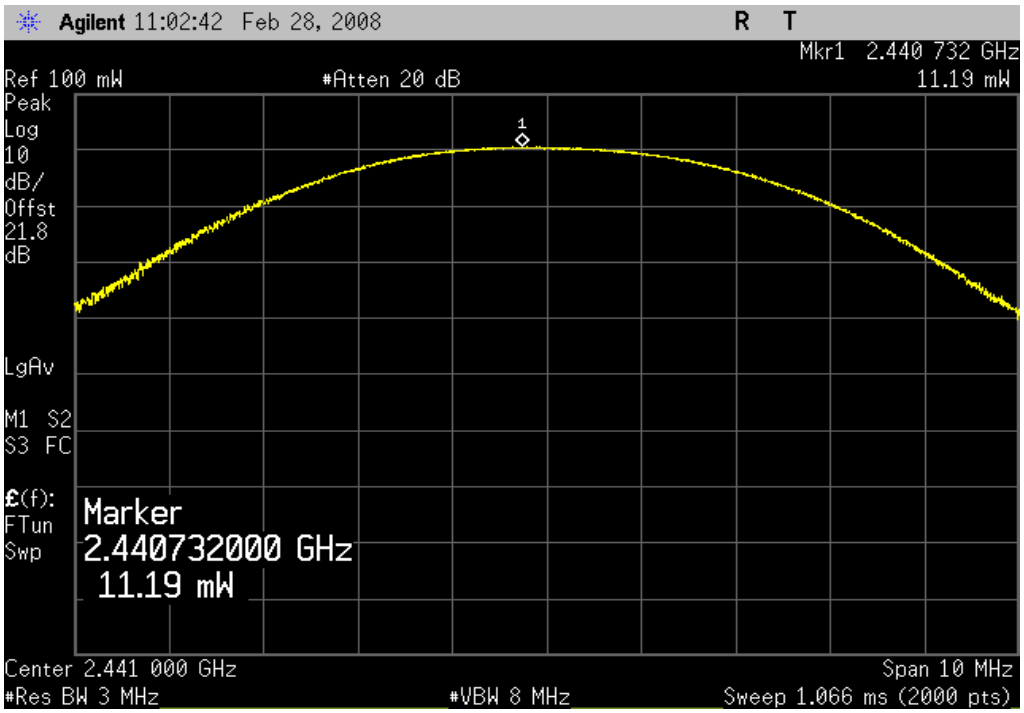
Configuration #	1, 2	Signature

		Value (mW)	Limit (mW)	Results
AVMD7211 with PA, S/N: 1				
pi/4-DQPSK				
Low antenna port				
	Low channel, Ch. 2, 2405MHz	13.79	1000	Pass
	Mid channel, Ch. 20, 2441MHz	11.19	1000	Pass
	High channel, Ch. 40, 2477MHz	8.52	1000	Pass
High antenna port				
	Low channel, Ch. 2, 2405MHz	13.88	1000	Pass
	Mid channel, Ch. 20, 2441MHz	11.05	1000	Pass
	High channel, Ch. 40, 2477MHz	8.34	1000	Pass
AVMD7211 with out PA, S/N: 5				
pi/4-DQPSK				
Low antenna port				
	Low channel, Ch. 2, 2405MHz	1.96	1000	Pass
	Mid channel, Ch. 20, 2441MHz	1.72	1000	Pass
	High channel, Ch. 40, 2477MHz	1.58	1000	Pass
High antenna port				
	Low channel, Ch. 2, 2405MHz	2.00	1000	Pass
	Mid channel, Ch. 20, 2441MHz	1.70	1000	Pass
	High channel, Ch. 40, 2477MHz	1.56	1000	Pass

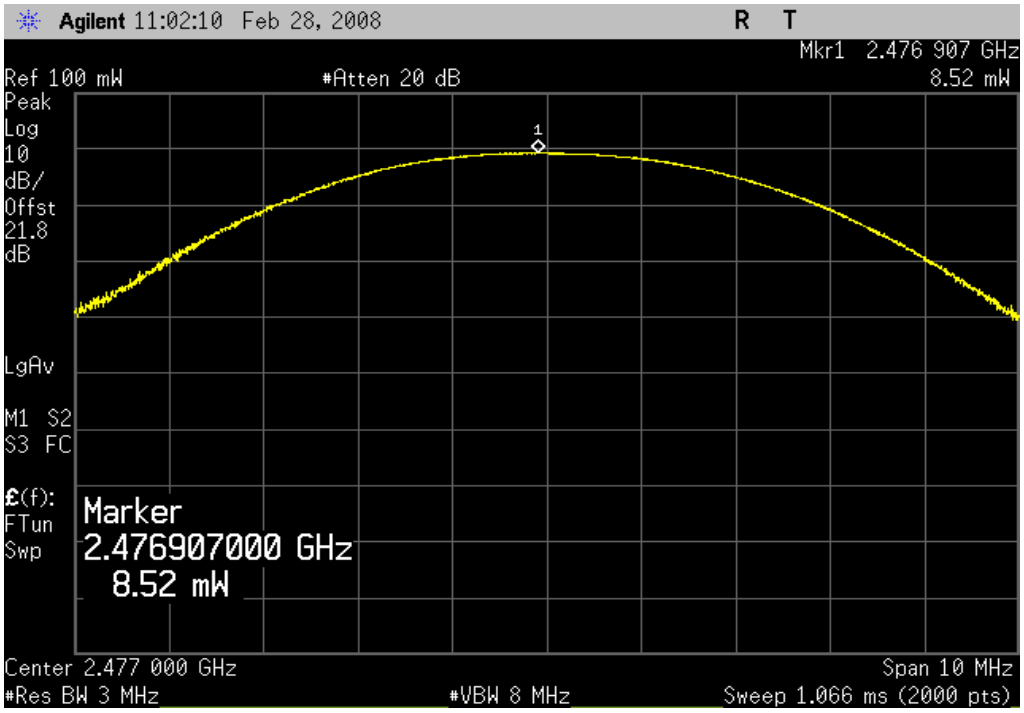
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	13.79 mW	**Limit:**	1 Watt



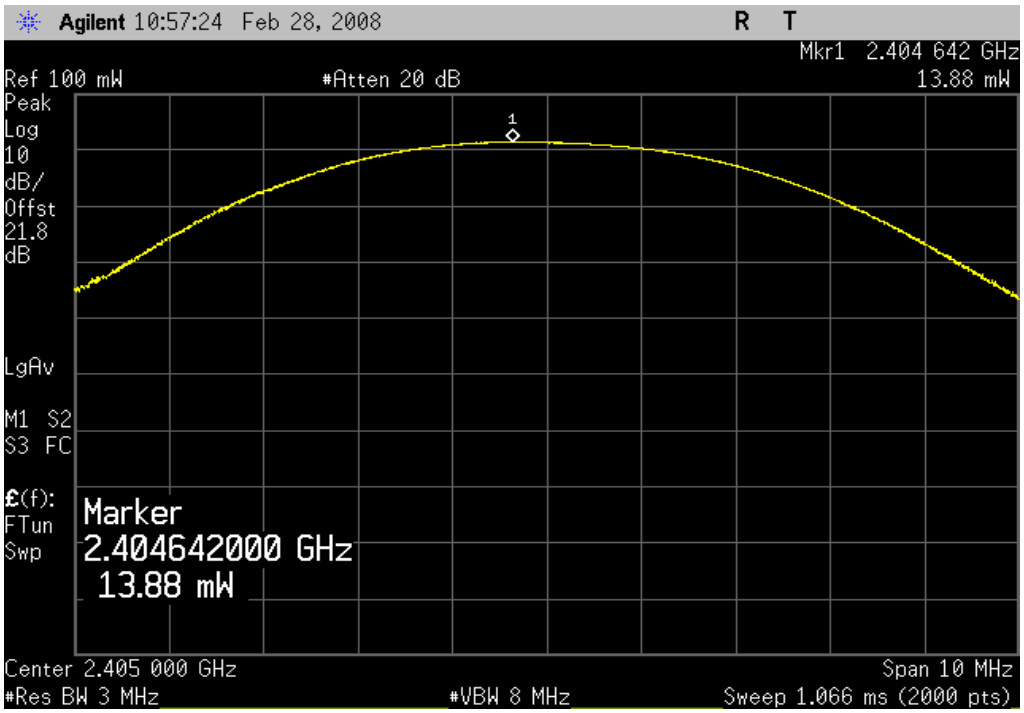
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	11.19 mW	**Limit:**	1 Watt



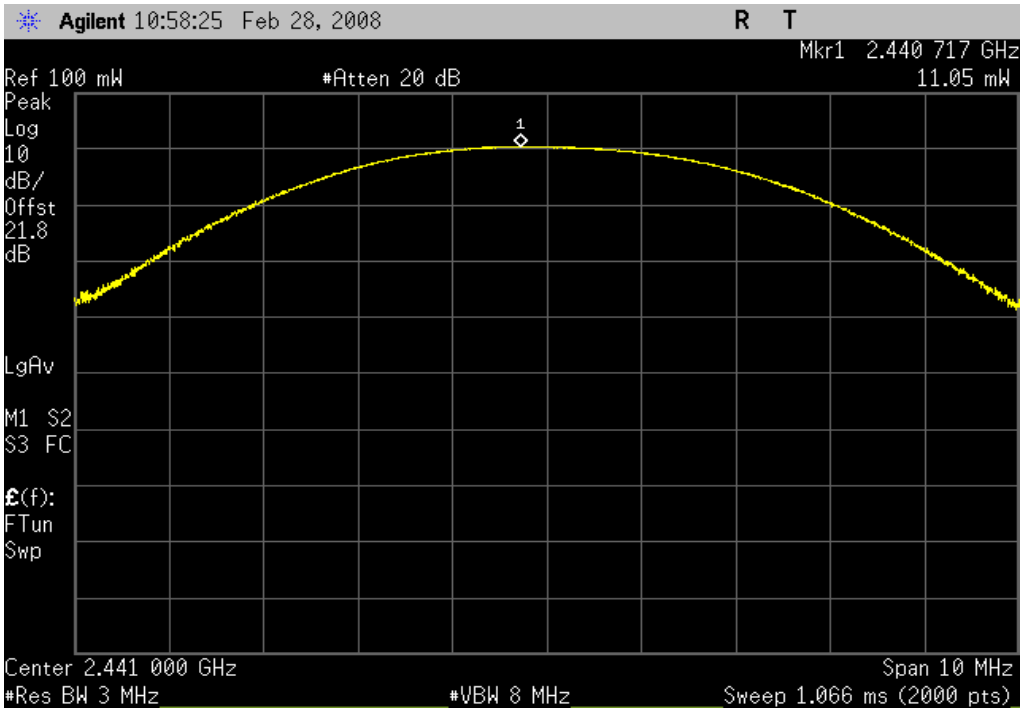
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	8.52 mW	**Limit:**	1 Watt



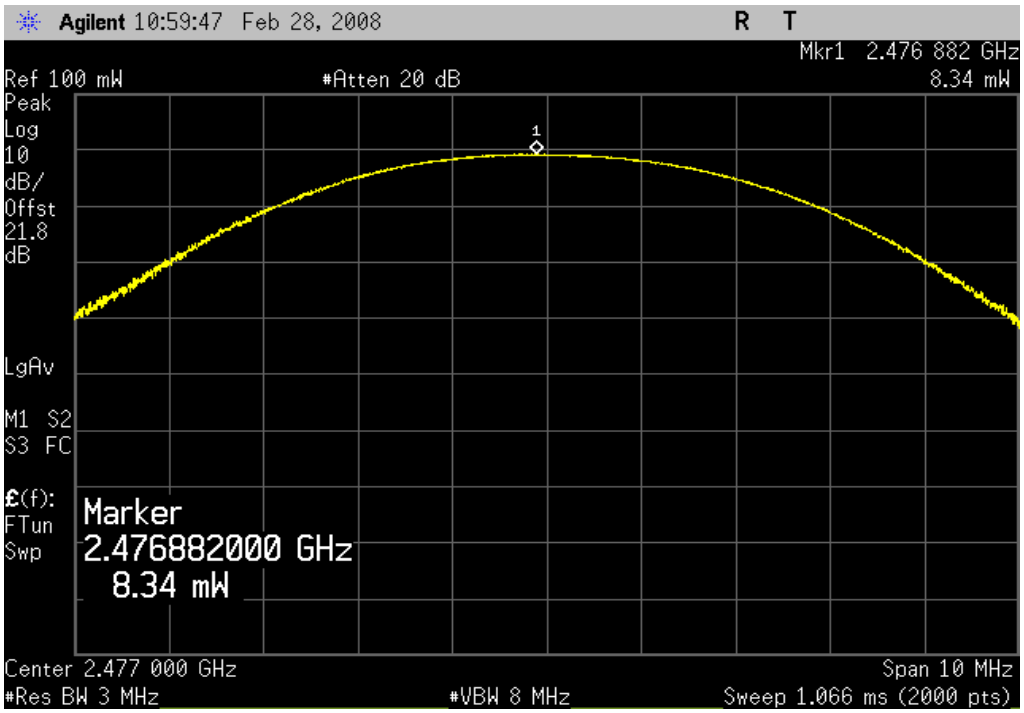
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, High antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	13.88 mW	**Limit:**	1 Watt



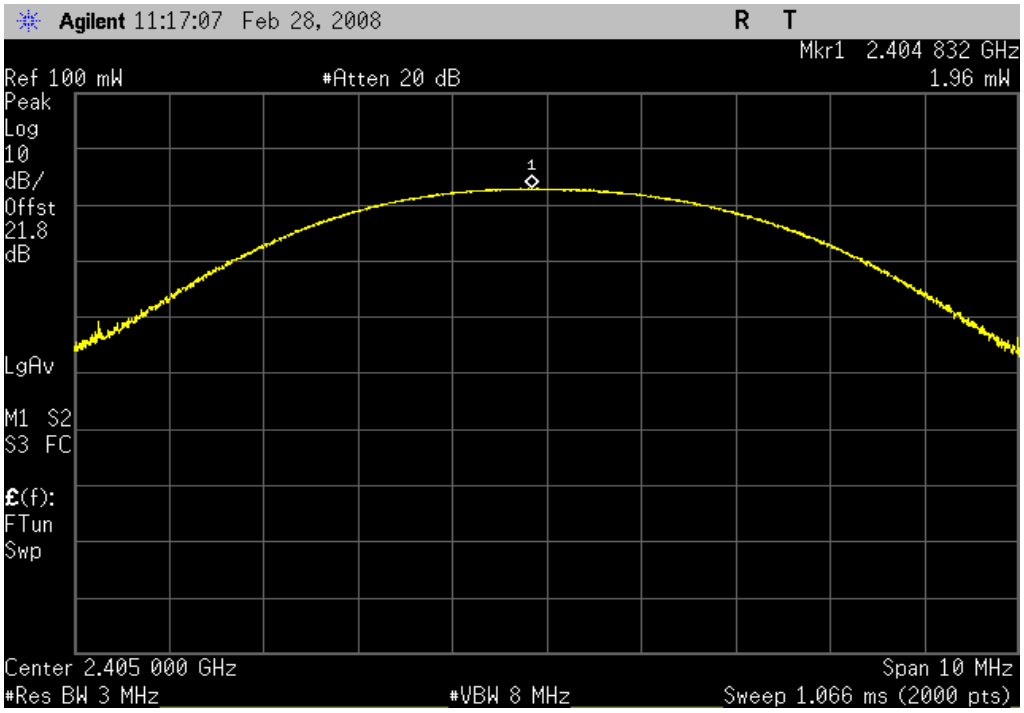
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, High antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	11.05 mW	**Limit:**	1 Watt



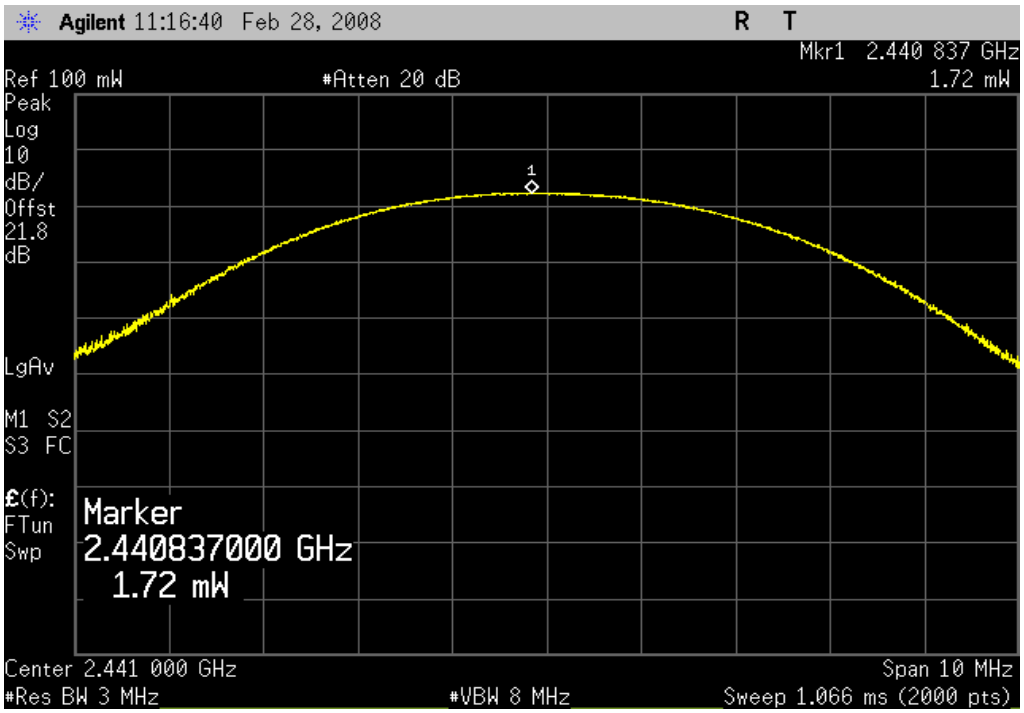
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, High antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	8.34 mW	**Limit:**	1 Watt



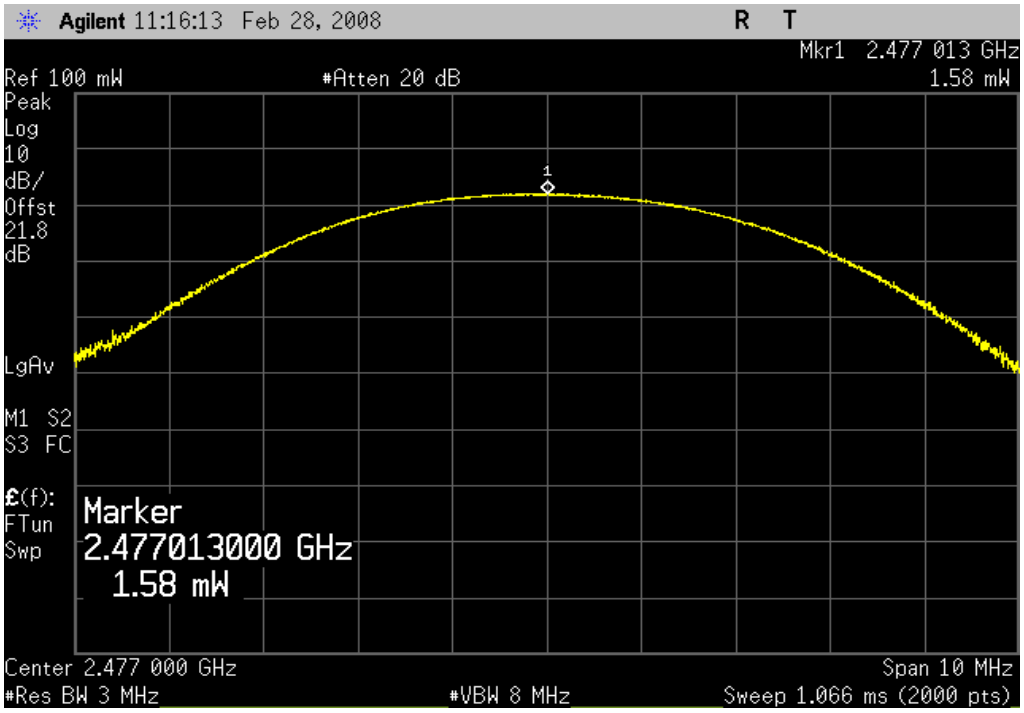
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.96 mW	**Limit:**	1 Watt



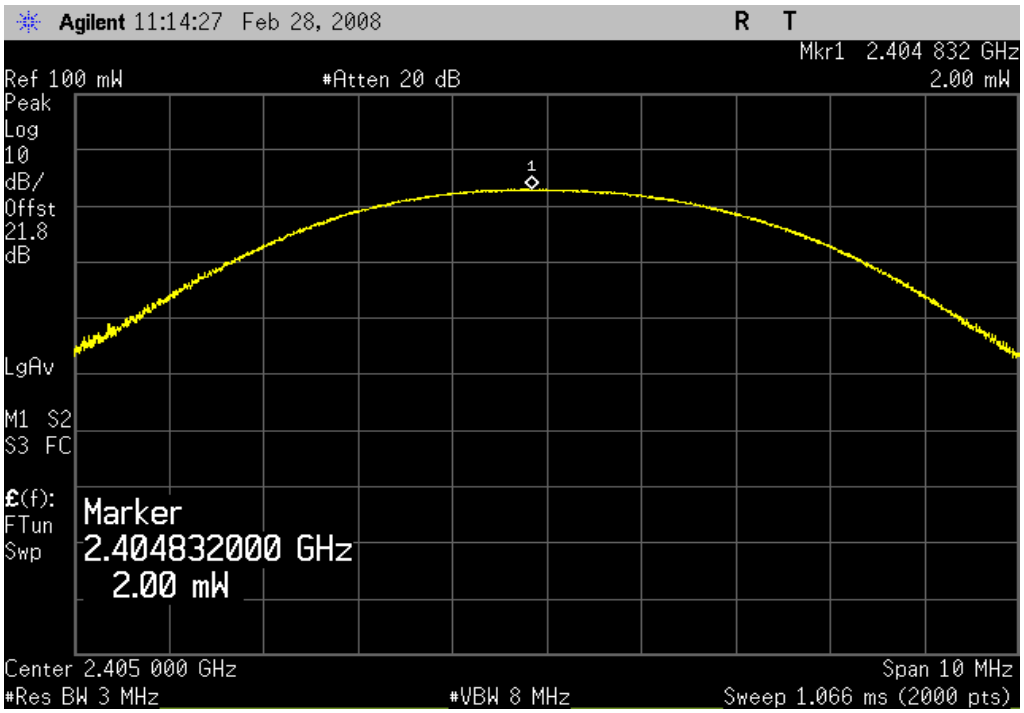
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.72 mW	**Limit:**	1 Watt



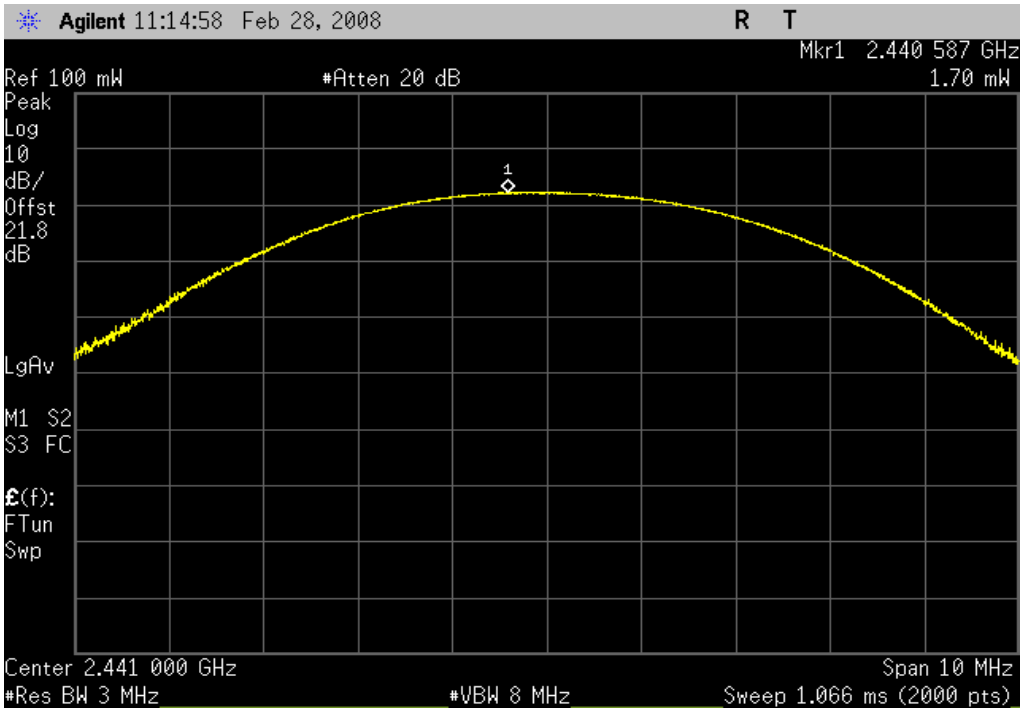
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	1.58 mW	**Limit:**	1 Watt



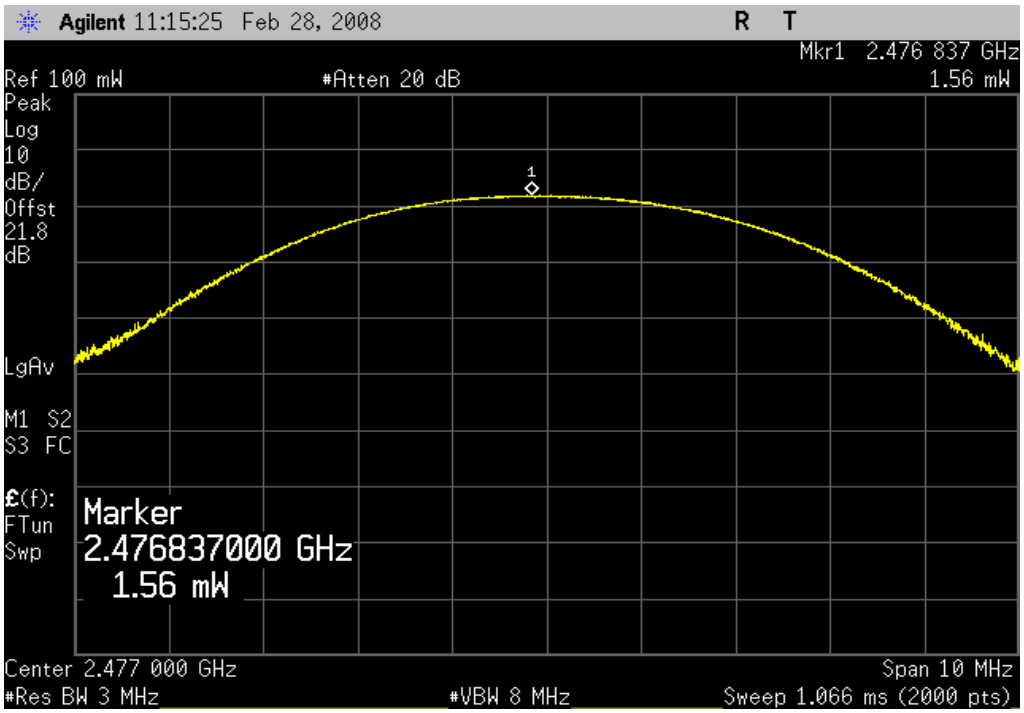
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, High antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	2 mW	**Limit:**	1 Watt

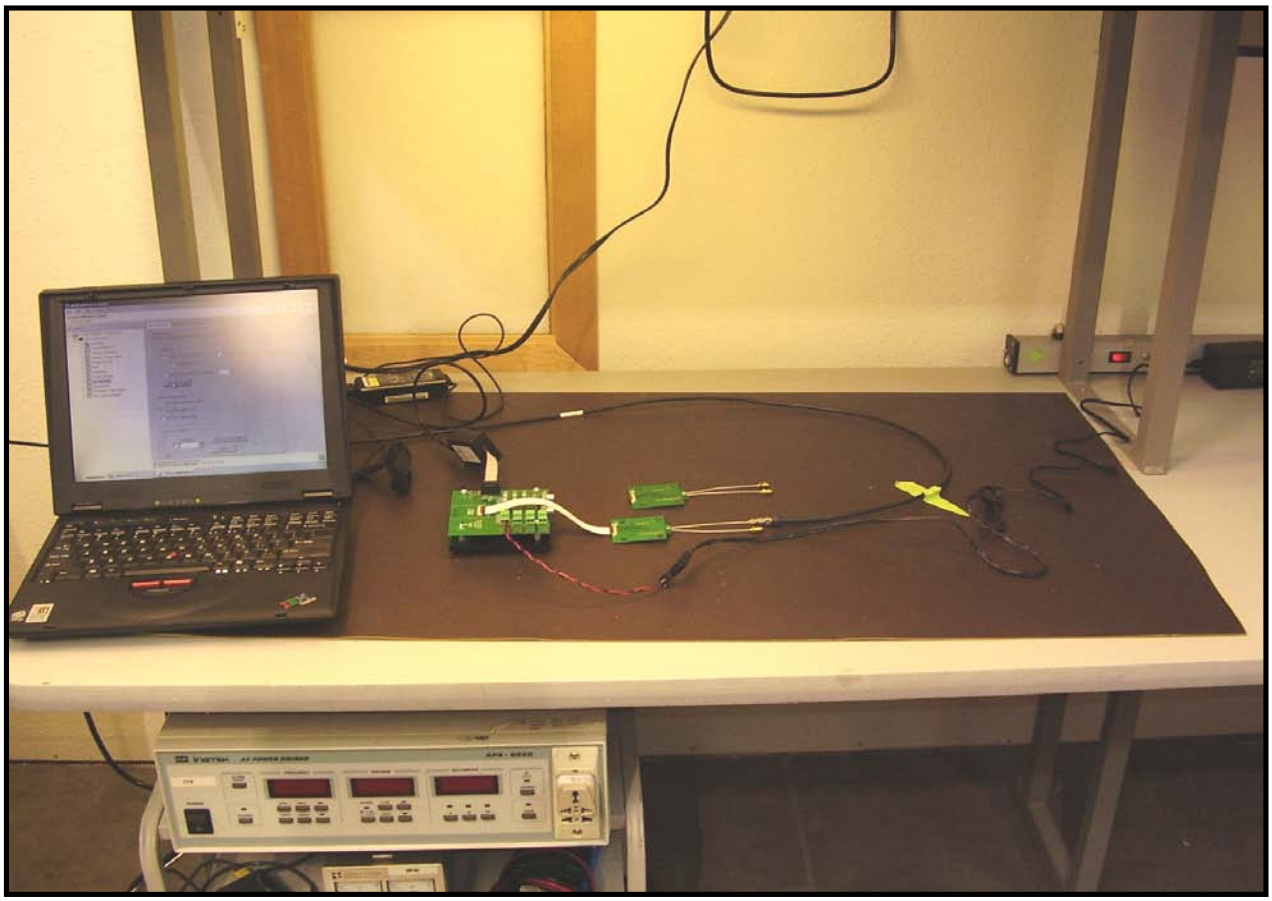


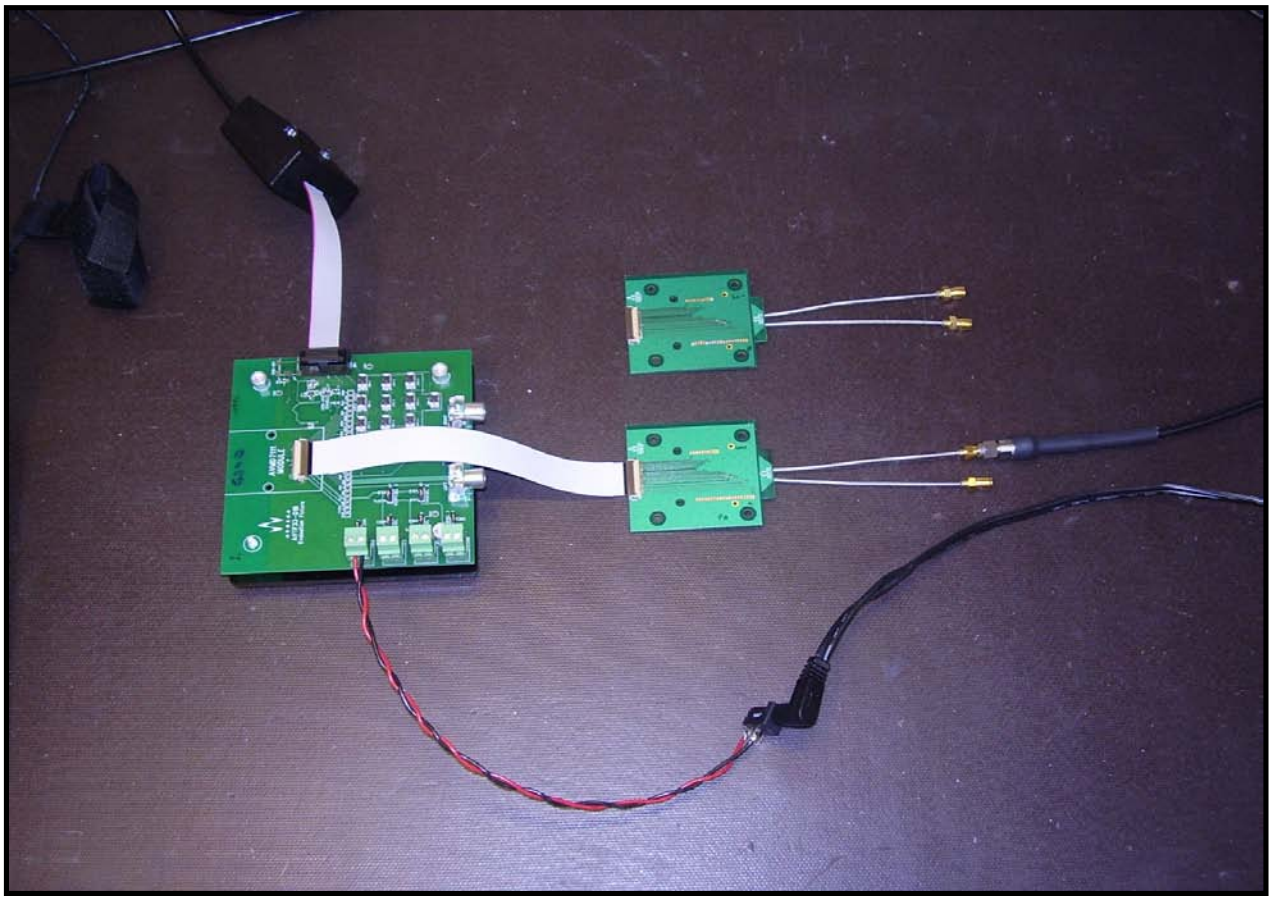
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, High antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.7 mW	**Limit:**	1 Watt



AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, High antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	1.56 mW	**Limit:**	1 Watt







Bandedge Compliance

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 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12

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.

NORTHWEST EMC

Bandedge Compliance

XMit 2007.06.13

EUT:	AVMD7211			**Work Order:**	AVNE0019
Serial Number:	1 (with PA), 4 (without PA)			**Date:**	02/27/08
Customer:	Avnera			**Temperature:**	24°C
Attendees:	Fred Weiss			**Humidity:**	27%
Project:	None			**Barometric Pres.:**	1025.3mb
Tested by:	Holly Ashkannejhad	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Please note, configuration 1 refers to unit with PA; configuration 2 refers to unit with out PA. Testing performed on low antenna port only; Antenna port outputs are within 0.5dB of each other (see output power measurements).

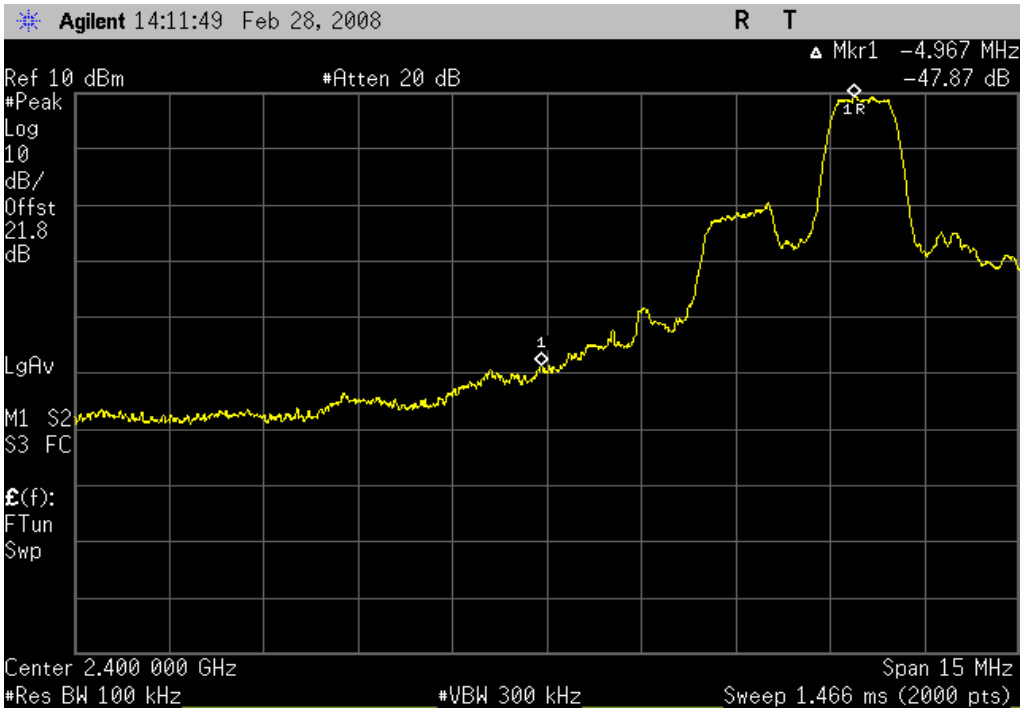
DEVIATIONS FROM TEST STANDARD

No deviations

Configuration #	**1, 2**	*Signature* Holly Ashkannejhad

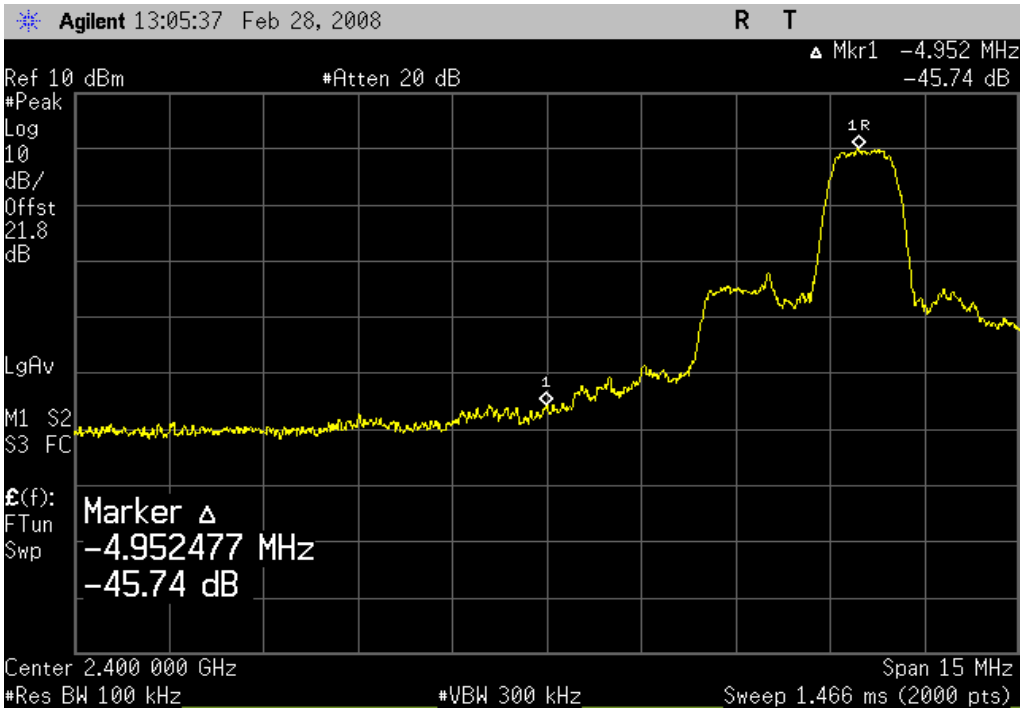
			Value	Limit	Results
AVMD7211 with PA, S/N; 1					
	pi/4-DQPSK				
		Low diversity antenna			
		Low channel, Ch. 2, 2405Mhz	≤ - 40 dBc	≤ -20 dBc	Pass
		High channel, Ch. 38, 2477Mhz	≤ - 40 dBc	≤ -20 dBc	Pass
AVMD7211 with out PA, S/N: 4					
	pi/4-DQPSK				
		Low diversity antenna			
		Low channel, Ch. 2, 2405Mhz	≤ - 40 dBc	≤ -20 dBc	Pass
		High channel, Ch. 38, 2477Mhz	≤ - 40 dBc	≤ -20 dBc	Pass

AVMD7211 with PA, S/N; 1, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405Mhz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ -20 dBc

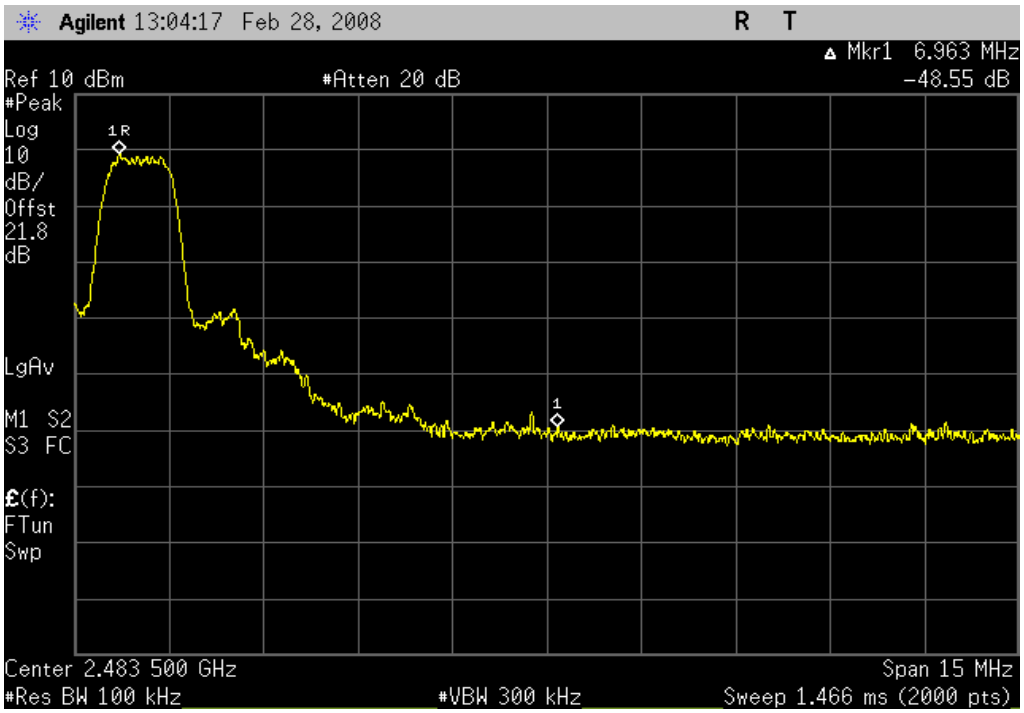


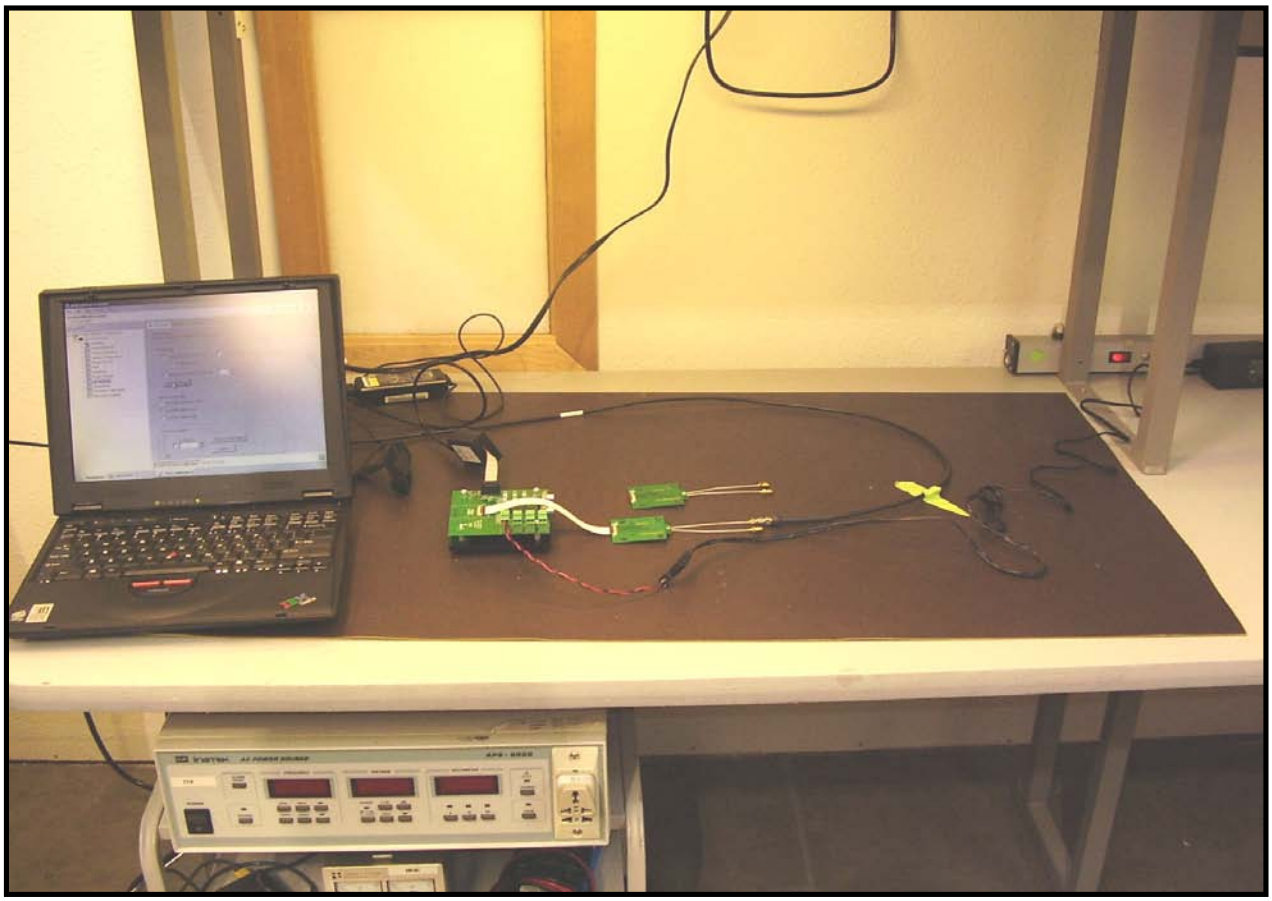
AVMD7211 with PA, S/N; 1, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477Mhz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ -20 dBc

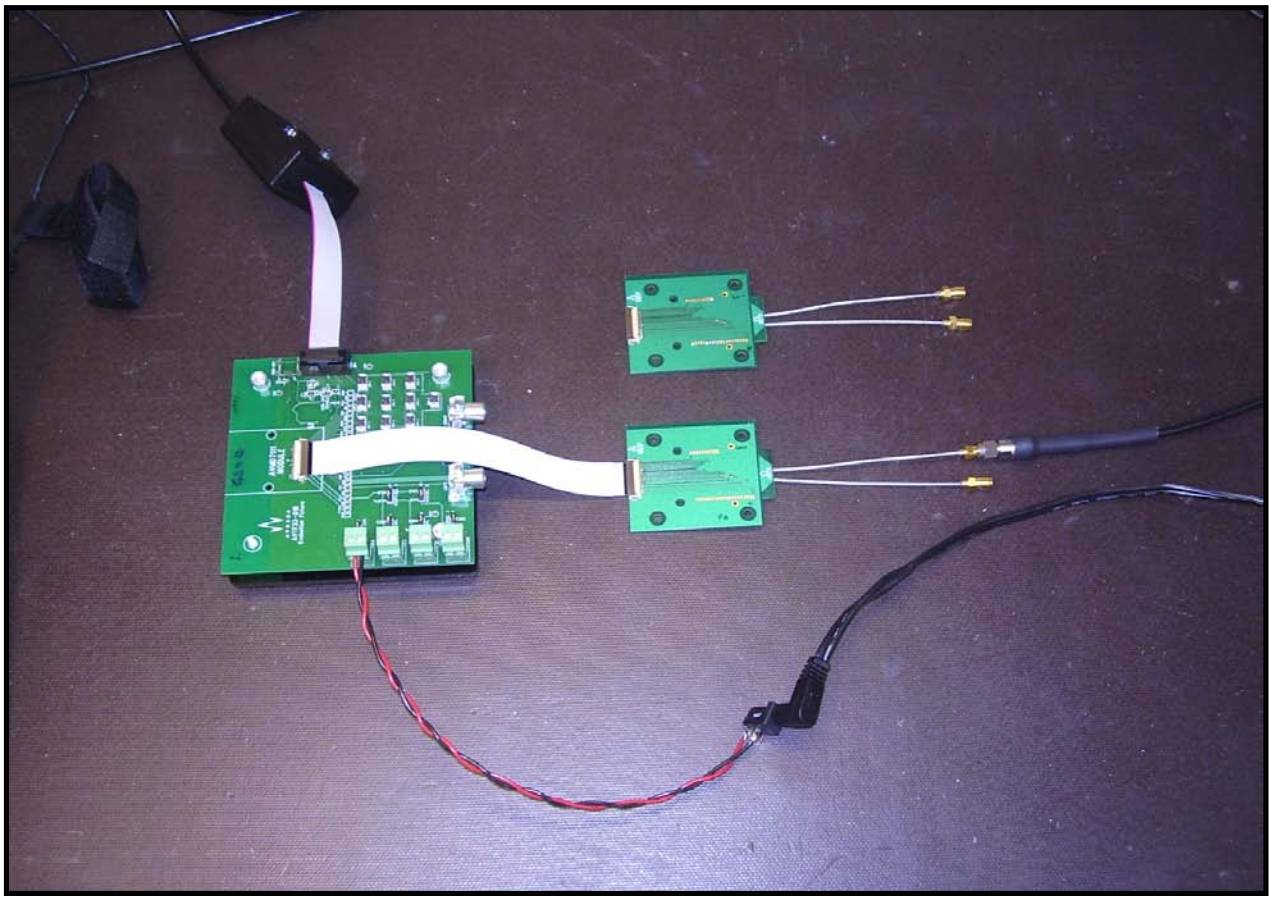
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405Mhz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ -20 dBc



AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477Mhz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ -20 dBc







Spurious Conducted 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.

TEST EQUIPMENT

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

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 using pi/4-DQPSK modulatio. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

NORTHWEST EMC

Spurious Conducted Emissions

XMit 2007.06.13

EUT:	AVMD7211			Work Order:	AVNE0019
Serial Number:	1 (with PA), 4 (without PA)			Date:	02/27/08
Customer:	Avnera			Temperature:	24°C
Attendees:	Fred Weiss			Humidity:	27%
Project:	None			Barometric Pres.:	1025.3mb
Tested by:	Holly Ashkannejhad	Power:	120VAC/60Hz	Job Site:	EV06

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

COMMENTS

Please note, configuration 1 refers to unit with PA; configuration 2 refers to unit with out PA. Testing performed on low antenna port only; Antenna port outputs are within 0.5dB of each other (see output power measurements).

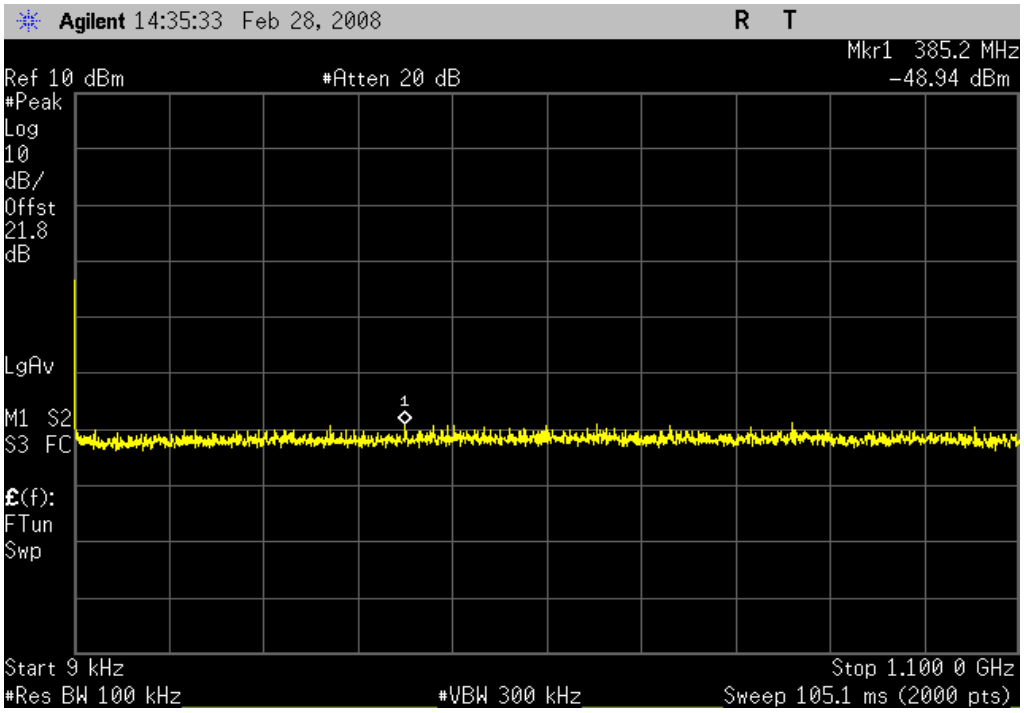
DEVIATIONS FROM TEST STANDARD

No Deviations

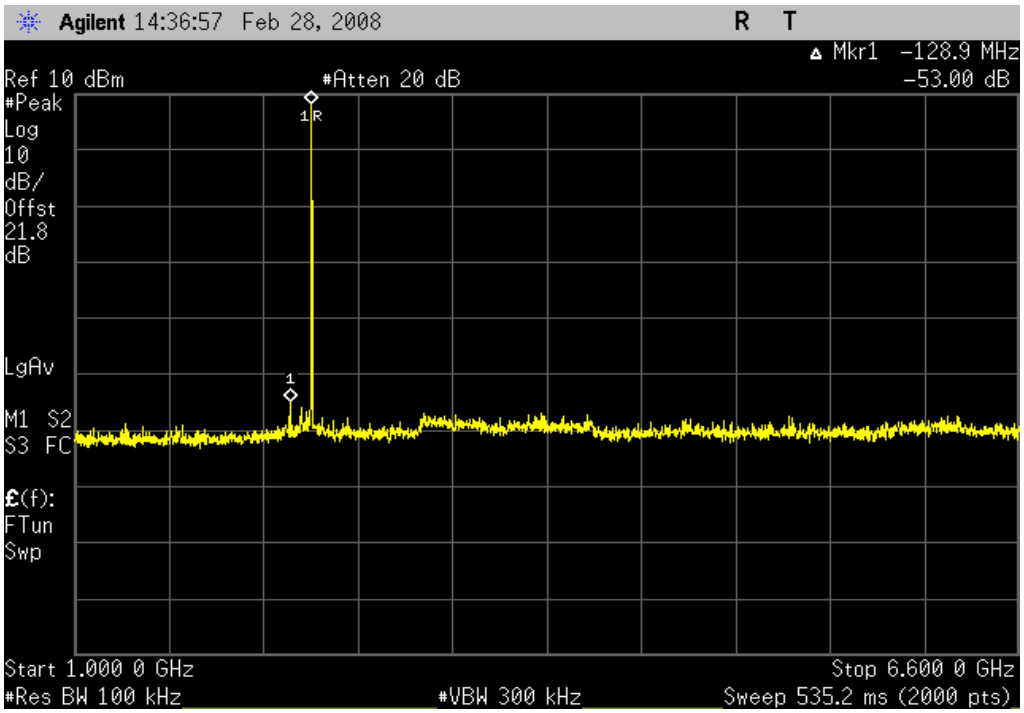
Configuration #	1, 2	Signature

		Value	Limit	Results
AVMD7211 with PA, S/N: 1				
pi/4-DQPSK				
Low diversity antenna				
Low channel, Ch. 2, 2405MHz				
	9kHz - 1.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	6.5GHz - 16.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	16GHz - 26GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
Mid channel, Ch. 20, 2441MHz				
	9kHz - 1.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	6.5GHz - 16.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	16GHz - 26GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
High channel, Ch. 38, 2477MHz				
	9kHz - 1.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	6.5GHz - 16.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	16GHz - 26GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
AVMD7211 with out PA, S/N: 4				
pi/4-DQPSK				
Low diversity antenna				
Low channel, Ch. 2, 2405MHz				
	9kHz - 1.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	6.5GHz - 16.1GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	16GHz - 26GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
Mid channel, Ch. 20, 2441MHz				
	9kHz - 1.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	6.5GHz - 16.1GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	16GHz - 26GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
High channel, Ch. 38, 2477MHz				
	9kHz - 1.1GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 40 dBc	≤ - 20 dBc	Pass
	6.5GHz - 16.1GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	16GHz - 26GHz	≤ - 30 dBc	≤ - 20 dBc	Pass

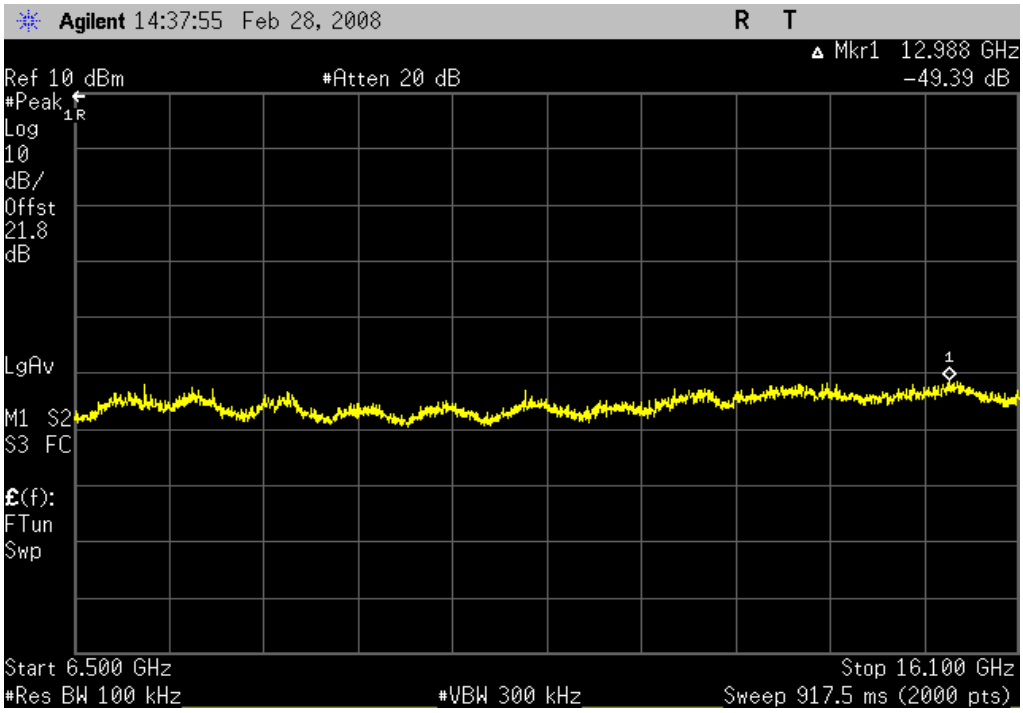
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



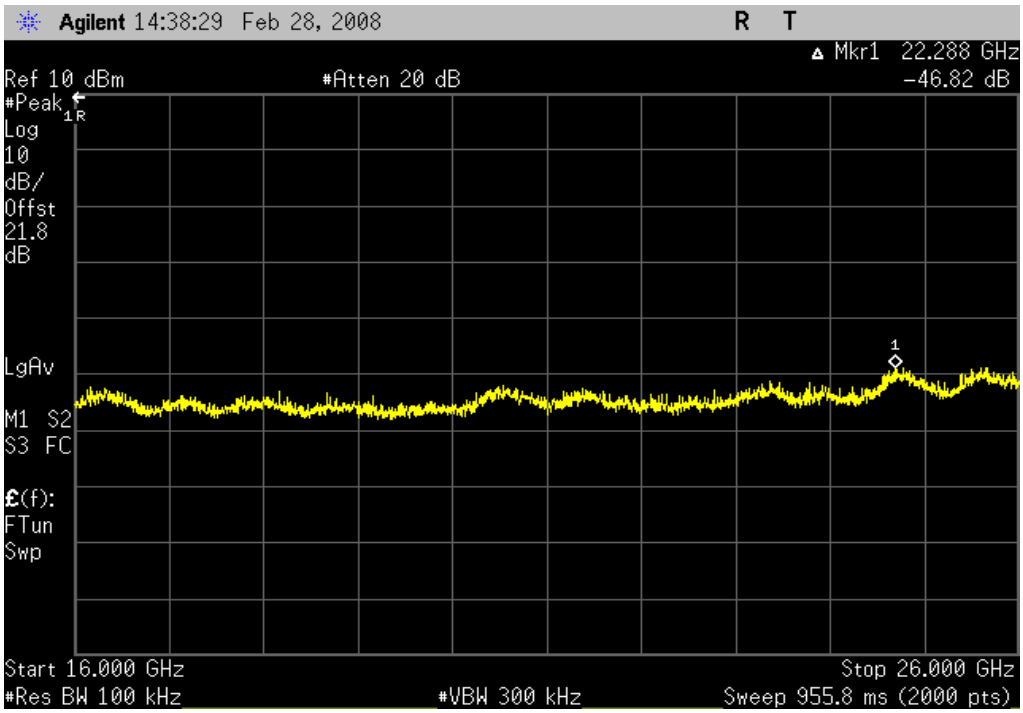
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



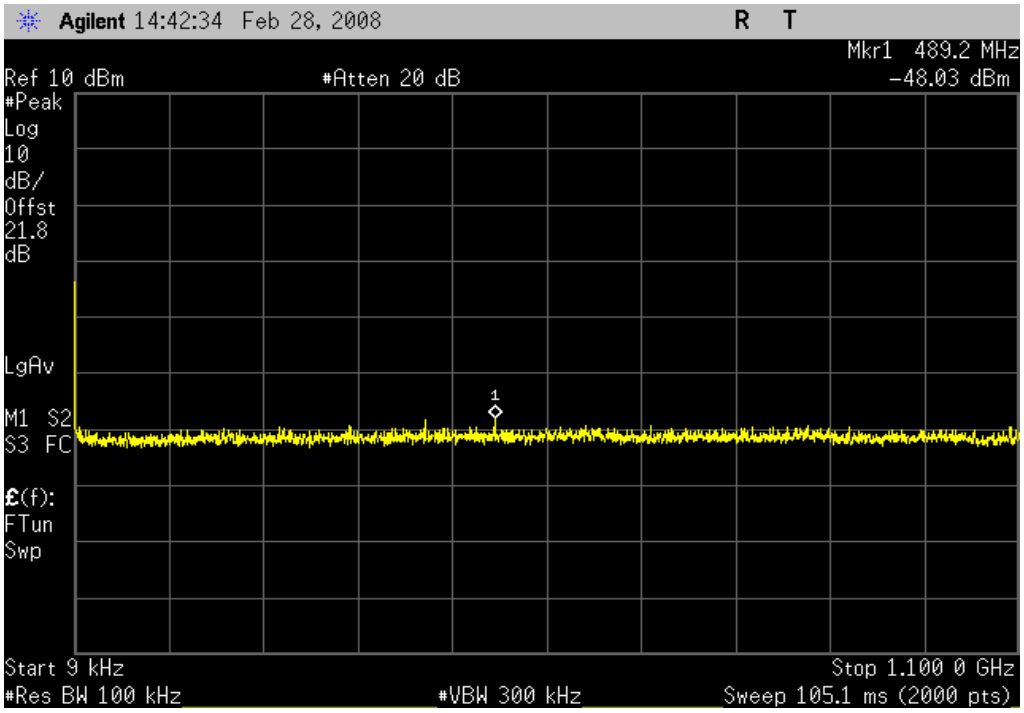
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



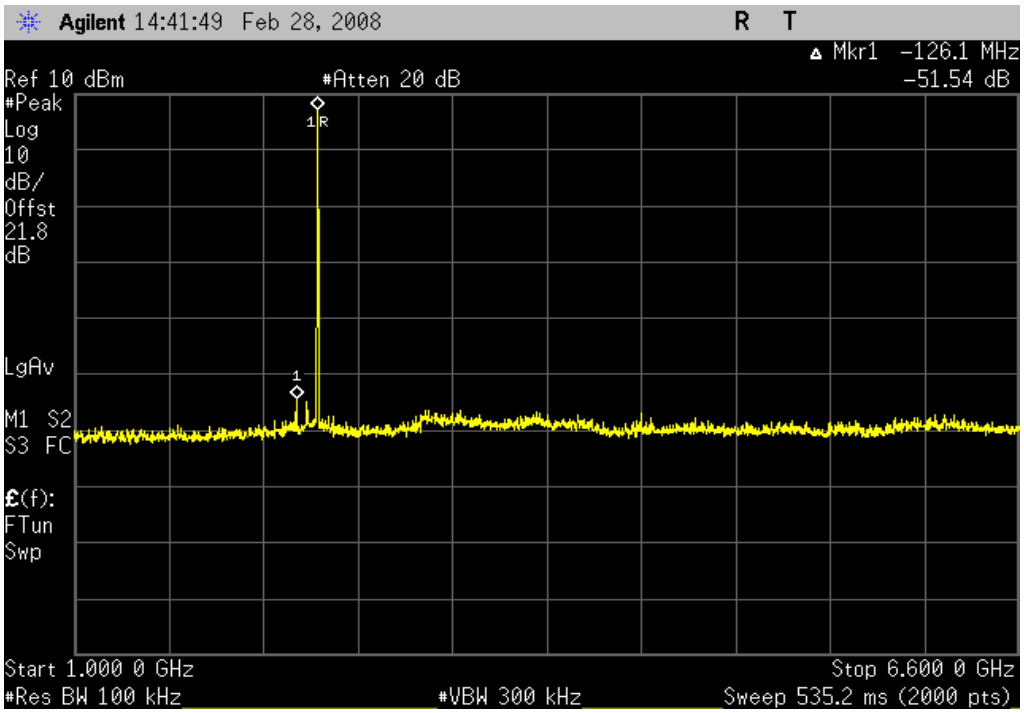
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



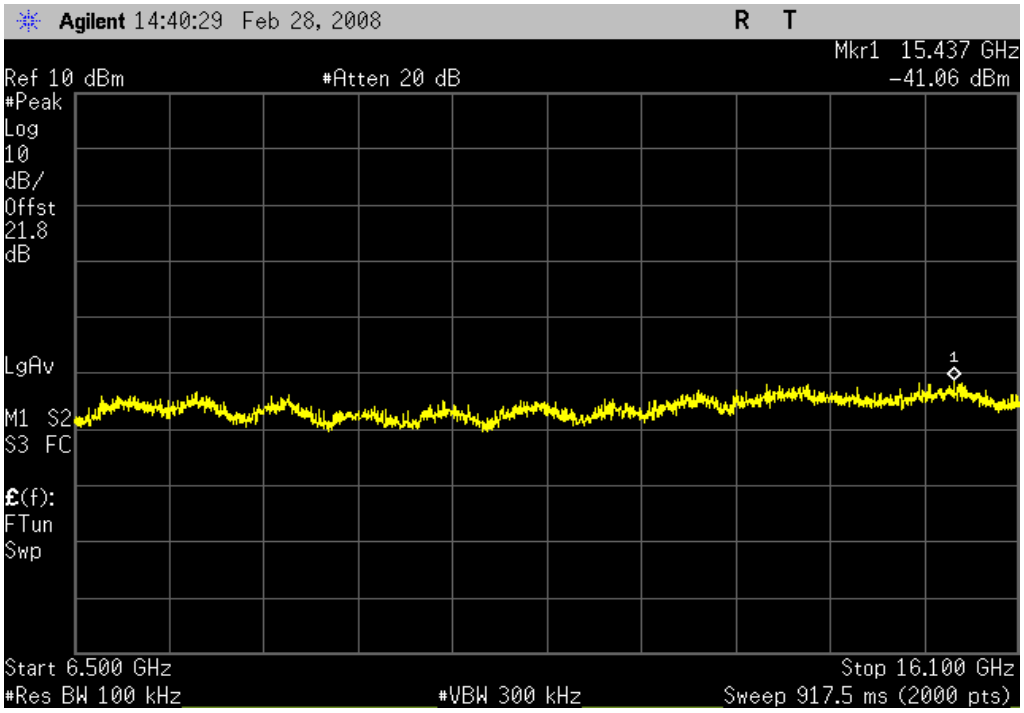
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



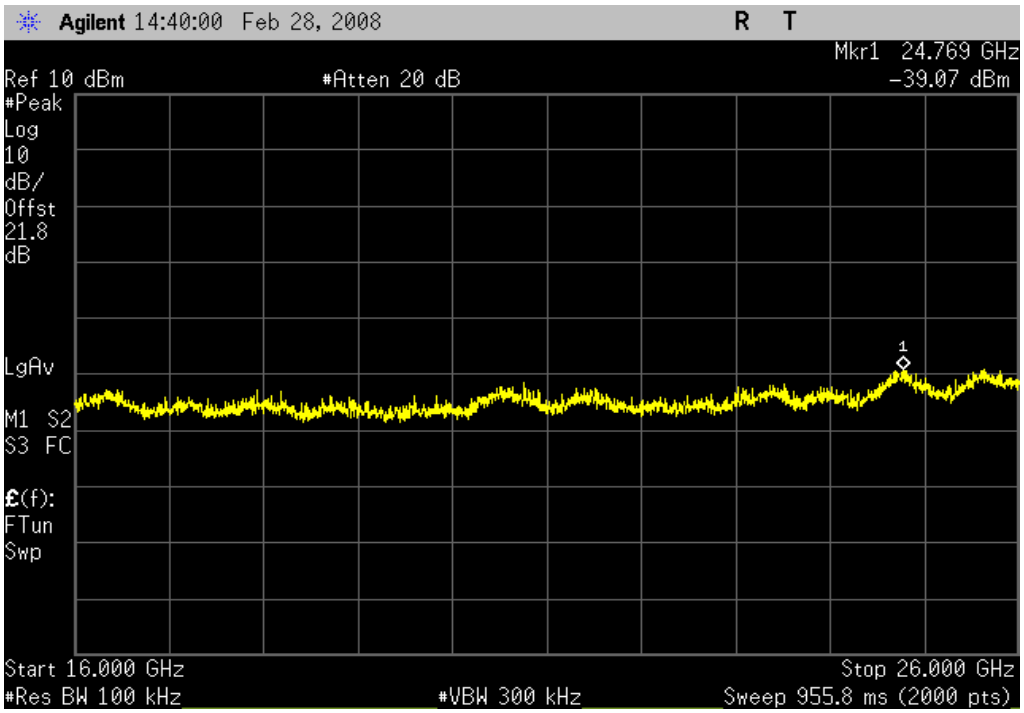
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



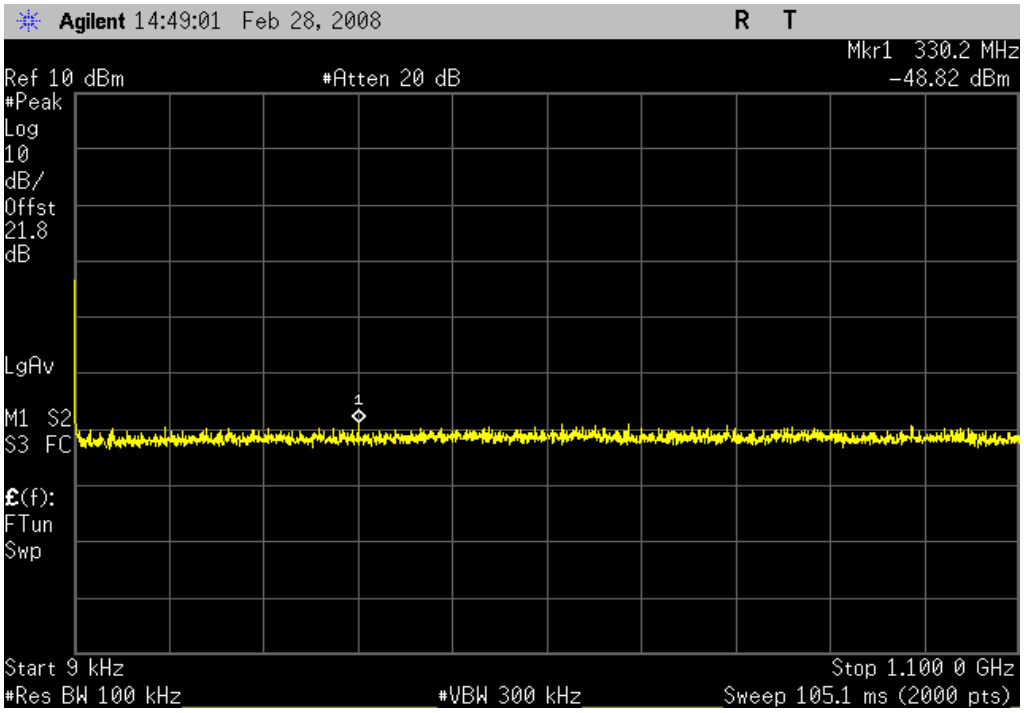
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



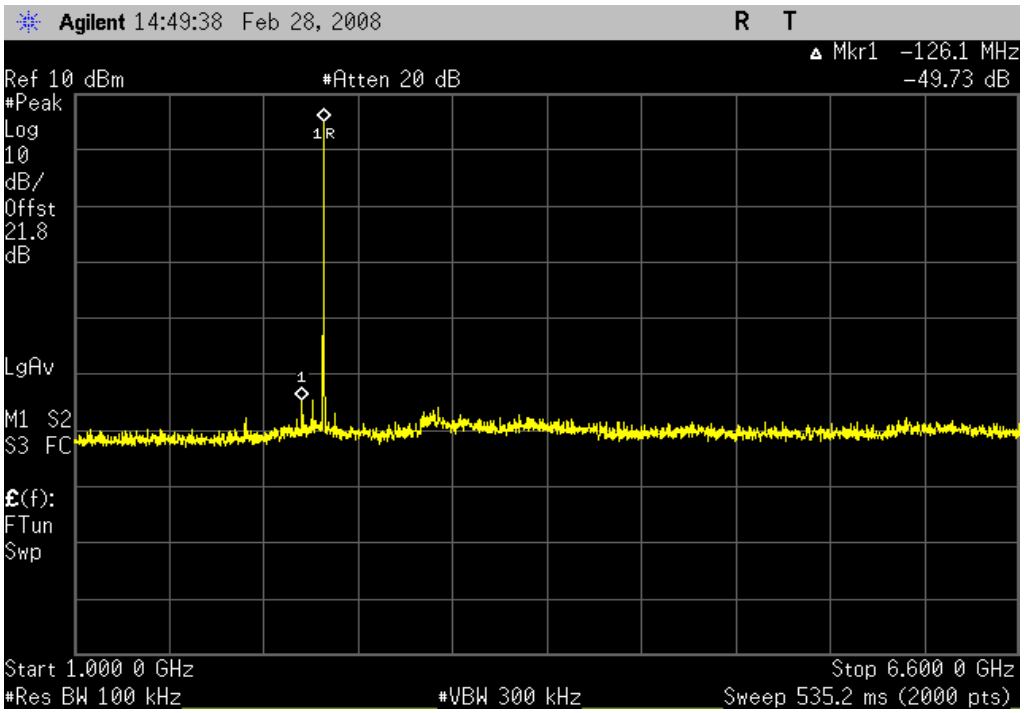
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



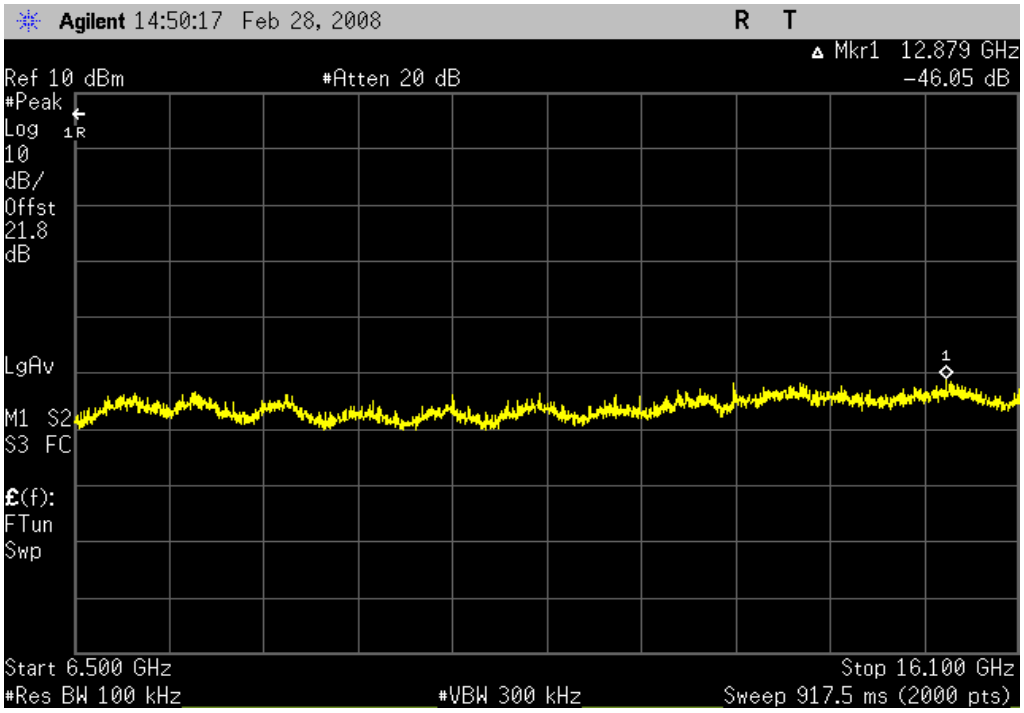
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



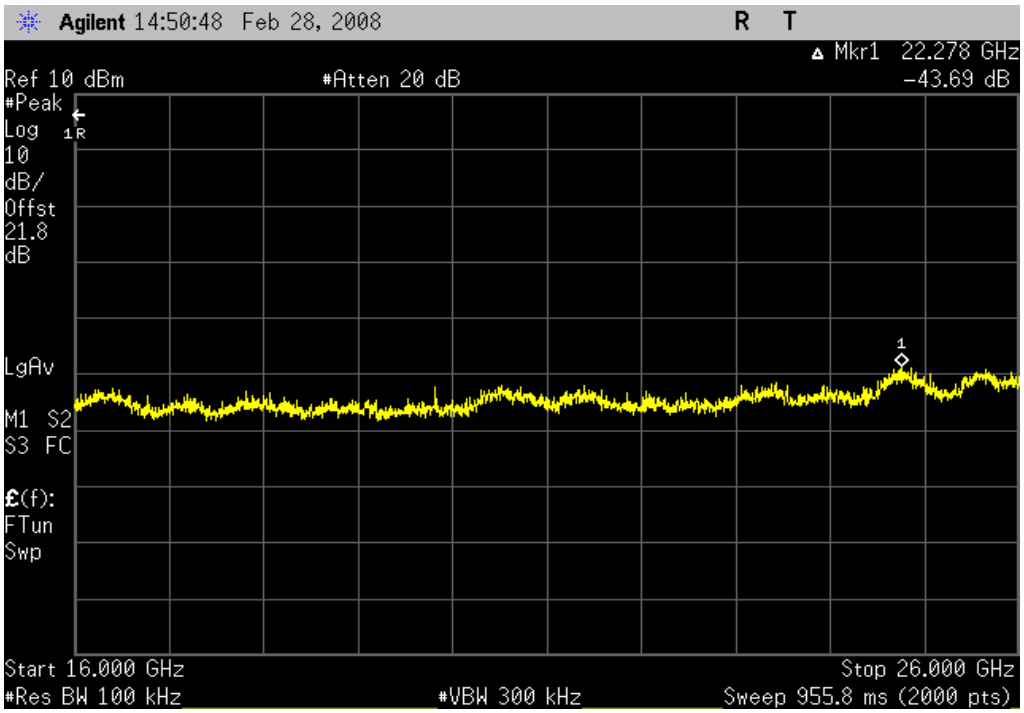
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



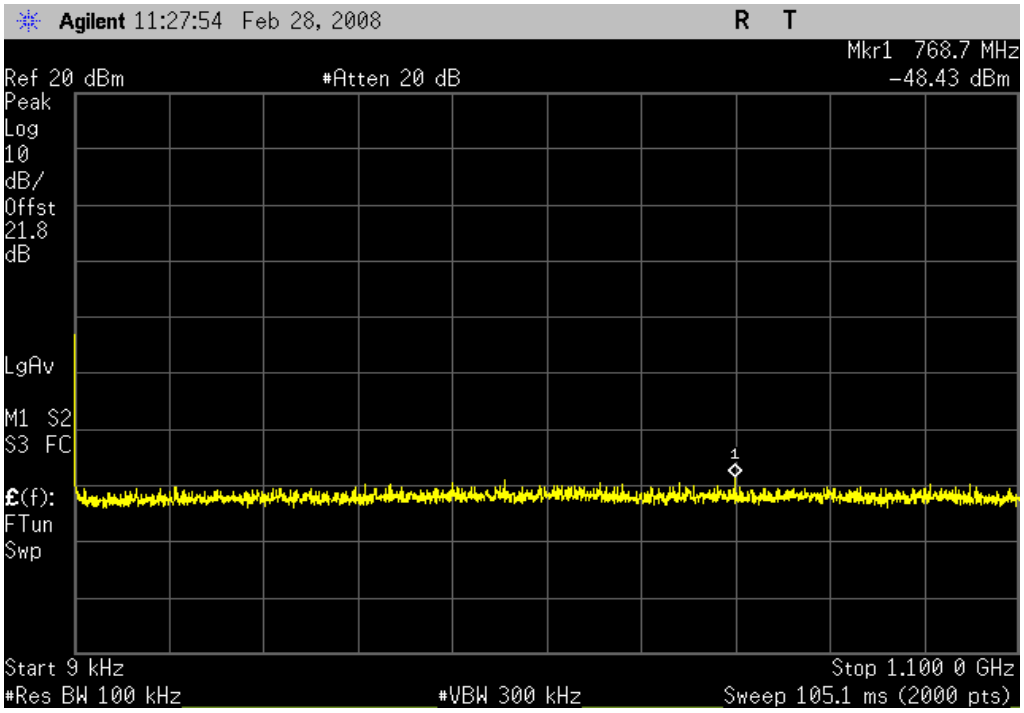
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



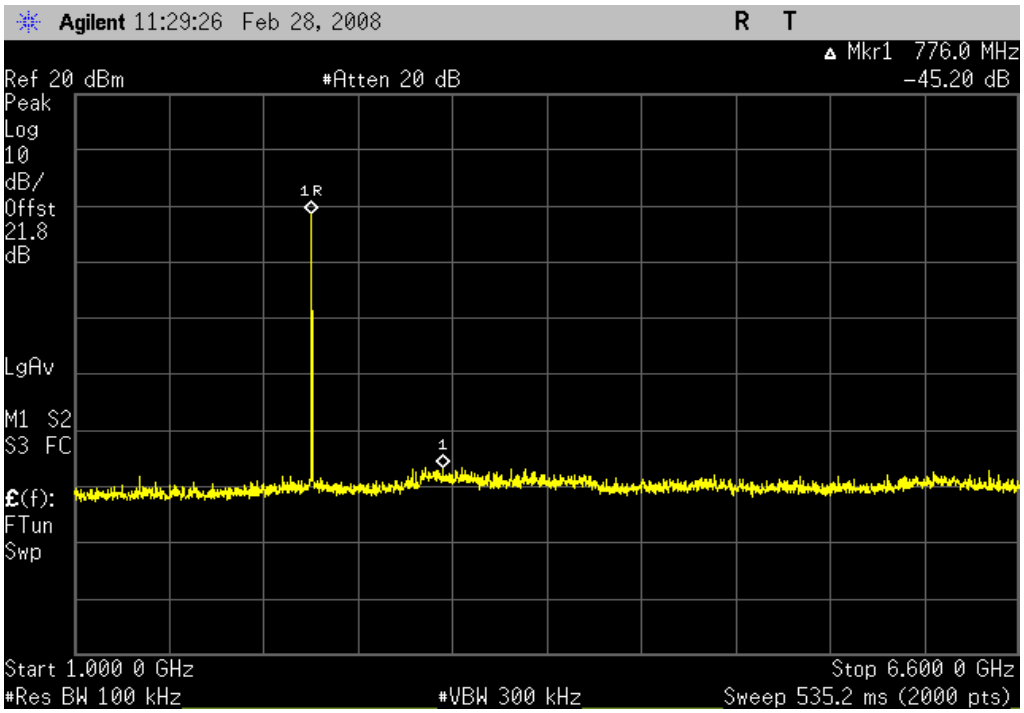
AVMD7211 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



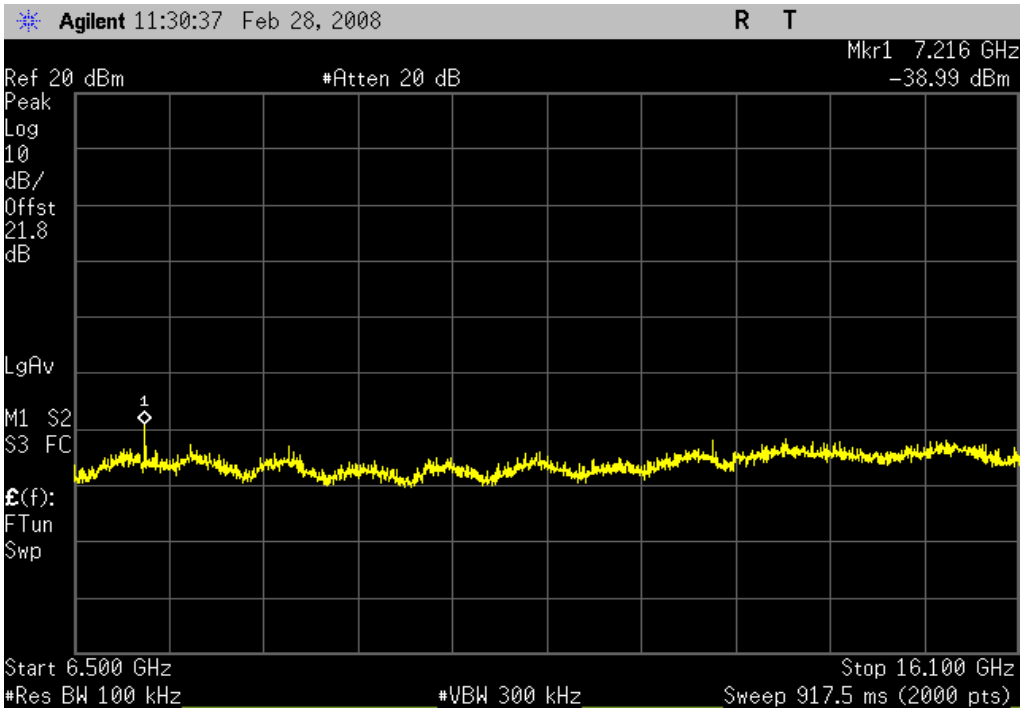
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



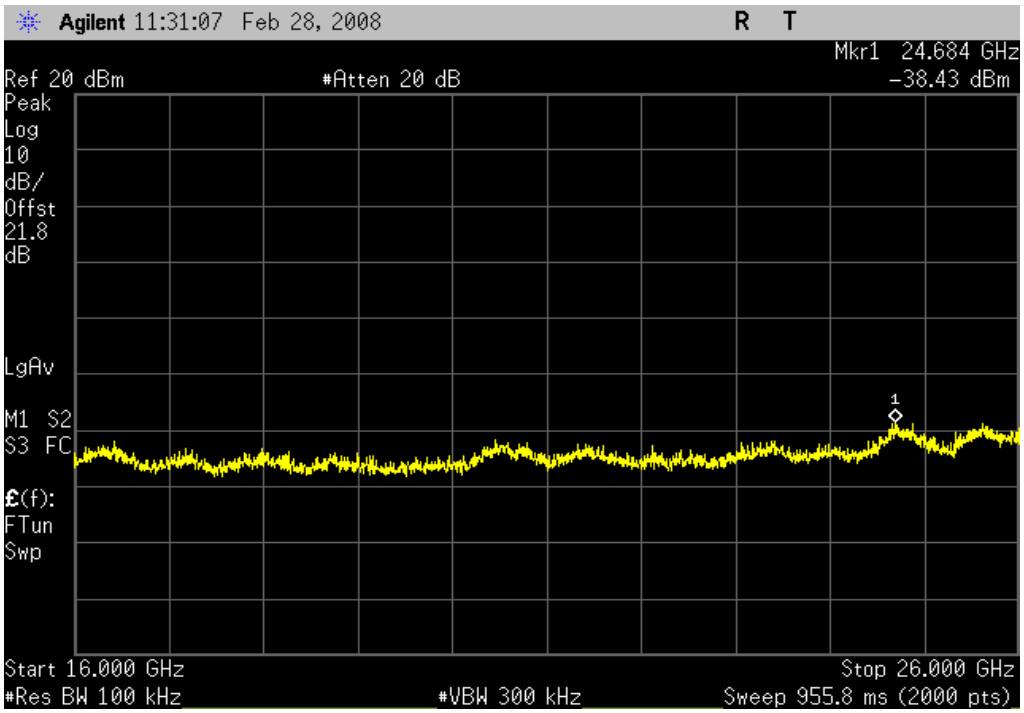
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



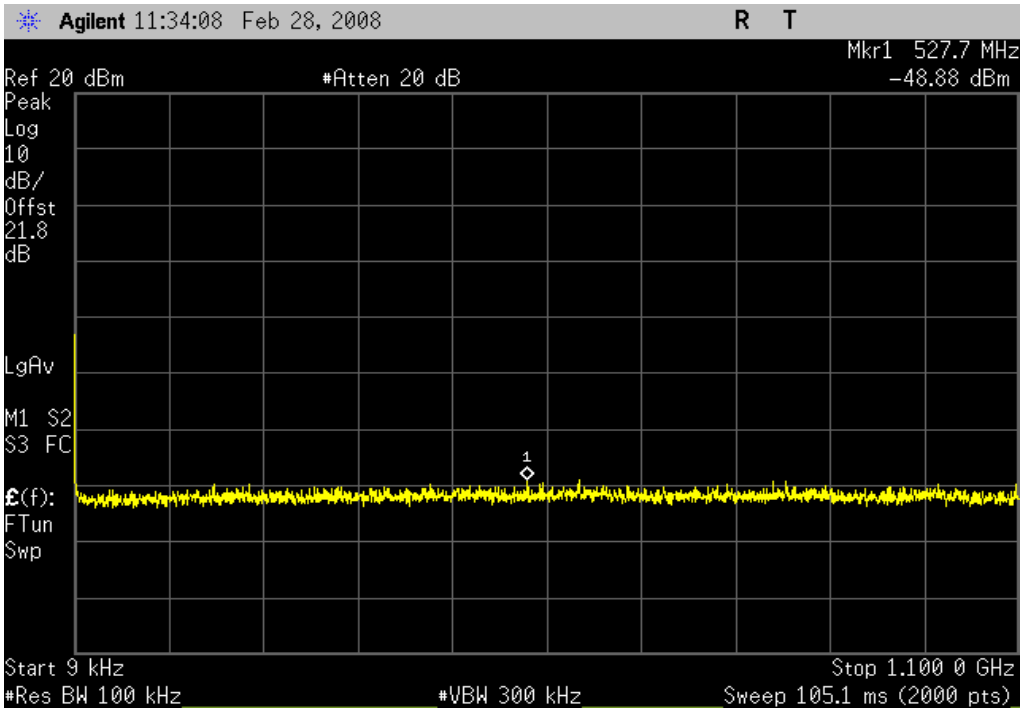
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



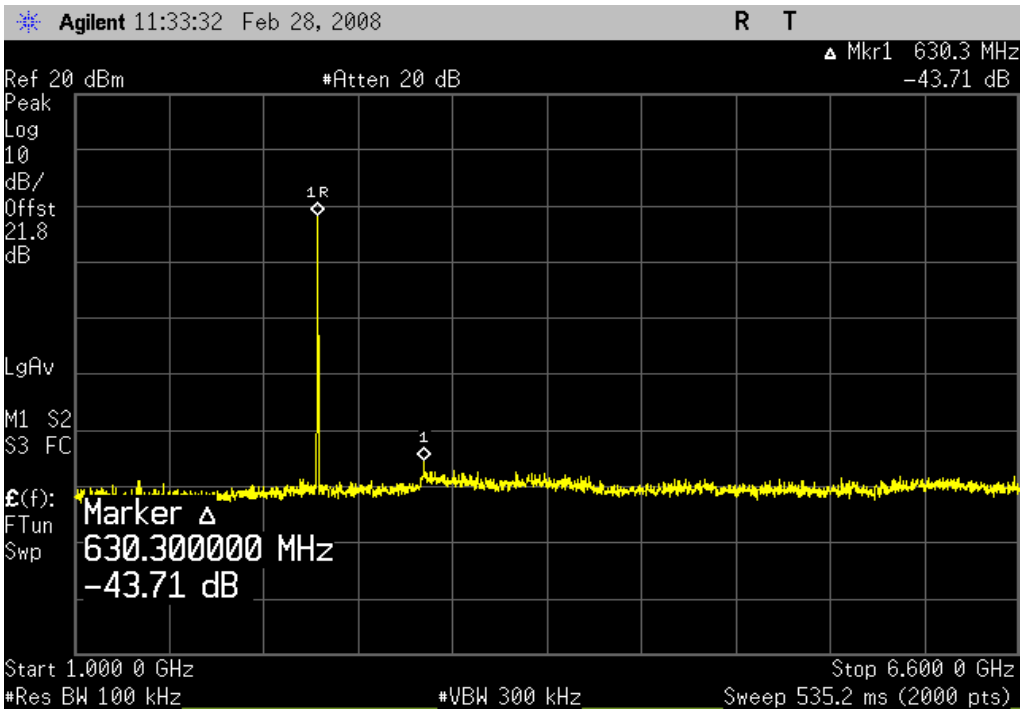
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

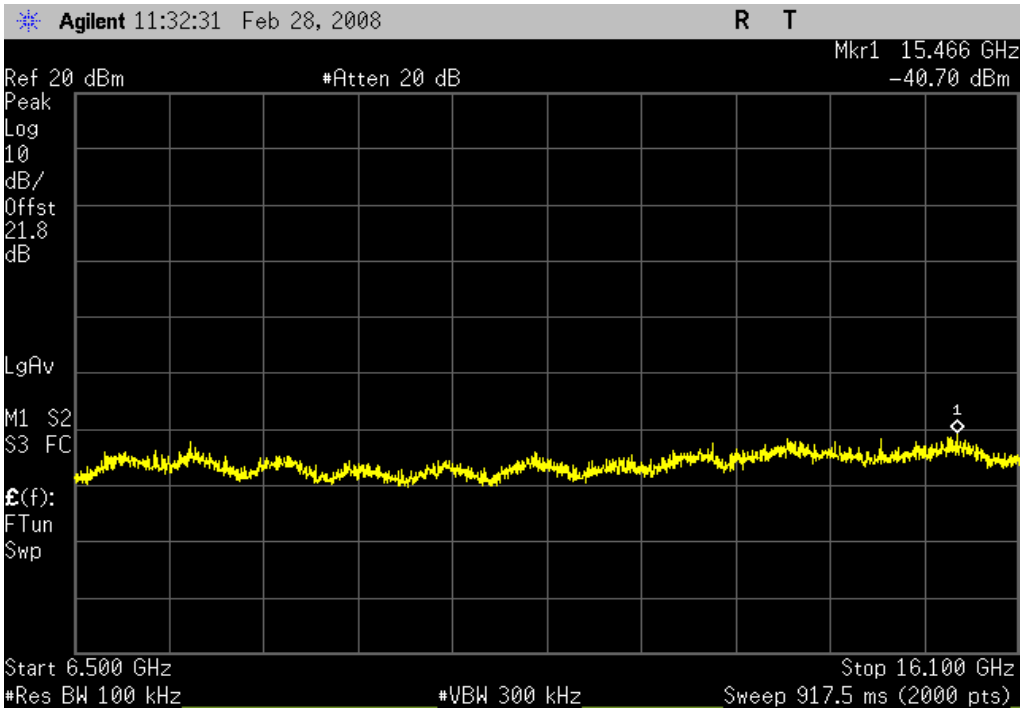


AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

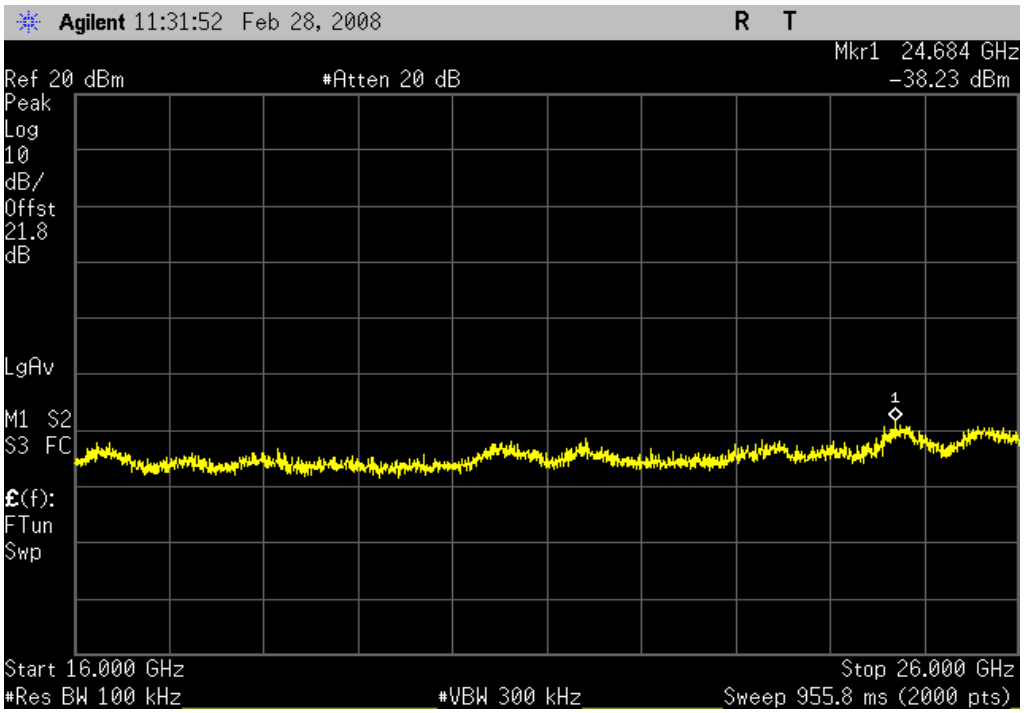


Spurious Conducted Emissions

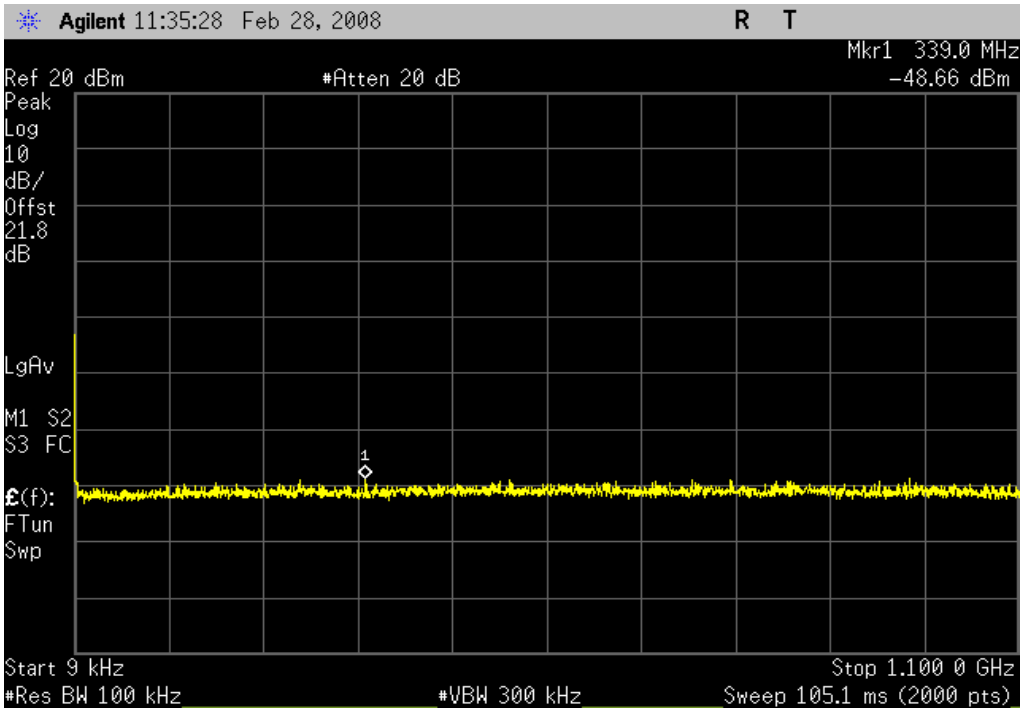
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



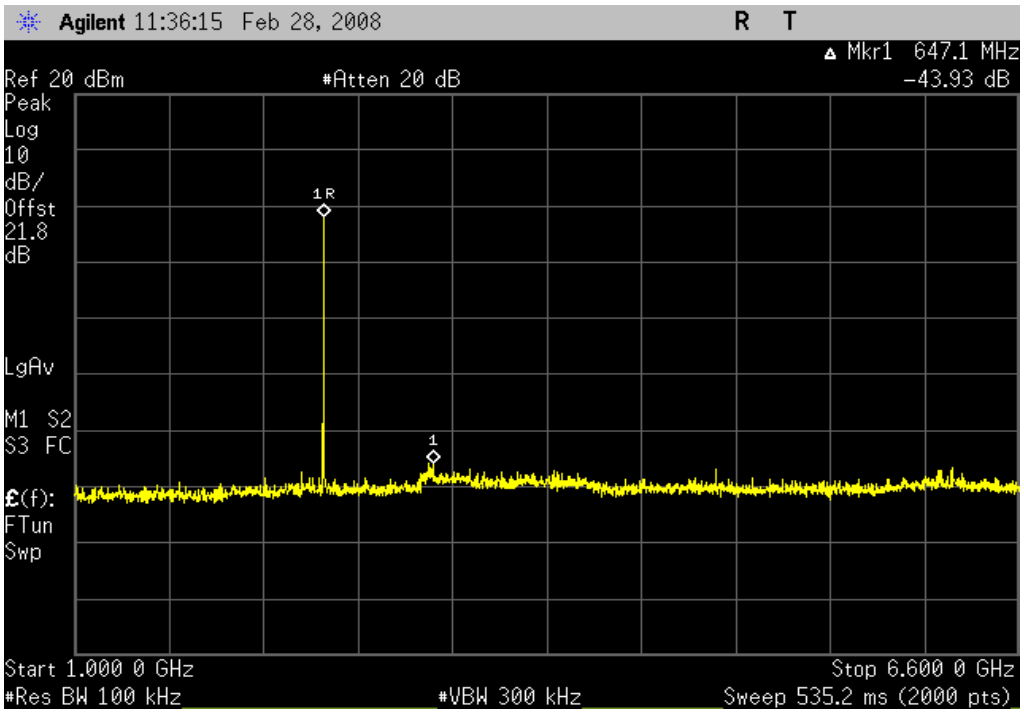
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

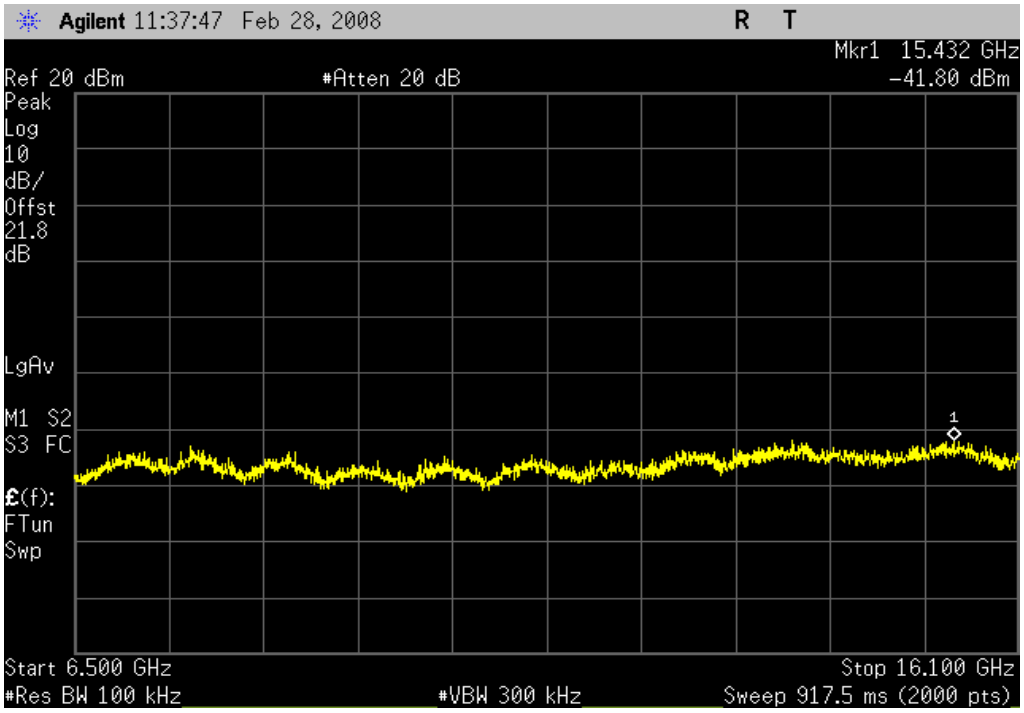


AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

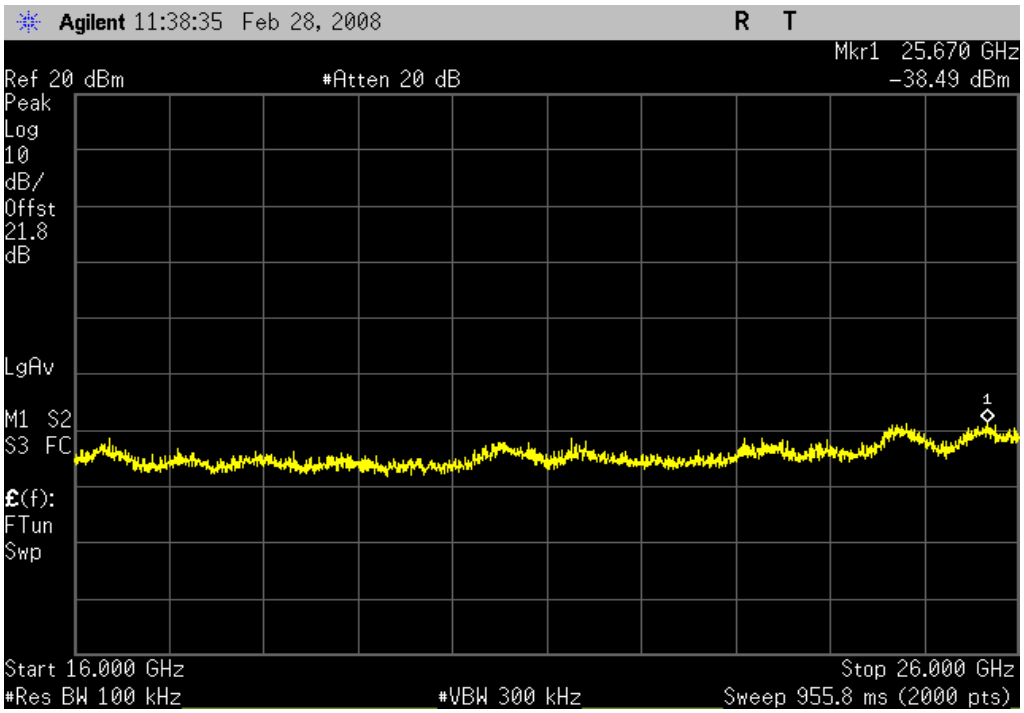


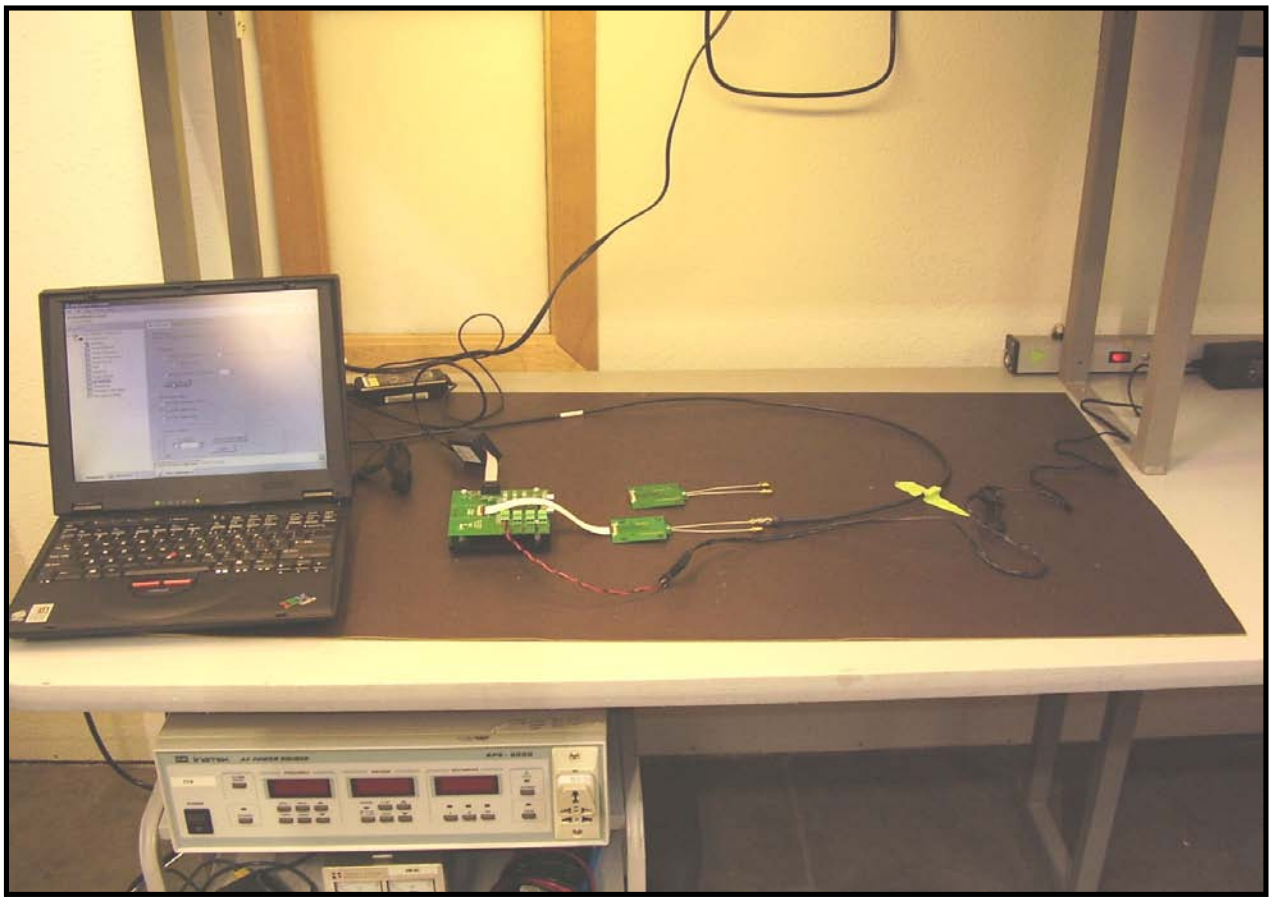
Spurious Conducted Emissions

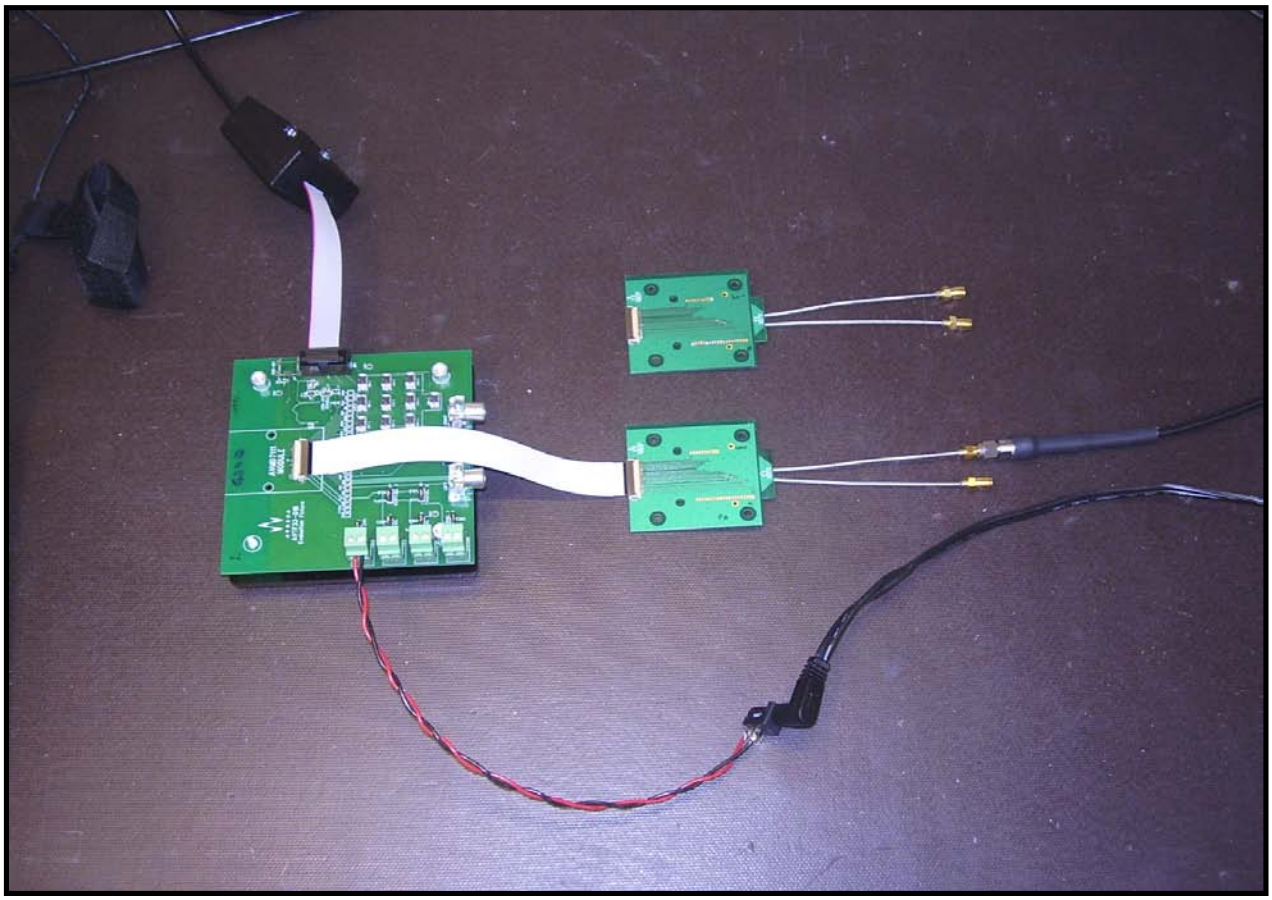
AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



AVMD7211 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc







Power Spectral Density

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 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/8/2007	13
Spectrum Analyzer	Agilent	E4446A	AAY	12/18/2007	12

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. 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 35 dB for correction to 3 kHz."

NORTHWEST EMC

Power Spectral Density

XMit 2007.06.13

EUT:	**AVMD7211**			**Work Order:**	**AVNE0019**
Serial Number:	**1 (with PA), 4 (without PA)**			**Date:**	**02/27/08**
Customer:	**Avnera**			**Temperature:**	**24°C**
Attendees:	**Fred Weiss**			**Humidity:**	**27%**
Project:	**None**			**Barometric Pres.:**	**1025.3mb**
Tested by:	**Holly Ashkannejhad**	**Power:**	**120VAC/60Hz**	**Job Site:**	**EV06**

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

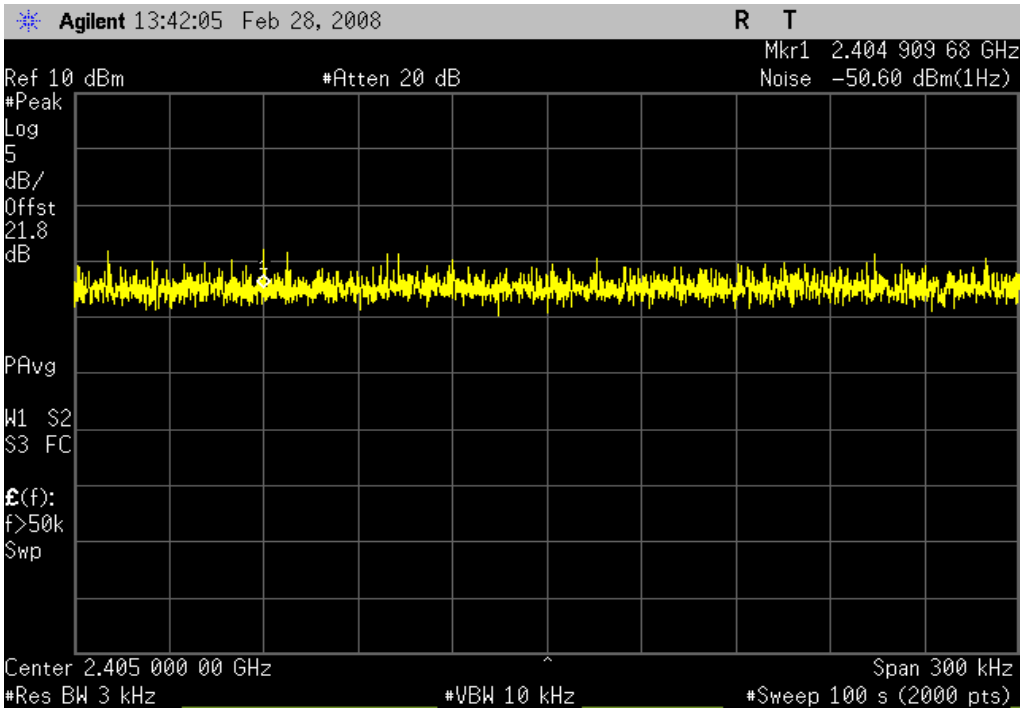
COMMENTS

Please note, configuration 1 refers to unit with PA; configuration 2 refers to unit with out PA. Testing performed on low antenna port only; Antenna port outputs are within 0.5dB of each other (see Output Power measurements).

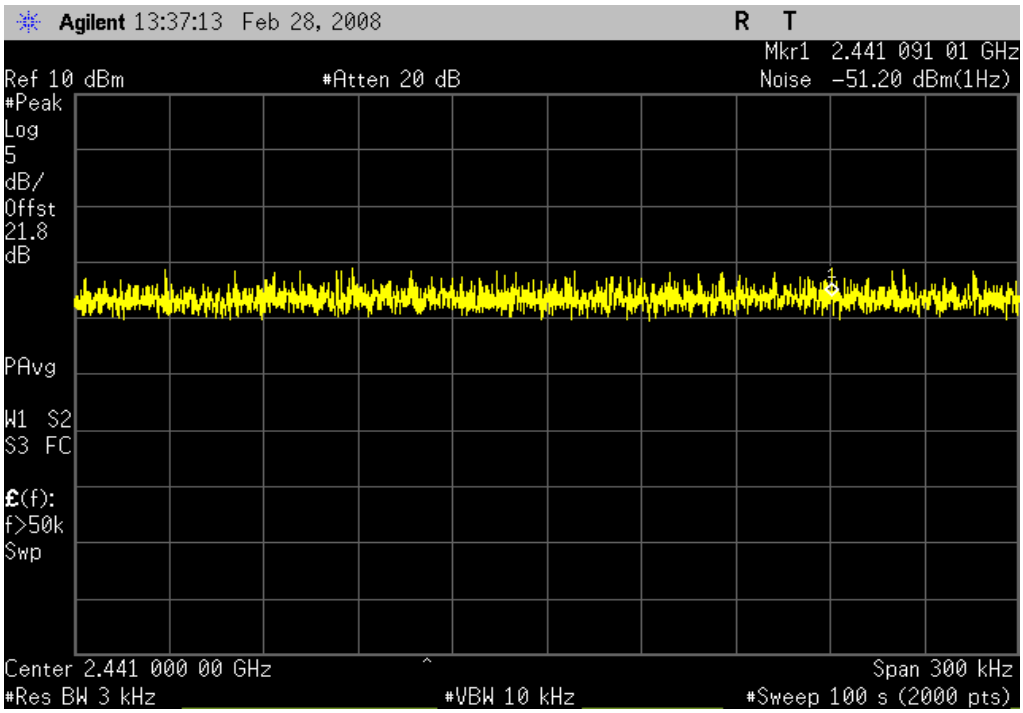
Configuration #	**1, 2**	*Signature* Holly Ashkannejhad

		Value	**Limit**	**Results**
AVMD7111 with PA, S/N: 1				
pi/4-DQPSK				
Low diversity antenna port				
	Low channel, Ch. 2, 2405MHz	-15.6 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	-16.2 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High channel, Ch. 38, 2477MHz	-17.46 dBm / 3 kHz	8 dBm / 3 kHz	Pass
AVMD7111 with out PA, S/N: 4				
pi/4-DQPSK				
Low diversity antenna port				
	Low channel, Ch. 2, 2405MHz	-23.9 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	-24.43 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High channel, Ch. 38, 2477MHz	-25.12 dBm / 3 kHz	8 dBm / 3 kHz	Pass

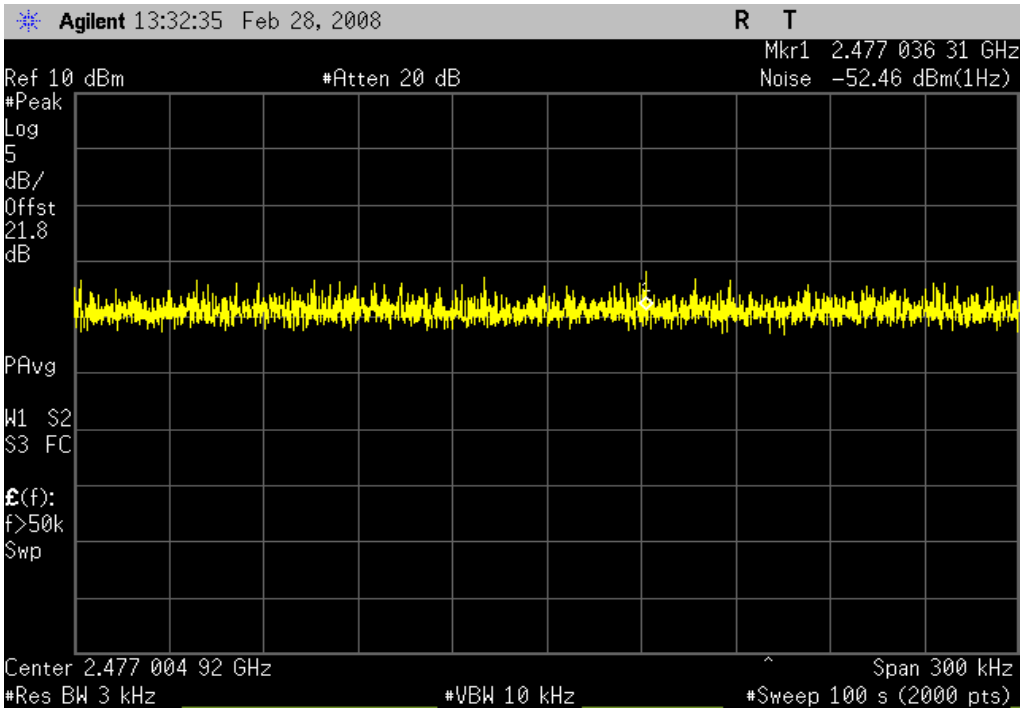
AVMD7111 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	-15.6 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



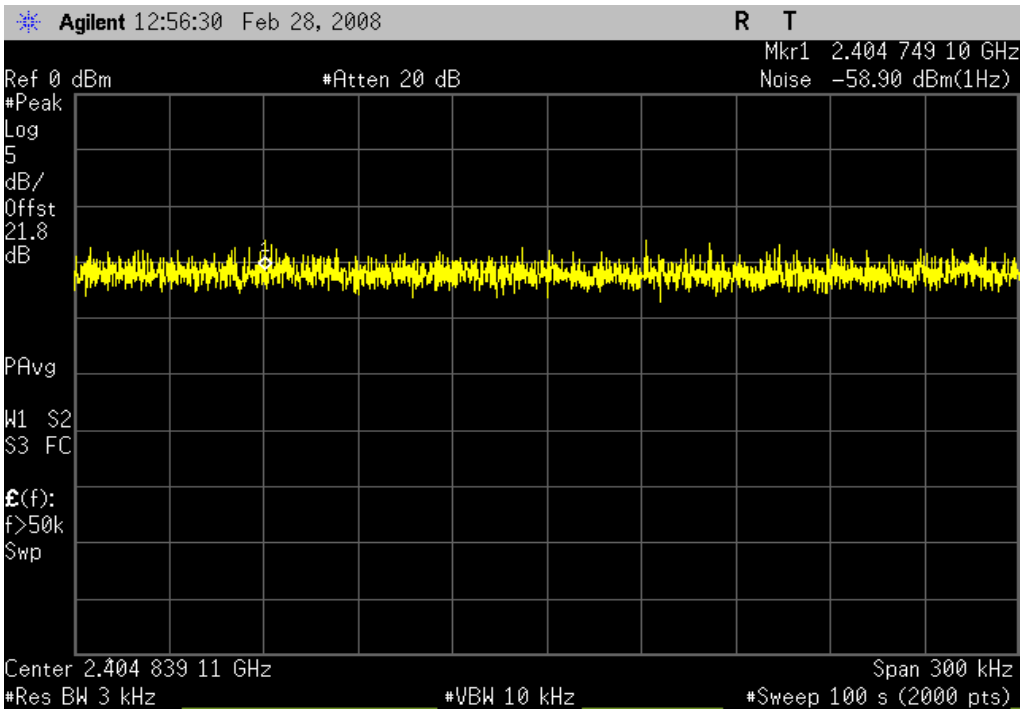
AVMD7111 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	-16.2 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



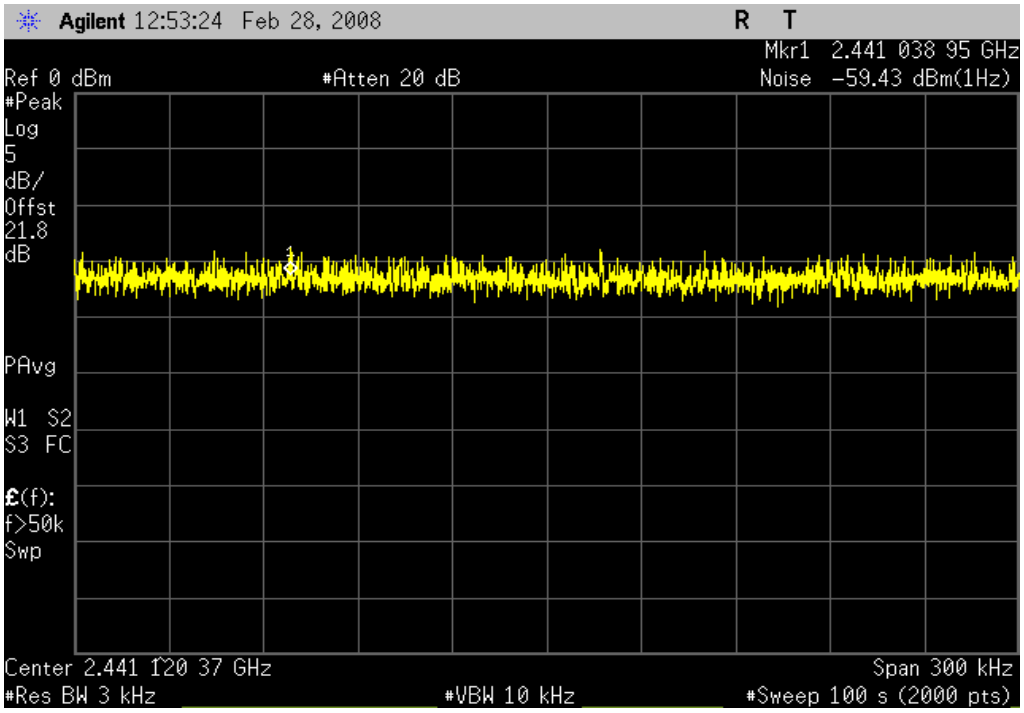
AVMD7111 with PA, S/N: 1, pi/4-DQPSK, Low diversity antenna port, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	-17.46 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



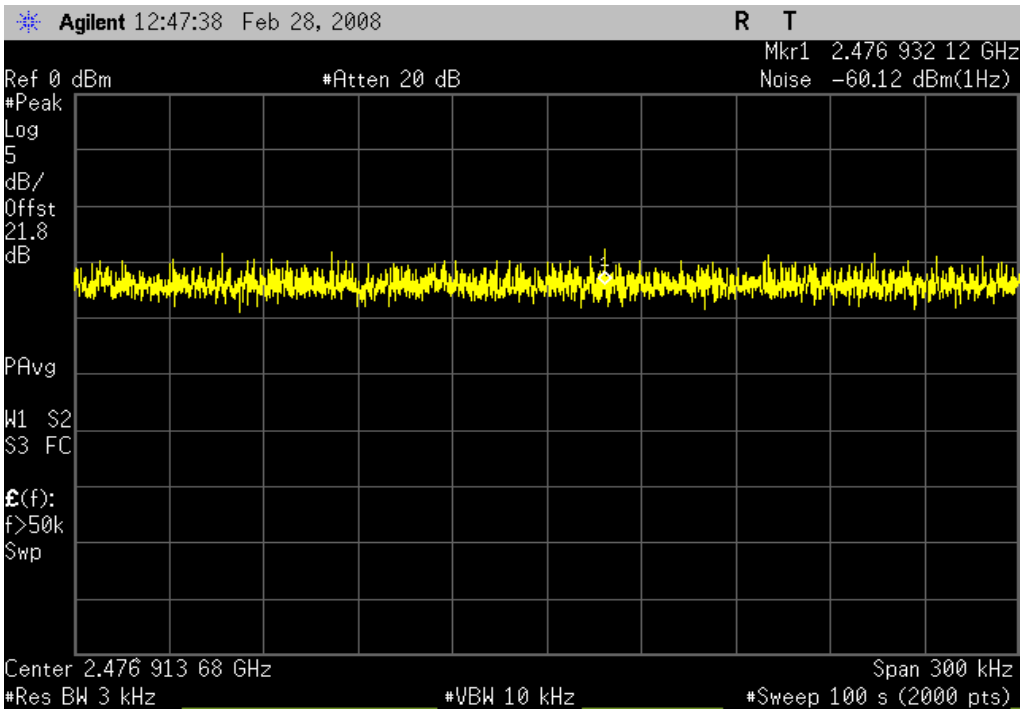
AVMD7111 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	-23.9 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

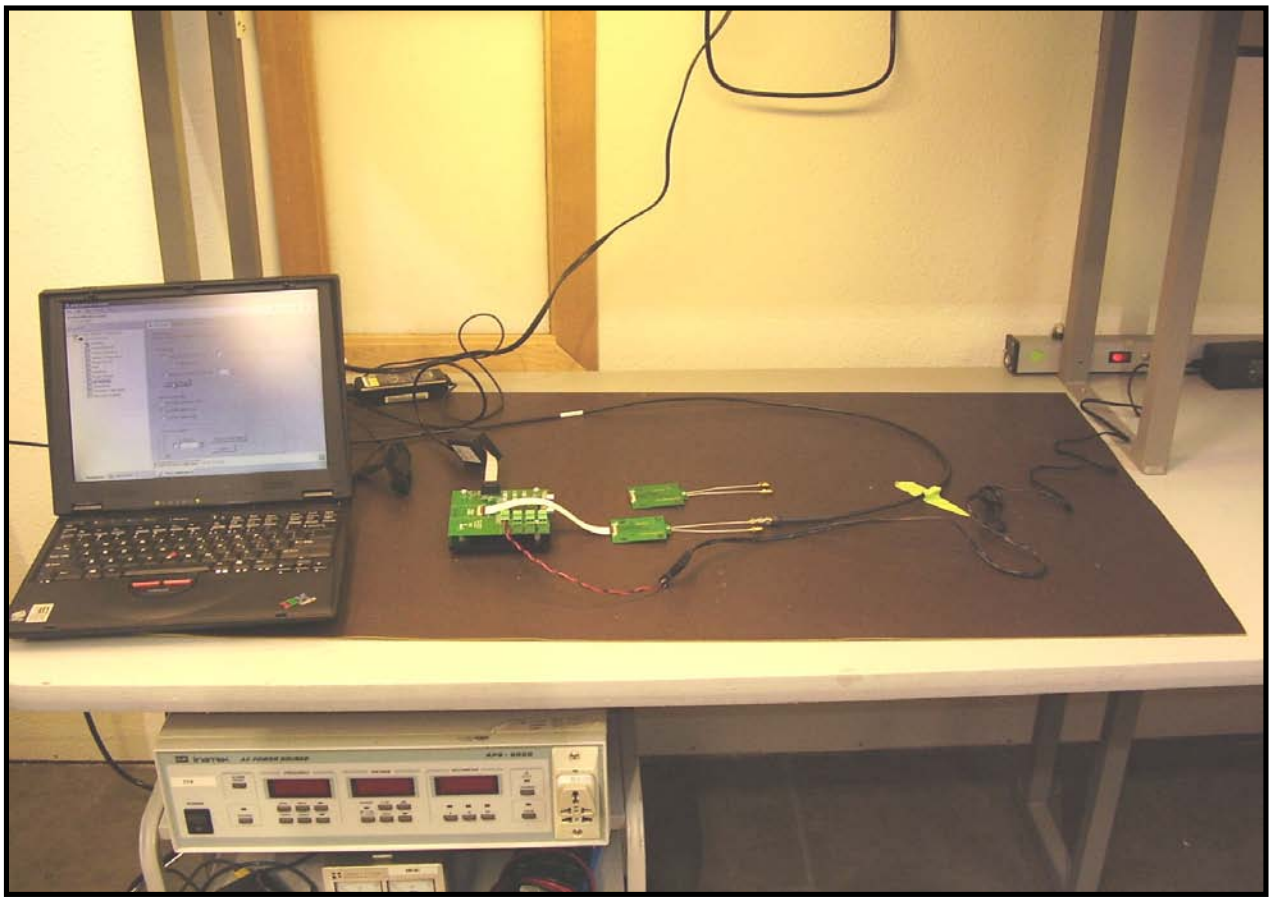


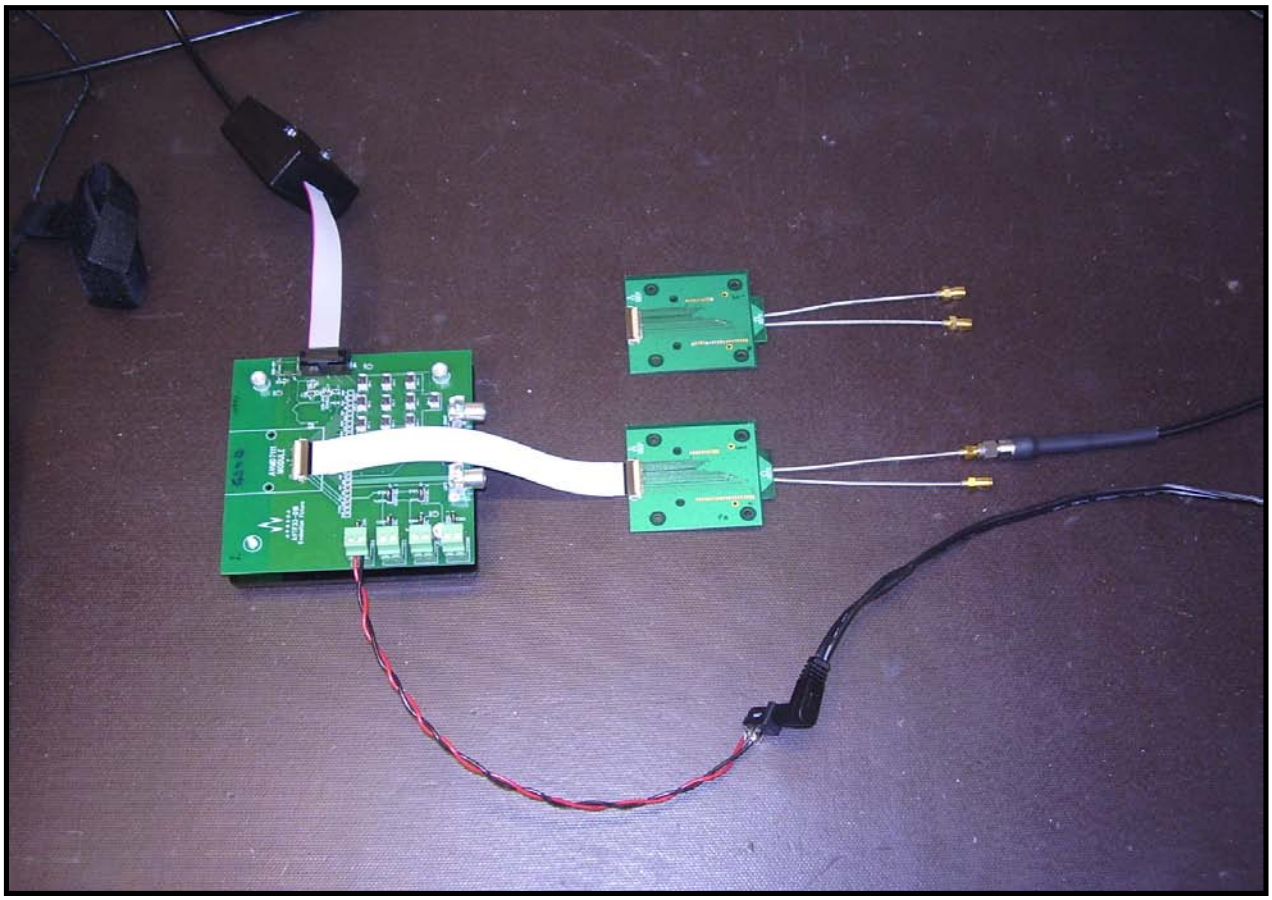
AVMD7111 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	-24.43 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



AVMD7111 with out PA, S/N: 4, pi/4-DQPSK, Low diversity antenna port, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	-25.12 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz







AC POWERLINE CONDUCTED 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 PA disabled, Low diversity antenna, high channel
Transmitting PA disabled, Low diversity antenna, mid channel
Transmitting PA disabled, Low diversity antenna, low channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

AVNE0019 - 4) AC Power Conducted Emissions

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 & Schwartz	ESCI	ARG	12/7/2007	13 mo
Attenuator	Coaxicom	66702 2910-20	RBR	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 (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.

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

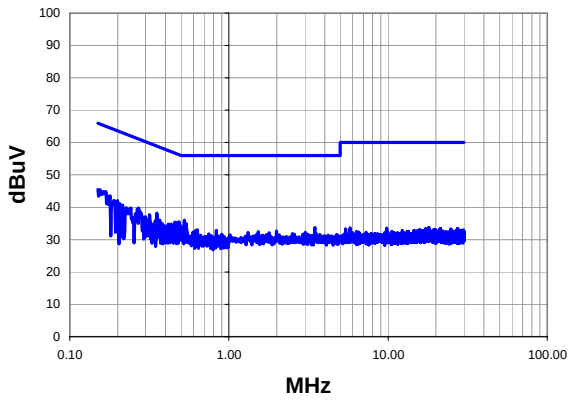
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA disabled, Low diversity antenna, low channel
Deviations:	No deviations.
Comments:	

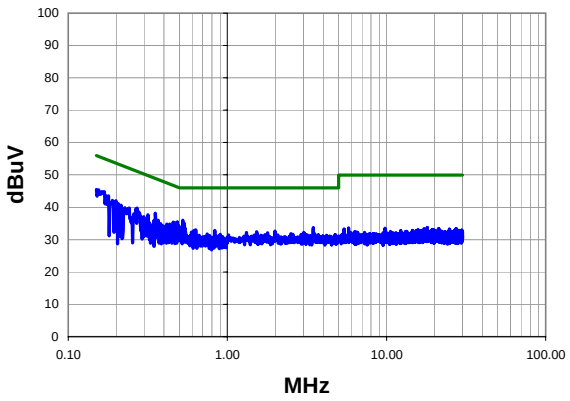
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	9	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.524	15.2	20.8	36.0	56.0	-20.0
0.150	23.5	22.0	45.5	66.0	-20.5
0.352	17.3	20.9	38.2	58.9	-20.7
0.485	14.7	20.8	35.5	56.3	-20.7
0.538	14.2	20.8	35.0	56.0	-21.0
0.465	14.5	20.8	35.3	56.6	-21.3
0.456	14.6	20.8	35.4	56.8	-21.3
0.271	18.8	21.0	39.8	61.1	-21.3
0.199	21.0	21.0	42.0	63.6	-21.6
0.495	13.6	20.8	34.4	56.1	-21.7
0.266	18.5	21.0	39.5	61.3	-21.8
0.189	20.9	21.2	42.1	64.1	-22.0
0.317	16.8	20.9	37.7	59.8	-22.1
0.206	20.2	21.0	41.2	63.4	-22.2
3.464	13.2	20.5	33.7	56.0	-22.3
0.434	14.0	20.9	34.9	57.2	-22.3
0.215	19.7	21.0	40.7	63.0	-22.3
0.473	13.1	20.8	33.9	56.5	-22.5
0.368	15.1	20.9	36.0	58.6	-22.6
0.417	14.0	20.9	34.9	57.5	-22.6

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.524	15.2	20.8	36.0	46.0	-10.0
0.150	23.5	22.0	45.5	56.0	-10.5
0.352	17.3	20.9	38.2	48.9	-10.7
0.485	14.7	20.8	35.5	46.3	-10.7
0.538	14.2	20.8	35.0	46.0	-11.0
0.465	14.5	20.8	35.3	46.6	-11.3
0.456	14.6	20.8	35.4	46.8	-11.3
0.271	18.8	21.0	39.8	51.1	-11.3
0.199	21.0	21.0	42.0	53.6	-11.6
0.495	13.6	20.8	34.4	46.1	-11.7
0.266	18.5	21.0	39.5	51.3	-11.8
0.189	20.9	21.2	42.1	54.1	-12.0
0.317	16.8	20.9	37.7	49.8	-12.1
0.206	20.2	21.0	41.2	53.4	-12.2
3.464	13.2	20.5	33.7	46.0	-12.3
0.434	14.0	20.9	34.9	47.2	-12.3
0.215	19.7	21.0	40.7	53.0	-12.3
0.473	13.1	20.8	33.9	46.5	-12.5
0.368	15.1	20.9	36.0	48.6	-12.6
0.417	14.0	20.9	34.9	47.5	-12.6

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

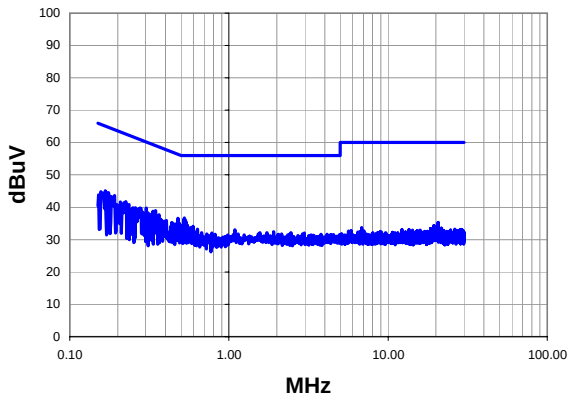
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA disabled, Low diversity antenna, low channel
Deviations:	No deviations.
Comments:	

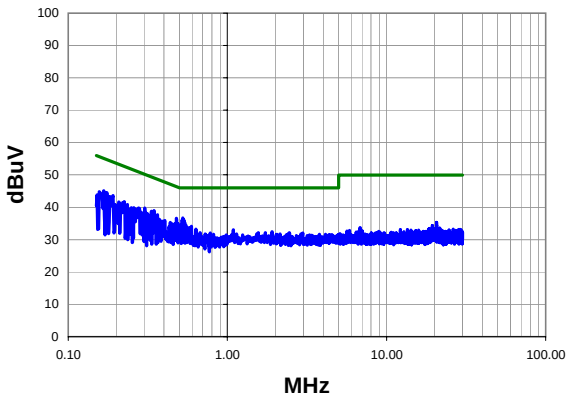
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	10	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.524	15.9	20.8	36.7	56.0	-19.3
0.478	15.8	20.8	36.6	56.4	-19.7
0.521	15.3	20.8	36.1	56.0	-19.9
0.533	15.3	20.8	36.1	56.0	-19.9
0.167	23.4	21.7	45.1	65.1	-20.0
0.346	18.1	20.9	39.0	59.1	-20.1
0.176	23.0	21.5	44.5	64.7	-20.2
0.191	22.4	21.2	43.6	64.0	-20.4
0.303	18.8	20.9	39.7	60.2	-20.4
0.334	17.9	20.9	38.8	59.4	-20.5
0.225	20.8	21.0	41.8	62.6	-20.9
0.157	22.9	21.9	44.8	65.6	-20.9
0.364	16.8	20.9	37.7	58.6	-20.9
0.278	18.8	21.0	39.8	60.9	-21.1
0.490	14.1	20.8	34.9	56.2	-21.2
0.235	19.9	21.0	40.9	62.3	-21.4
0.507	13.6	20.8	34.4	56.0	-21.6
0.259	18.9	21.0	39.9	61.5	-21.6
0.550	13.6	20.8	34.4	56.0	-21.6
0.468	14.1	20.8	34.9	56.6	-21.6

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.524	15.9	20.8	36.7	46.0	-9.3
0.478	15.8	20.8	36.6	46.4	-9.7
0.521	15.3	20.8	36.1	46.0	-9.9
0.533	15.3	20.8	36.1	46.0	-9.9
0.167	23.4	21.7	45.1	55.1	-10.0
0.346	18.1	20.9	39.0	49.1	-10.1
0.176	23.0	21.5	44.5	54.7	-10.2
0.191	22.4	21.2	43.6	54.0	-10.4
0.303	18.8	20.9	39.7	50.2	-10.4
0.334	17.9	20.9	38.8	49.4	-10.5
0.225	20.8	21.0	41.8	52.6	-10.9
0.157	22.9	21.9	44.8	55.6	-10.9
0.364	16.8	20.9	37.7	48.6	-10.9
0.278	18.8	21.0	39.8	50.9	-11.1
0.490	14.1	20.8	34.9	46.2	-11.2
0.235	19.9	21.0	40.9	52.3	-11.4
0.507	13.6	20.8	34.4	46.0	-11.6
0.259	18.9	21.0	39.9	51.5	-11.6
0.550	13.6	20.8	34.4	46.0	-11.6
0.468	14.1	20.8	34.9	46.6	-11.6

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

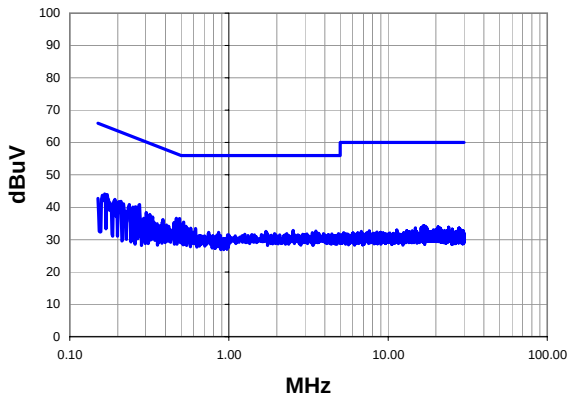
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA disabled, Low diversity antenna, mid channel
Deviations:	No deviations.
Comments:	

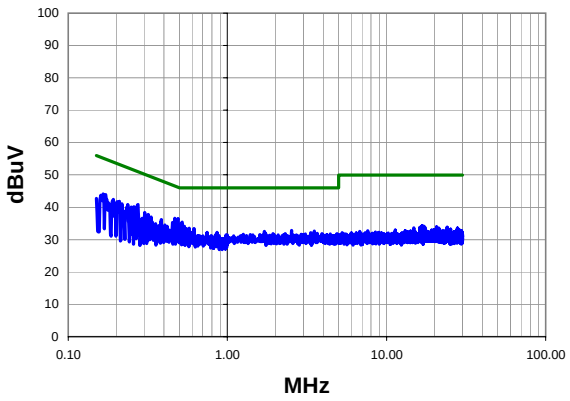
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	11	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.488	15.7	20.8	36.5	56.2	-19.7
0.466	15.8	20.8	36.6	56.6	-19.9
0.274	19.9	21.0	40.9	61.0	-20.1
0.519	14.6	20.8	35.4	56.0	-20.6
0.172	22.4	21.6	44.0	64.9	-20.9
0.478	14.6	20.8	35.4	56.4	-20.9
0.165	22.4	21.7	44.1	65.2	-21.1
0.510	14.0	20.8	34.8	56.0	-21.2
0.259	19.2	21.0	40.2	61.5	-21.3
0.237	19.9	21.0	40.9	62.2	-21.3
0.210	20.8	21.0	41.8	63.2	-21.4
0.193	21.3	21.2	42.5	63.9	-21.5
0.453	14.5	20.8	35.3	56.8	-21.5
0.495	13.6	20.8	34.4	56.1	-21.7
0.249	19.1	21.0	40.1	61.8	-21.7
0.203	20.7	21.0	41.7	63.5	-21.8
0.303	17.4	20.9	38.3	60.2	-21.8
0.216	20.1	21.0	41.1	63.0	-21.9
0.538	13.3	20.8	34.1	56.0	-21.9
0.318	16.9	20.9	37.8	59.8	-21.9

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.488	15.7	20.8	36.5	46.2	-9.7
0.466	15.8	20.8	36.6	46.6	-9.9
0.274	19.9	21.0	40.9	51.0	-10.1
0.519	14.6	20.8	35.4	46.0	-10.6
0.172	22.4	21.6	44.0	54.9	-10.9
0.478	14.6	20.8	35.4	46.4	-10.9
0.165	22.4	21.7	44.1	55.2	-11.1
0.510	14.0	20.8	34.8	46.0	-11.2
0.259	19.2	21.0	40.2	51.5	-11.3
0.237	19.9	21.0	40.9	52.2	-11.3
0.210	20.8	21.0	41.8	53.2	-11.4
0.193	21.3	21.2	42.5	53.9	-11.5
0.453	14.5	20.8	35.3	46.8	-11.5
0.495	13.6	20.8	34.4	46.1	-11.7
0.249	19.1	21.0	40.1	51.8	-11.7
0.203	20.7	21.0	41.7	53.5	-11.8
0.303	17.4	20.9	38.3	50.2	-11.8
0.216	20.1	21.0	41.1	53.0	-11.9
0.538	13.3	20.8	34.1	46.0	-11.9
0.318	16.9	20.9	37.8	49.8	-11.9

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

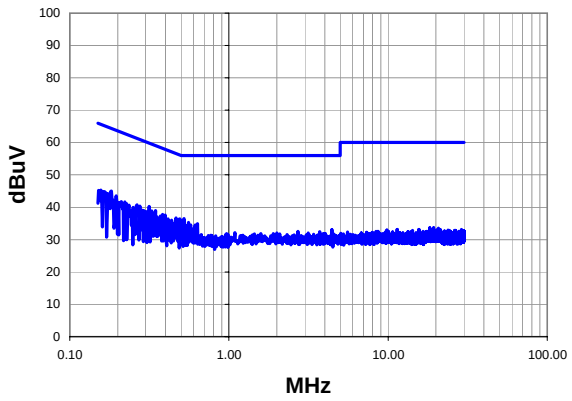
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin
EUT:	AVMD7211				
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions				
Customer:	Avnera				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting PA disabled, Low diversity antenna, mid channel				
Deviations:	No deviations.				
Comments:					

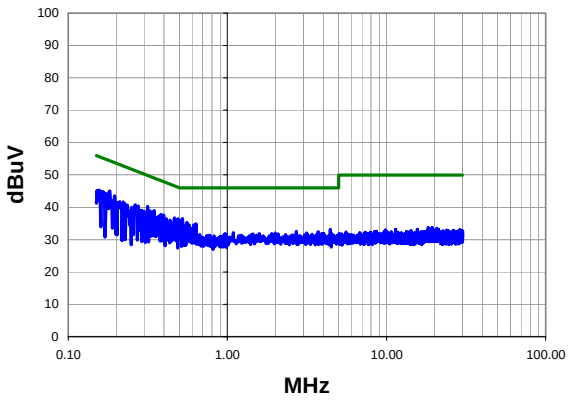
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	12	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.182	23.7	21.4	45.1	64.4	-19.3
0.522	15.7	20.8	36.5	56.0	-19.5
0.315	19.3	20.9	40.2	59.8	-19.6
0.492	15.6	20.8	36.4	56.1	-19.7
0.465	15.9	20.8	36.7	56.6	-19.9
0.485	15.5	20.8	36.3	56.3	-19.9
0.346	18.1	20.9	39.0	59.1	-20.1
0.509	15.1	20.8	35.9	56.0	-20.1
0.196	22.4	21.1	43.5	63.8	-20.3
0.398	16.7	20.9	37.6	57.9	-20.3
0.157	23.4	21.9	45.3	65.6	-20.4
0.165	23.1	21.7	44.8	65.2	-20.4
0.383	16.9	20.9	37.8	58.2	-20.4
0.264	19.8	21.0	40.8	61.3	-20.5
0.174	22.7	21.5	44.2	64.8	-20.6
0.276	19.4	21.0	40.4	60.9	-20.6
0.327	18.0	20.9	38.9	59.5	-20.6
0.556	14.5	20.8	35.3	56.0	-20.7
0.152	23.2	22.0	45.2	65.9	-20.7
0.480	14.5	20.8	35.3	56.3	-21.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.182	23.7	21.4	45.1	54.4	-9.3
0.522	15.7	20.8	36.5	46.0	-9.5
0.315	19.3	20.9	40.2	49.8	-9.6
0.492	15.6	20.8	36.4	46.1	-9.7
0.465	15.9	20.8	36.7	46.6	-9.9
0.485	15.5	20.8	36.3	46.3	-9.9
0.346	18.1	20.9	39.0	49.1	-10.1
0.509	15.1	20.8	35.9	46.0	-10.1
0.196	22.4	21.1	43.5	53.8	-10.3
0.398	16.7	20.9	37.6	47.9	-10.3
0.157	23.4	21.9	45.3	55.6	-10.4
0.165	23.1	21.7	44.8	55.2	-10.4
0.383	16.9	20.9	37.8	48.2	-10.4
0.264	19.8	21.0	40.8	51.3	-10.5
0.174	22.7	21.5	44.2	54.8	-10.6
0.276	19.4	21.0	40.4	50.9	-10.6
0.327	18.0	20.9	38.9	49.5	-10.6
0.556	14.5	20.8	35.3	46.0	-10.7
0.152	23.2	22.0	45.2	55.9	-10.7
0.480	14.5	20.8	35.3	46.3	-11.0

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

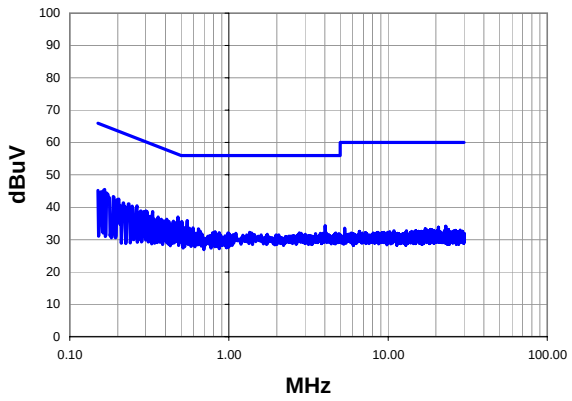
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA disabled, Low diversity antenna, high channel
Deviations:	No deviations.
Comments:	

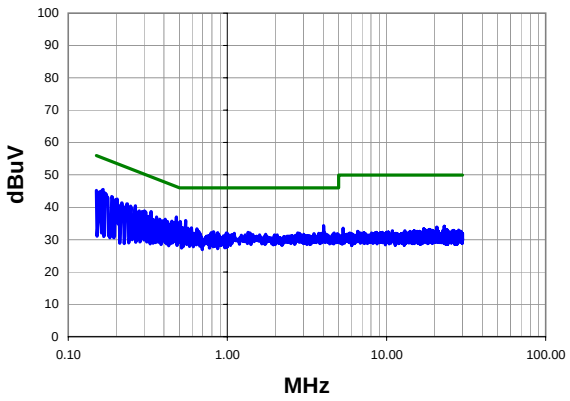
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	13	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.478	16.2	20.8	37.0	56.4	-19.3
0.165	23.8	21.7	45.5	65.2	-19.7
0.546	15.1	20.8	35.9	56.0	-20.1
0.505	14.8	20.8	35.6	56.0	-20.4
0.170	22.8	21.6	44.4	64.9	-20.5
0.332	17.8	20.9	38.7	59.4	-20.7
0.159	23.0	21.8	44.8	65.5	-20.7
0.187	22.1	21.3	43.4	64.2	-20.8
0.150	23.2	22.0	45.2	66.0	-20.8
0.264	19.5	21.0	40.5	61.3	-20.8
0.203	21.5	21.0	42.5	63.5	-21.0
0.490	14.3	20.8	35.1	56.2	-21.0
0.448	14.9	20.8	35.7	56.9	-21.2
0.233	20.1	21.0	41.1	62.3	-21.3
0.301	17.9	20.9	38.8	60.2	-21.4
0.461	14.4	20.8	35.2	56.7	-21.4
0.407	15.4	20.9	36.3	57.7	-21.4
0.247	19.4	21.0	40.4	61.9	-21.5
0.216	20.4	21.0	41.4	63.0	-21.6
4.032	13.8	20.5	34.3	56.0	-21.7

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.478	16.2	20.8	37.0	46.4	-9.3
0.165	23.8	21.7	45.5	55.2	-9.7
0.546	15.1	20.8	35.9	46.0	-10.1
0.505	14.8	20.8	35.6	46.0	-10.4
0.170	22.8	21.6	44.4	54.9	-10.5
0.332	17.8	20.9	38.7	49.4	-10.7
0.159	23.0	21.8	44.8	55.5	-10.7
0.187	22.1	21.3	43.4	54.2	-10.8
0.150	23.2	22.0	45.2	56.0	-10.8
0.264	19.5	21.0	40.5	51.3	-10.8
0.203	21.5	21.0	42.5	53.5	-11.0
0.490	14.3	20.8	35.1	46.2	-11.0
0.448	14.9	20.8	35.7	46.9	-11.2
0.233	20.1	21.0	41.1	52.3	-11.3
0.301	17.9	20.9	38.8	50.2	-11.4
0.461	14.4	20.8	35.2	46.7	-11.4
0.407	15.4	20.9	36.3	47.7	-11.4
0.247	19.4	21.0	40.4	51.9	-11.5
0.216	20.4	21.0	41.4	53.0	-11.6
4.032	13.8	20.5	34.3	46.0	-11.7

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

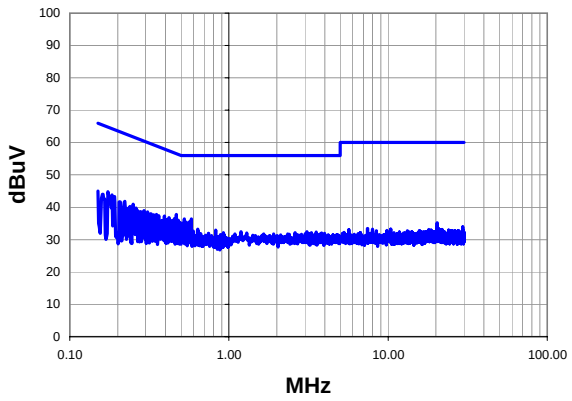
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA disabled, Low diversity antenna, high channel
Deviations:	No deviations.
Comments:	

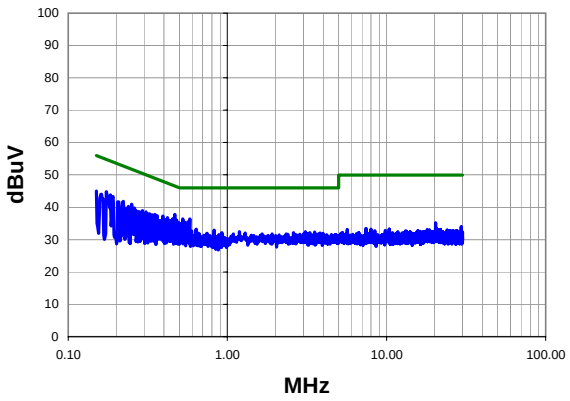
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	14	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit

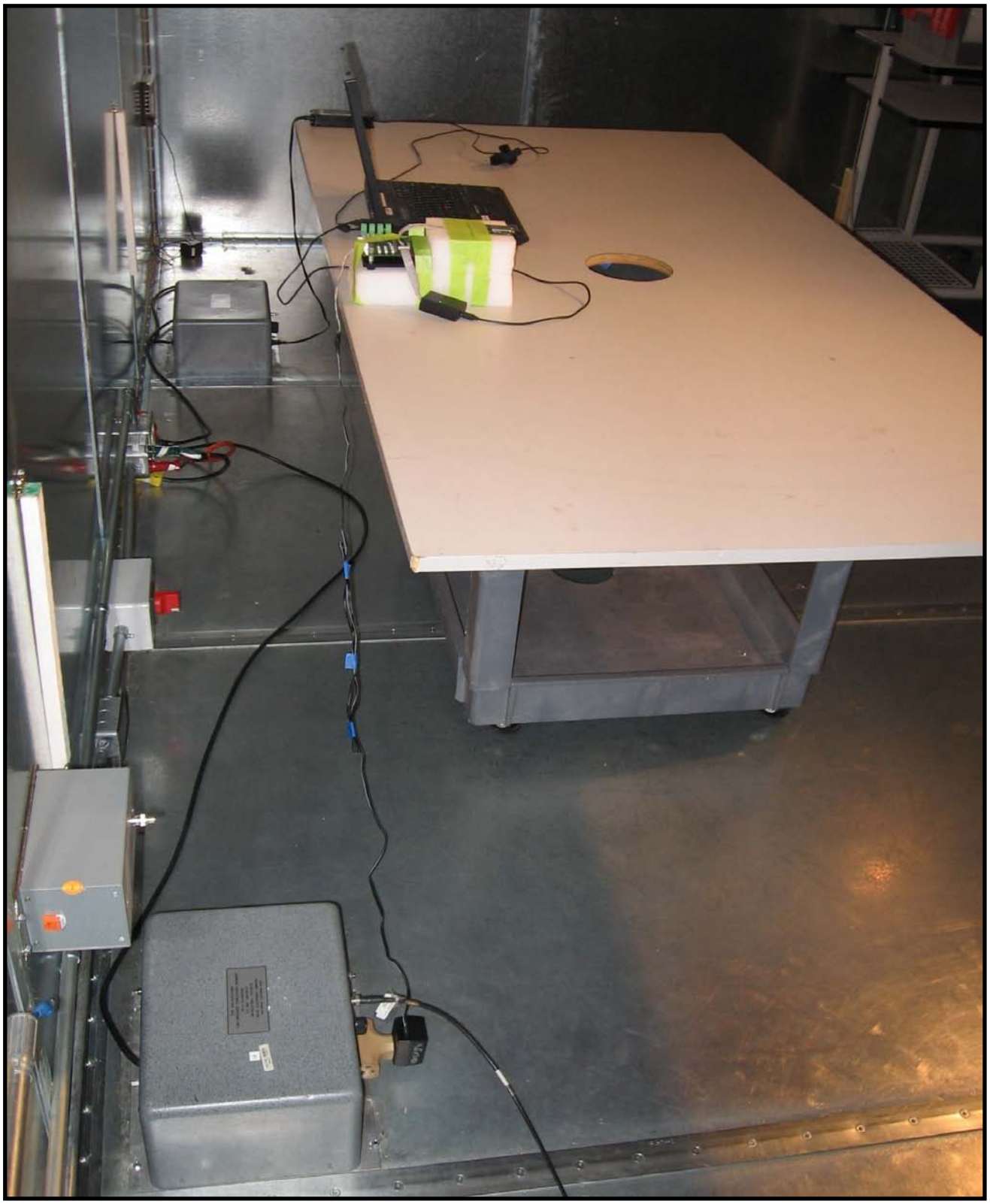


Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.466	17.0	20.8	37.8	56.6	-18.7
0.524	15.6	20.8	36.4	56.0	-19.6
0.580	15.6	20.8	36.4	56.0	-19.6
0.174	23.3	21.5	44.8	64.8	-20.0
0.454	15.7	20.8	36.5	56.8	-20.3
0.480	15.2	20.8	36.0	56.3	-20.3
0.184	22.5	21.3	43.8	64.3	-20.5
0.565	14.7	20.8	35.5	56.0	-20.5
0.539	14.6	20.8	35.4	56.0	-20.6
0.420	15.9	20.9	36.8	57.4	-20.7
0.191	22.1	21.2	43.3	64.0	-20.7
0.393	16.4	20.9	37.3	58.0	-20.7
0.250	20.0	21.0	41.0	61.7	-20.8
0.493	14.5	20.8	35.3	56.1	-20.8
0.221	20.9	21.0	41.9	62.8	-20.9
0.512	14.2	20.8	35.0	56.0	-21.0
0.150	23.0	22.0	45.0	66.0	-21.0
0.351	16.9	20.9	37.8	58.9	-21.1
0.363	16.5	20.9	37.4	58.7	-21.3
0.436	15.0	20.9	35.9	57.1	-21.3

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.466	17.0	20.8	37.8	46.6	-8.7
0.524	15.6	20.8	36.4	46.0	-9.6
0.580	15.6	20.8	36.4	46.0	-9.6
0.174	23.3	21.5	44.8	54.8	-10.0
0.454	15.7	20.8	36.5	46.8	-10.3
0.480	15.2	20.8	36.0	46.3	-10.3
0.184	22.5	21.3	43.8	54.3	-10.5
0.565	14.7	20.8	35.5	46.0	-10.5
0.539	14.6	20.8	35.4	46.0	-10.6
0.420	15.9	20.9	36.8	47.4	-10.7
0.191	22.1	21.2	43.3	54.0	-10.7
0.393	16.4	20.9	37.3	48.0	-10.7
0.250	20.0	21.0	41.0	51.7	-10.8
0.493	14.5	20.8	35.3	46.1	-10.8
0.221	20.9	21.0	41.9	52.8	-10.9
0.512	14.2	20.8	35.0	46.0	-11.0
0.150	23.0	22.0	45.0	56.0	-11.0
0.351	16.9	20.9	37.8	48.9	-11.1
0.363	16.5	20.9	37.4	48.7	-11.3
0.436	15.0	20.9	35.9	47.1	-11.3



AC POWERLINE CONDUCTED 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 PA enabled, Low diversity antenna, high channel
Transmitting PA enabled, Low diversity antenna, mid channel
Transmitting PA enabled, Low diversity antenna, low channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

AVNE0019 - 4) AC Power Conducted Emissions

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 & Schwartz	ESCI	ARG	12/7/2007	13 mo
Attenuator	Coaxicom	66702 2910-20	RBR	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 (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.

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

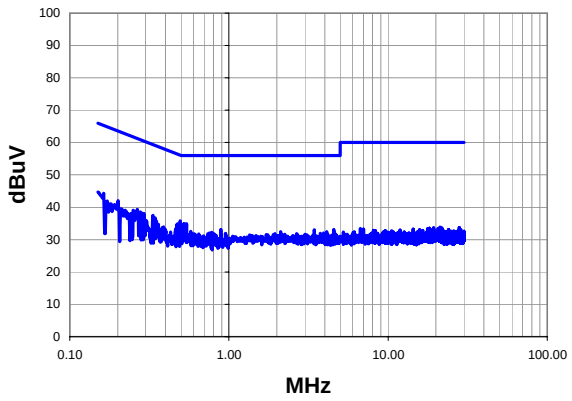
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA enabled, Low diversity antenna, low channel
Deviations:	No deviations.
Comments:	

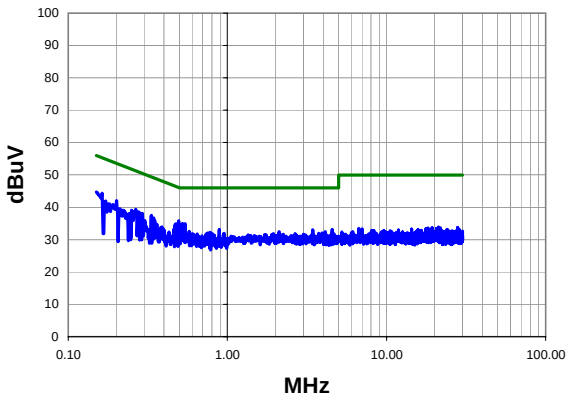
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	3	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.495	15.0	20.8	35.8	56.1	-20.3
0.524	14.1	20.8	34.9	56.0	-21.1
0.541	14.1	20.8	34.9	56.0	-21.1
0.517	14.0	20.8	34.8	56.0	-21.2
0.150	22.7	22.0	44.7	66.0	-21.3
0.476	14.1	20.8	34.9	56.4	-21.5
0.201	21.0	21.0	42.0	63.6	-21.6
0.334	16.6	20.9	37.5	59.4	-21.8
0.266	18.4	21.0	39.4	61.3	-21.9
0.531	12.9	20.8	33.7	56.0	-22.3
0.278	17.6	21.0	38.6	60.9	-22.3
0.344	15.8	20.9	36.7	59.1	-22.4
0.293	17.1	20.9	38.0	60.4	-22.4
0.284	17.2	20.9	38.1	60.7	-22.5
0.250	18.1	21.0	39.1	61.7	-22.7
0.172	20.4	21.6	42.0	64.9	-22.9
4.552	12.6	20.5	33.1	56.0	-22.9
0.889	12.5	20.6	33.1	56.0	-22.9
3.440	12.5	20.5	33.0	56.0	-23.0
0.349	14.9	20.9	35.8	59.0	-23.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.495	15.0	20.8	35.8	46.1	-10.3
0.524	14.1	20.8	34.9	46.0	-11.1
0.541	14.1	20.8	34.9	46.0	-11.1
0.517	14.0	20.8	34.8	46.0	-11.2
0.150	22.7	22.0	44.7	56.0	-11.3
0.476	14.1	20.8	34.9	46.4	-11.5
0.201	21.0	21.0	42.0	53.6	-11.6
0.334	16.6	20.9	37.5	49.4	-11.8
0.266	18.4	21.0	39.4	51.3	-11.9
0.531	12.9	20.8	33.7	46.0	-12.3
0.278	17.6	21.0	38.6	50.9	-12.3
0.344	15.8	20.9	36.7	49.1	-12.4
0.293	17.1	20.9	38.0	50.4	-12.4
0.284	17.2	20.9	38.1	50.7	-12.5
0.250	18.1	21.0	39.1	51.7	-12.7
0.172	20.4	21.6	42.0	54.9	-12.9
4.552	12.6	20.5	33.1	46.0	-12.9
0.889	12.5	20.6	33.1	46.0	-12.9
3.440	12.5	20.5	33.0	46.0	-13.0
0.349	14.9	20.9	35.8	49.0	-13.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

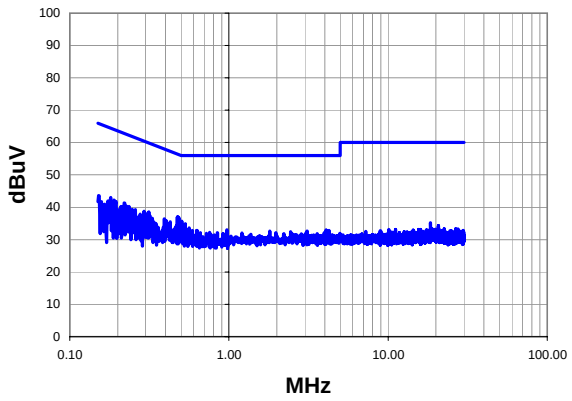
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA enabled, Low diversity antenna, low channel
Deviations:	No deviations.
Comments:	

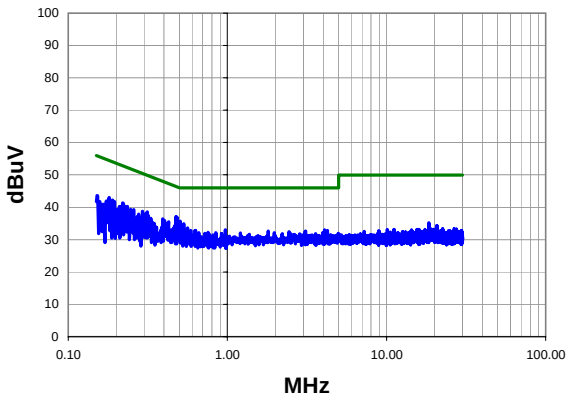
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	4	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.478	16.3	20.8	37.1	56.4	-19.2
0.473	16.2	20.8	37.0	56.5	-19.4
0.485	16.0	20.8	36.8	56.3	-19.4
0.505	14.9	20.8	35.7	56.0	-20.3
0.533	14.1	20.8	34.9	56.0	-21.1
0.313	17.6	20.9	38.5	59.9	-21.4
0.220	20.4	21.0	41.4	62.8	-21.4
0.181	21.6	21.4	43.0	64.5	-21.5
0.488	13.8	20.8	34.6	56.2	-21.6
0.493	13.7	20.8	34.5	56.1	-21.6
0.391	15.5	20.9	36.4	58.0	-21.7
0.293	17.8	20.9	38.7	60.4	-21.7
0.427	14.7	20.9	35.6	57.3	-21.8
0.189	21.0	21.2	42.2	64.1	-21.9
0.308	17.2	20.9	38.1	60.0	-21.9
0.403	15.0	20.9	35.9	57.8	-21.9
0.235	19.3	21.0	40.3	62.3	-22.0
0.227	19.4	21.0	40.4	62.6	-22.2
0.259	18.3	21.0	39.3	61.5	-22.2
0.468	13.5	20.8	34.3	56.6	-22.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.478	16.3	20.8	37.1	46.4	-9.2
0.473	16.2	20.8	37.0	46.5	-9.4
0.485	16.0	20.8	36.8	46.3	-9.4
0.505	14.9	20.8	35.7	46.0	-10.3
0.533	14.1	20.8	34.9	46.0	-11.1
0.313	17.6	20.9	38.5	49.9	-11.4
0.220	20.4	21.0	41.4	52.8	-11.4
0.181	21.6	21.4	43.0	54.5	-11.5
0.488	13.8	20.8	34.6	46.2	-11.6
0.493	13.7	20.8	34.5	46.1	-11.6
0.391	15.5	20.9	36.4	48.0	-11.7
0.293	17.8	20.9	38.7	50.4	-11.7
0.427	14.7	20.9	35.6	47.3	-11.8
0.189	21.0	21.2	42.2	54.1	-11.9
0.308	17.2	20.9	38.1	50.0	-11.9
0.403	15.0	20.9	35.9	47.8	-11.9
0.235	19.3	21.0	40.3	52.3	-12.0
0.227	19.4	21.0	40.4	52.6	-12.2
0.259	18.3	21.0	39.3	51.5	-12.2
0.468	13.5	20.8	34.3	46.6	-12.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

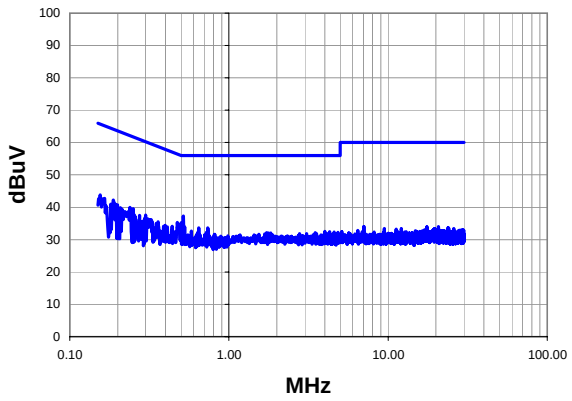
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA enabled, Low diversity antenna, mid channel
Deviations:	No deviations.
Comments:	

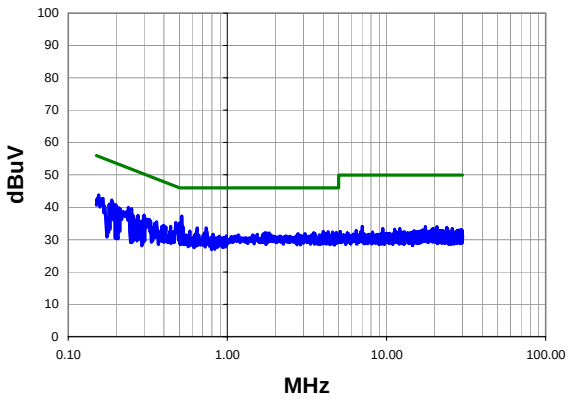
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	5	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.517	16.5	20.8	37.3	56.0	-18.7
0.500	14.4	20.8	35.2	56.0	-20.8
0.475	14.5	20.8	35.3	56.4	-21.1
0.187	21.0	21.3	42.3	64.2	-21.9
0.155	21.9	21.9	43.8	65.7	-21.9
0.527	13.1	20.8	33.9	56.0	-22.1
0.238	19.0	21.0	40.0	62.2	-22.2
0.250	18.6	21.0	39.6	61.7	-22.2
0.736	13.0	20.7	33.7	56.0	-22.3
0.646	12.9	20.7	33.6	56.0	-22.4
0.300	16.6	20.9	37.5	60.3	-22.7
0.199	19.7	21.0	40.7	63.6	-22.9
0.439	13.3	20.9	34.2	57.1	-22.9
0.194	19.8	21.1	40.9	63.9	-22.9
0.512	12.2	20.8	33.0	56.0	-23.0
0.359	14.6	20.9	35.5	58.7	-23.2
0.580	11.9	20.8	32.7	56.0	-23.3
0.208	18.9	21.0	39.9	63.3	-23.4
0.181	19.6	21.4	41.0	64.5	-23.5
4.000	12.0	20.5	32.5	56.0	-23.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.517	16.5	20.8	37.3	46.0	-8.7
0.500	14.4	20.8	35.2	46.0	-10.8
0.475	14.5	20.8	35.3	46.4	-11.1
0.187	21.0	21.3	42.3	54.2	-11.9
0.155	21.9	21.9	43.8	55.7	-11.9
0.527	13.1	20.8	33.9	46.0	-12.1
0.238	19.0	21.0	40.0	52.2	-12.2
0.250	18.6	21.0	39.6	51.7	-12.2
0.736	13.0	20.7	33.7	46.0	-12.3
0.646	12.9	20.7	33.6	46.0	-12.4
0.300	16.6	20.9	37.5	50.3	-12.7
0.199	19.7	21.0	40.7	53.6	-12.9
0.439	13.3	20.9	34.2	47.1	-12.9
0.194	19.8	21.1	40.9	53.9	-12.9
0.512	12.2	20.8	33.0	46.0	-13.0
0.359	14.6	20.9	35.5	48.7	-13.2
0.580	11.9	20.8	32.7	46.0	-13.3
0.208	18.9	21.0	39.9	53.3	-13.4
0.181	19.6	21.4	41.0	54.5	-13.5
4.000	12.0	20.5	32.5	46.0	-13.5

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

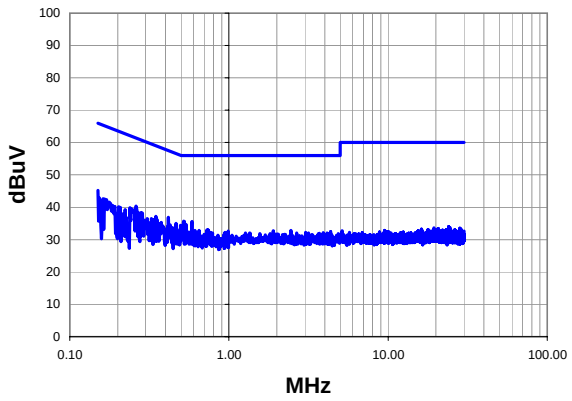
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA enabled, Low diversity antenna, mid channel
Deviations:	No deviations.
Comments:	

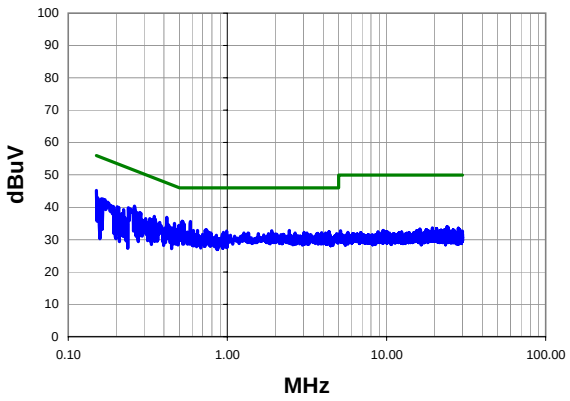
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.519	14.9	20.8	35.7	56.0	-20.3
0.524	14.8	20.8	35.6	56.0	-20.4
0.585	14.8	20.8	35.6	56.0	-20.4
0.417	16.0	20.9	36.9	57.5	-20.6
0.150	23.2	22.0	45.2	66.0	-20.8
0.261	19.4	21.0	40.4	61.4	-21.1
0.536	13.9	20.8	34.7	56.0	-21.3
0.527	13.8	20.8	34.6	56.0	-21.4
0.465	14.2	20.8	35.0	56.6	-21.6
0.497	13.6	20.8	34.4	56.1	-21.6
0.347	16.3	20.9	37.2	59.0	-21.8
0.507	13.2	20.8	34.0	56.0	-22.0
0.238	18.9	21.0	39.9	62.2	-22.3
0.243	18.6	21.0	39.6	62.0	-22.4
0.281	17.4	20.9	38.3	60.8	-22.4
0.352	15.4	20.9	36.3	58.9	-22.6
0.165	20.8	21.7	42.5	65.2	-22.7
0.162	20.9	21.8	42.7	65.4	-22.7
0.269	17.4	21.0	38.4	61.1	-22.8
0.342	15.4	20.9	36.3	59.2	-22.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.519	14.9	20.8	35.7	46.0	-10.3
0.524	14.8	20.8	35.6	46.0	-10.4
0.585	14.8	20.8	35.6	46.0	-10.4
0.417	16.0	20.9	36.9	47.5	-10.6
0.150	23.2	22.0	45.2	56.0	-10.8
0.261	19.4	21.0	40.4	51.4	-11.1
0.536	13.9	20.8	34.7	46.0	-11.3
0.527	13.8	20.8	34.6	46.0	-11.4
0.465	14.2	20.8	35.0	46.6	-11.6
0.497	13.6	20.8	34.4	46.1	-11.6
0.347	16.3	20.9	37.2	49.0	-11.8
0.507	13.2	20.8	34.0	46.0	-12.0
0.238	18.9	21.0	39.9	52.2	-12.3
0.243	18.6	21.0	39.6	52.0	-12.4
0.281	17.4	20.9	38.3	50.8	-12.4
0.352	15.4	20.9	36.3	48.9	-12.6
0.165	20.8	21.7	42.5	55.2	-12.7
0.162	20.9	21.8	42.7	55.4	-12.7
0.269	17.4	21.0	38.4	51.1	-12.8
0.342	15.4	20.9	36.3	49.2	-12.8

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

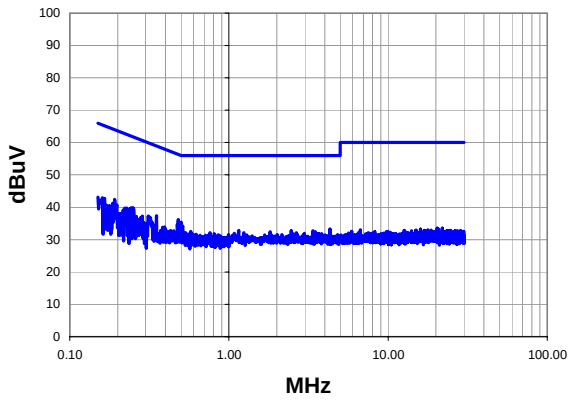
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA enabled, Low diversity antenna, high channel
Deviations:	No deviations.
Comments:	

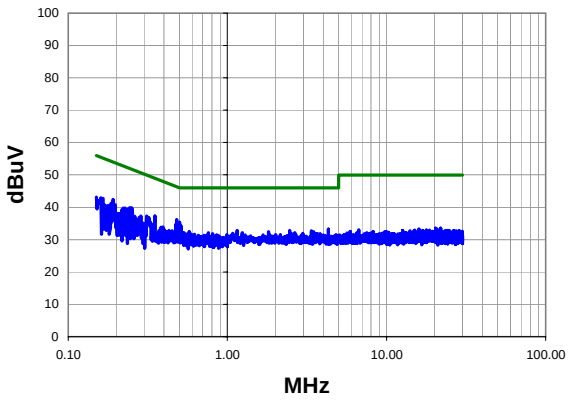
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	7	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.480	15.4	20.8	36.2	56.3	-20.1
0.502	14.6	20.8	35.4	56.0	-20.6
0.497	14.0	20.8	34.8	56.1	-21.2
0.351	16.5	20.9	37.4	58.9	-21.5
0.191	21.2	21.2	42.4	64.0	-21.6
0.475	13.9	20.8	34.7	56.4	-21.7
0.512	13.4	20.8	34.2	56.0	-21.8
0.250	18.9	21.0	39.9	61.7	-21.9
0.490	13.3	20.8	34.1	56.2	-22.0
0.243	18.9	21.0	39.9	62.0	-22.1
0.165	21.0	21.7	42.7	65.2	-22.5
0.160	21.1	21.8	42.9	65.5	-22.6
0.238	18.6	21.0	39.6	62.2	-22.6
0.312	16.4	20.9	37.3	59.9	-22.6
4.312	12.7	20.5	33.2	56.0	-22.8
0.150	21.1	22.0	43.1	66.0	-22.9
0.186	20.0	21.3	41.3	64.2	-22.9
0.221	18.8	21.0	39.8	62.8	-23.0
1.152	12.3	20.5	32.8	56.0	-23.2
2.464	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)
0.480	15.4	20.8	36.2	46.3	-10.1
0.502	14.6	20.8	35.4	46.0	-10.6
0.497	14.0	20.8	34.8	46.1	-11.2
0.351	16.5	20.9	37.4	48.9	-11.5
0.191	21.2	21.2	42.4	54.0	-11.6
0.475	13.9	20.8	34.7	46.4	-11.7
0.512	13.4	20.8	34.2	46.0	-11.8
0.250	18.9	21.0	39.9	51.7	-11.9
0.490	13.3	20.8	34.1	46.2	-12.0
0.243	18.9	21.0	39.9	52.0	-12.1
0.165	21.0	21.7	42.7	55.2	-12.5
0.160	21.1	21.8	42.9	55.5	-12.6
0.238	18.6	21.0	39.6	52.2	-12.6
0.312	16.4	20.9	37.3	49.9	-12.6
4.312	12.7	20.5	33.2	46.0	-12.8
0.150	21.1	22.0	43.1	56.0	-12.9
0.186	20.0	21.3	41.3	54.2	-12.9
0.221	18.8	21.0	39.8	52.8	-13.0
1.152	12.3	20.5	32.8	46.0	-13.2
2.464	12.3	20.5	32.8	46.0	-13.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

Version 2007.8.27
PSA-ESCI 2008.01.03

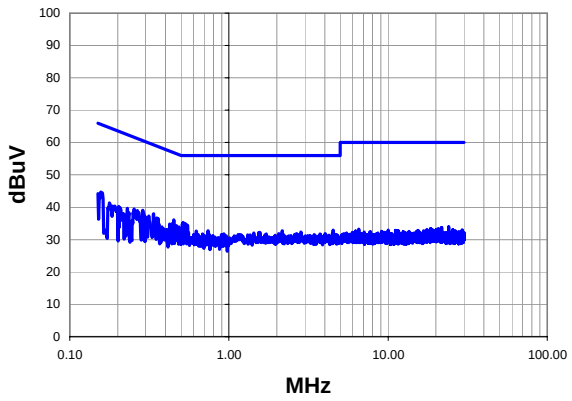
Work Order:	AVNE0019	**Date:**	03/04/08		
Project:	None	**Temperature:**	24		
Job Site:	EV07	**Humidity:**	29		
Serial Number:	7	**Barometric Pres.:**	1023.8mb	**Tested by:**	Rod Peloquin

EUT:	AVMD7211
Configuration:	AVNE0019 - 4) AC Power Conducted Emissions
Customer:	Avnera
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting PA enabled, Low diversity antenna, high channel
Deviations:	No deviations.
Comments:	

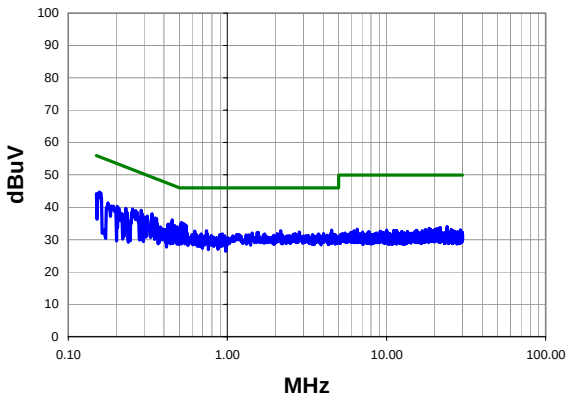
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	8	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

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)
0.514	14.5	20.8	35.3	56.0	-20.7
0.451	15.3	20.8	36.1	56.9	-20.7
0.157	22.8	21.9	44.7	65.6	-21.0
0.524	14.2	20.8	35.0	56.0	-21.0
0.536	14.0	20.8	34.8	56.0	-21.2
0.337	17.1	20.9	38.0	59.3	-21.3
0.288	18.1	20.9	39.0	60.6	-21.5
0.550	13.6	20.8	34.4	56.0	-21.6
0.150	22.2	22.0	44.2	66.0	-21.8
0.254	18.5	21.0	39.5	61.6	-22.2
0.352	15.8	20.9	36.7	58.9	-22.2
0.466	13.5	20.8	34.3	56.6	-22.2
0.359	15.6	20.9	36.5	58.7	-22.2
0.485	13.1	20.8	33.9	56.3	-22.3
0.424	14.0	20.9	34.9	57.4	-22.5
0.313	16.4	20.9	37.3	59.9	-22.6
0.482	12.9	20.8	33.7	56.3	-22.6
0.230	18.7	21.0	39.7	62.5	-22.8
0.493	12.3	20.8	33.1	56.1	-23.0
4.520	12.4	20.5	32.9	56.0	-23.1

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.514	14.5	20.8	35.3	46.0	-10.7
0.451	15.3	20.8	36.1	46.9	-10.7
0.157	22.8	21.9	44.7	55.6	-11.0
0.524	14.2	20.8	35.0	46.0	-11.0
0.536	14.0	20.8	34.8	46.0	-11.2
0.337	17.1	20.9	38.0	49.3	-11.3
0.288	18.1	20.9	39.0	50.6	-11.5
0.550	13.6	20.8	34.4	46.0	-11.6
0.150	22.2	22.0	44.2	56.0	-11.8
0.254	18.5	21.0	39.5	51.6	-12.2
0.352	15.8	20.9	36.7	48.9	-12.2
0.466	13.5	20.8	34.3	46.6	-12.2
0.359	15.6	20.9	36.5	48.7	-12.2
0.485	13.1	20.8	33.9	46.3	-12.3
0.424	14.0	20.9	34.9	47.4	-12.5
0.313	16.4	20.9	37.3	49.9	-12.6
0.482	12.9	20.8	33.7	46.3	-12.6
0.230	18.7	21.0	39.7	52.5	-12.8
0.493	12.3	20.8	33.1	46.1	-13.0
4.520	12.4	20.5	32.9	46.0	-13.1