Avnera

AVMD7212

March 06, 2008

Report No. AVNE0020

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: AVMD7212

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

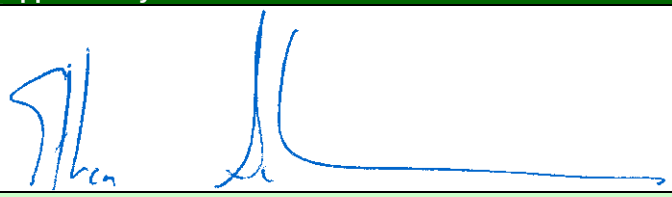
The measurement facility used to collect the data is located at:

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).*

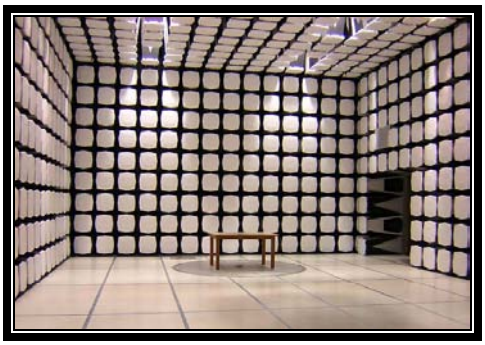
BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.

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)*

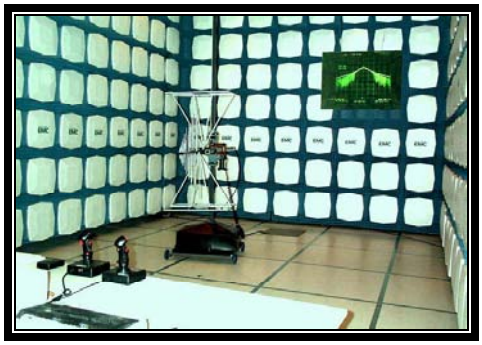
SCOPE

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:	AVMD7212
First Date of Test:	February 25, 2008
Last Date of Test:	February 28, 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 AVNE0020

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.008

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module (with PA)	Avnera	AVMD7212	5

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF32-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	53
Laptop	Gateway	MA3	T006981006774
Laptop AC Adapter	Gateway	PA-1650-01	6807066001
Test fixture AC Adapter	Philips	AY3170/17	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 AVNE0020

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.008

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module (with out PA)	Avnera	AVMD7212	3

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF32-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	53
Laptop	Gateway	MA3	T006981006774
Laptop AC Adapter	Gateway	PA-1650-01	6807066001
Test fixture AC Adapter	Philips	AY3170/17	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 AVNE0020

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.008

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module	Avnera	AVMD7212	1

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF32-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	53
Test fixture AC Adapter	Philips	AY3170/17	Unknown

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	IBM	A21m	IS108

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
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 AVNE0020

Software/Firmware Running during test	
Description	**Version**
AMD2debug	1.0.008

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Radio module	Avnera	AVMD7212	1

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Test fixture	Avnera	AVTF32-01B	Unknown
USB to SPI converter	Avnera	USB to SPI Converter	53
Test fixture AC Adapter	Philips	AY3170/17	Unknown
Laptop	IBM	A21m	IS108

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
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	2/25/2008	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	2/25/2008	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	2/25/2008	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	2/25/2008	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	2/28/2008	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	2/28/2008	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.

Spurious Radiated Emissions

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

MODES OF OPERATION
Transmitting PA enabled, High diversity, low channel
Transmitting PA enabled, high diversity, Mid channel
Transmitting PA enabled, high diversity, High channel
Transmitting PA enabled, low diversity antenna, low channel
Transmitting PA enabled, low diversity antenna, mid channel
Transmitting PA enabled, Low diversity antenna, high channel

POWER SETTINGS INVESTIGATED
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	26 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
EV01 Cables		6GHz Standard Gain Horn C	EVD	7/25/2007	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	7/25/2007	13
Antenna, Horn	EMCO	3160-09	AHG	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	AMF-6F-08001200-30-10P	AVC	6/22/2007	13
Antenna, Horn	ETS	3160-07	AHU	NCR	0
EV01 Cables		Bilog Cables	EVA	10/23/2007	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	16
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Double Ridge Horn Cables	EVB	1/3/2008	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	1/3/2008	13
Antenna, Horn	EMCO	3115	AHC	8/24/2006	24
High Pass Filter	Micro-Tronics	HPM50111	HFO	1/16/2008	13
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13

MEASUREMENT BANDWIDTHS				
	Frequency Range	**Peak Data**	**Quasi-Peak Data**	**Average Data**
	(MHz)	**(kHz)**	**(kHz)**	**(kHz)**
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212	Work Order:	AVNE0020
Serial Number:	1	Date:	02/27/08
Customer:	Avnera	Temperature:	22
Attendees:	Fred Weiss	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

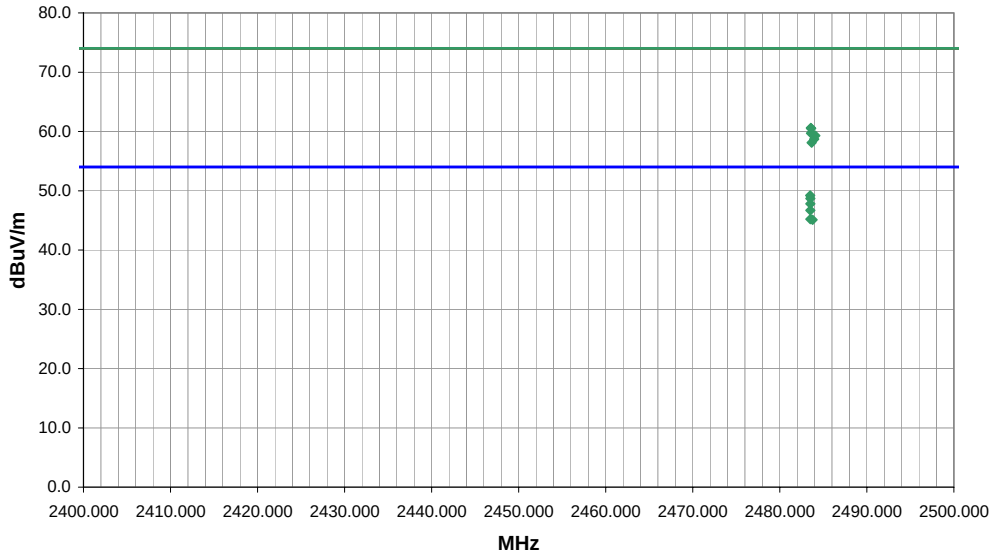
Transmitting PA ebabled, low diversity, High channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
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
2483.500	27.0	2.2	112.0	1.1	3.0	20.0	H-Horn	AV	0.0	49.2	54.0	-4.8	EUT on side
2483.505	26.5	2.2	118.0	1.0	3.0	20.0	H-Horn	AV	0.0	48.7	54.0	-5.3	EUT horizontal
2483.505	25.6	2.2	332.0	1.4	3.0	20.0	V-Horn	AV	0.0	47.8	54.0	-6.2	EUT vertical
2483.505	24.5	2.2	223.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.7	54.0	-7.3	EUT horizontal
2483.508	23.0	2.2	258.0	1.9	3.0	20.0	V-Horn	AV	0.0	45.2	54.0	-8.8	EUT on side
2483.767	22.9	2.2	175.0	1.1	3.0	20.0	H-Horn	AV	0.0	45.1	54.0	-8.9	EUT vertical
2483.560	38.4	2.2	106.0	1.0	3.0	20.0	H-Horn	PK	0.0	60.6	74.0	-13.4	EUT horizontal
2483.607	38.3	2.2	111.0	1.1	3.0	20.0	H-Horn	PK	0.0	60.5	74.0	-13.5	EUT on side
2483.578	37.5	2.2	327.0	1.4	3.0	20.0	V-Horn	PK	0.0	59.7	74.0	-14.3	EUT vertical
2484.073	37.1	2.2	216.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.3	74.0	-14.7	EUT horizontal
2483.950	36.5	2.2	175.0	1.1	3.0	20.0	H-Horn	PK	0.0	58.7	74.0	-15.3	EUT vertical
2483.652	35.9	2.2	258.0	1.9	3.0	20.0	V-Horn	PK	0.0	58.1	74.0	-15.9	EUT on side

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212			Work Order:	AVNE0020
Serial Number:	1			Date:	02/27/08
Customer:	Avnera			Temperature:	22
Attendees:	Fred Weiss			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

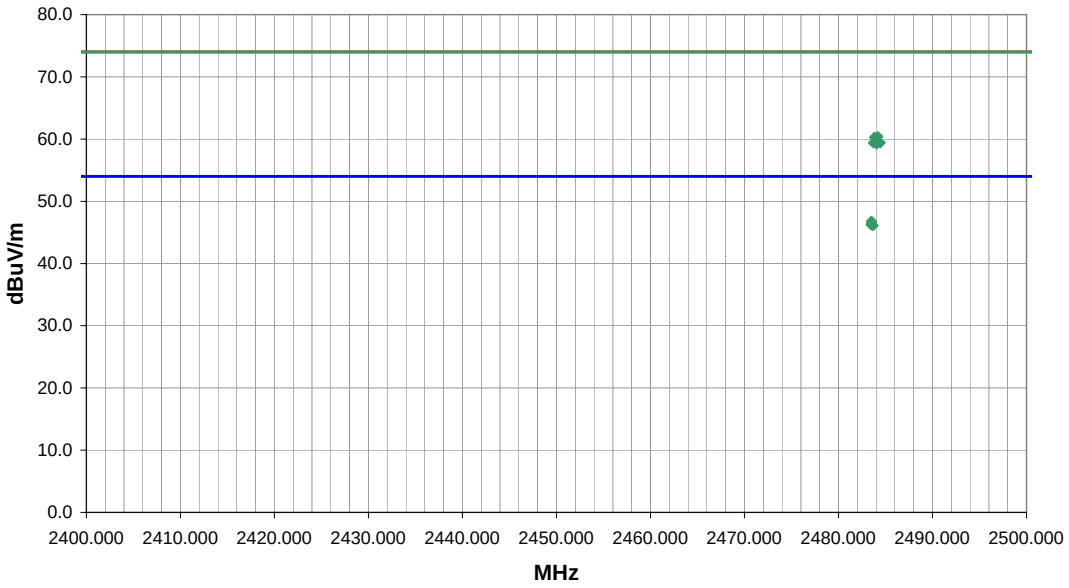
Transmitting PA enabled, high diversity, High channel

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
2483.508	24.6	2.2	114.0	1.3	3.0	20.0	H-Horn	AV	0.0	46.8	54.0	-7.2	EUT horizontal
2483.505	24.3	2.2	257.0	1.4	3.0	20.0	V-Horn	AV	0.0	46.5	54.0	-7.5	EUT vertical
2483.500	24.1	2.2	216.0	1.3	3.0	20.0	H-Horn	AV	0.0	46.3	54.0	-7.7	EUT vertical
2483.500	24.0	2.2	42.0	1.3	3.0	20.0	H-Horn	AV	0.0	46.2	54.0	-7.8	EUT on side
2483.627	24.0	2.2	147.0	1.4	3.0	20.0	V-Horn	AV	0.0	46.2	54.0	-7.8	EUT horizontal
2483.697	23.9	2.2	230.0	1.4	3.0	20.0	V-Horn	AV	0.0	46.1	54.0	-7.9	EUT on side
2484.185	38.2	2.2	115.0	1.3	3.0	20.0	H-Horn	PK	0.0	60.4	74.0	-13.6	EUT horizontal
2483.828	38.1	2.2	257.0	1.4	3.0	20.0	V-Horn	PK	0.0	60.3	74.0	-13.7	EUT vertical
2483.998	37.6	2.2	216.0	1.3	3.0	20.0	H-Horn	PK	0.0	59.8	74.0	-14.2	EUT vertical
2483.690	37.2	2.2	147.0	1.4	3.0	20.0	V-Horn	PK	0.0	59.4	74.0	-14.6	EUT horizontal
2484.445	37.2	2.2	230.0	1.4	3.0	20.0	V-Horn	PK	0.0	59.4	74.0	-14.6	EUT on side
2484.050	37.0	2.2	42.0	1.3	3.0	20.0	H-Horn	PK	0.0	59.2	74.0	-14.8	EUT on side

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212	Work Order:	AVNE0020
Serial Number:	1	Date:	02/27/08
Customer:	Avnera	Temperature:	22
Attendees:	Fred Weiss	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

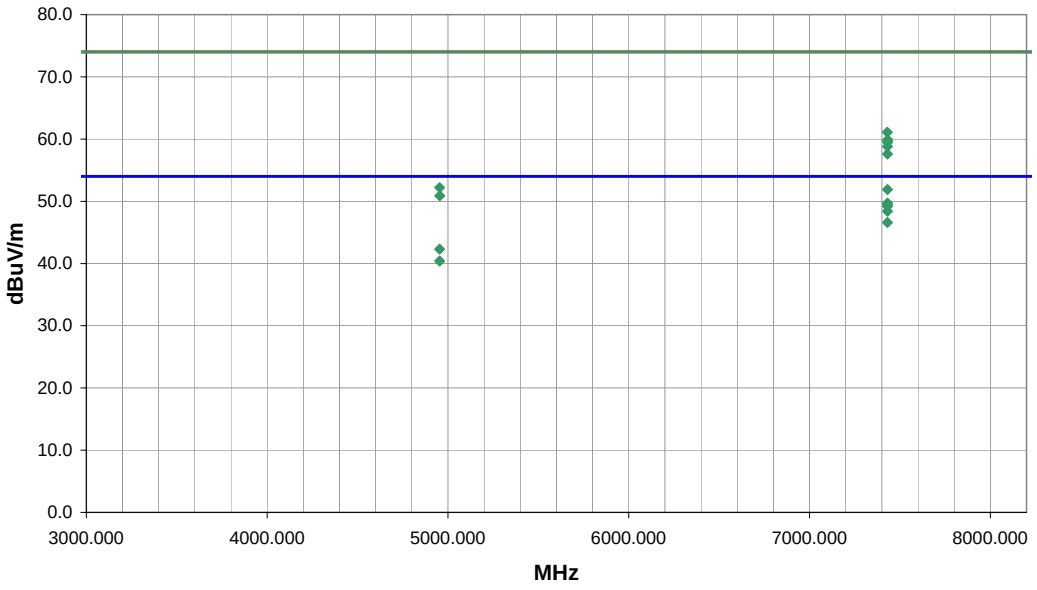
Transmitting PA enabled, Low diversity antenna, high channel

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
7431.085	34.3	17.6	96.0	1.1	3.0	0.0	V-Horn	AV	0.0	51.9	54.0	-2.1	EUT on side
7431.115	32.1	17.6	139.0	1.2	3.0	0.0	H-Horn	AV	0.0	49.7	54.0	-4.3	EUT on side
7431.060	31.9	17.6	90.0	1.1	3.0	0.0	H-Horn	AV	0.0	49.5	54.0	-4.5	EUT vertical
7431.095	31.6	17.6	275.0	1.2	3.0	0.0	V-Horn	AV	0.0	49.2	54.0	-4.8	EUT horizontal
7431.085	30.8	17.6	121.0	1.1	3.0	0.0	V-Horn	AV	0.0	48.4	54.0	-5.6	EUT vertical
7431.080	29.0	17.6	142.0	1.0	3.0	0.0	H-Horn	AV	0.0	46.6	54.0	-7.4	EUT horizontal
4954.090	31.3	11.0	246.0	1.0	3.0	0.0	V-Horn	AV	0.0	42.3	54.0	-11.7	EUT on side
7430.510	43.5	17.6	96.0	1.1	3.0	0.0	V-Horn	PK	0.0	61.1	74.0	-12.9	EUT on side
4954.100	29.4	11.0	95.0	1.0	3.0	0.0	H-Horn	AV	0.0	40.4	54.0	-13.6	EUT on side
7431.460	42.3	17.6	90.0	1.1	3.0	0.0	H-Horn	PK	0.0	59.9	74.0	-14.1	EUT vertical
7430.660	42.1	17.6	139.0	1.2	3.0	0.0	H-Horn	PK	0.0	59.7	74.0	-14.3	EUT on side
7431.595	41.9	17.6	275.0	1.2	3.0	0.0	V-Horn	PK	0.0	59.5	74.0	-14.5	EUT horizontal
7431.065	41.2	17.6	121.0	1.1	3.0	0.0	V-Horn	PK	0.0	58.8	74.0	-15.2	EUT vertical
7430.675	40.0	17.6	142.0	1.0	3.0	0.0	H-Horn	PK	0.0	57.6	74.0	-16.4	EUT horizontal
4953.630	41.2	11.0	246.0	1.0	3.0	0.0	V-Horn	PK	0.0	52.2	74.0	-21.8	EUT on side
4954.600	39.9	11.0	95.0	1.0	3.0	0.0	H-Horn	PK	0.0	50.9	74.0	-23.1	EUT on side

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212			Work Order:	AVNE0020
Serial Number:	1			Date:	02/27/08
Customer:	Avnera			Temperature:	22
Attendees:	Fred Weiss			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

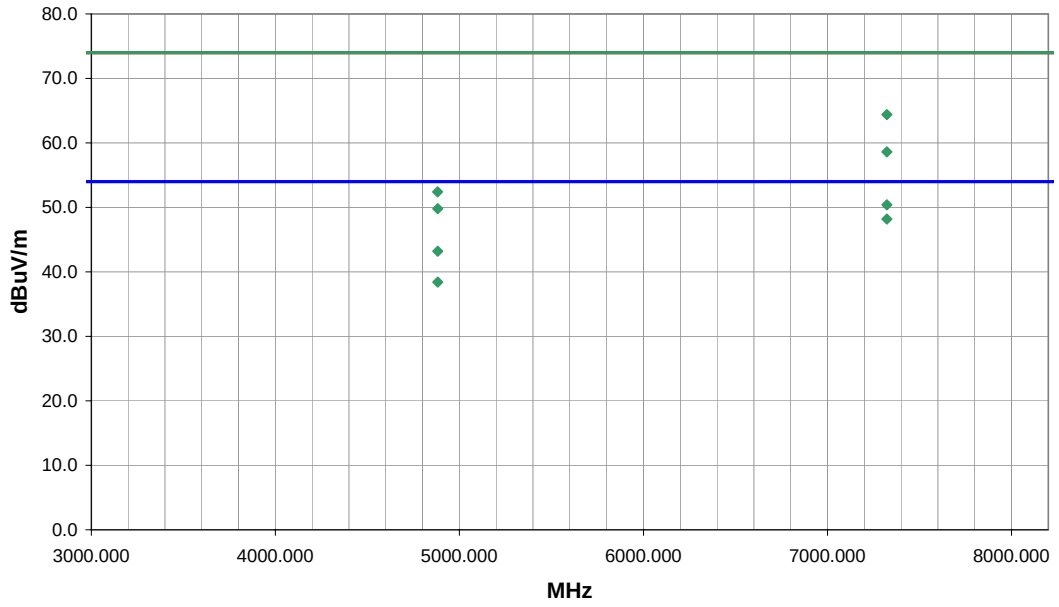
Transmitting PA enabled, low diversity antenna, mid channel

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
7323.087	33.3	17.1	94.0	1.2	3.0	0.0	V-Horn	AV	0.0	50.4	54.0	-3.6	EUT on side
7323.063	31.1	17.1	139.0	1.2	3.0	0.0	H-Horn	AV	0.0	48.2	54.0	-5.8	EUT on side
7322.807	47.3	17.1	94.0	1.2	3.0	0.0	V-Horn	PK	0.0	64.4	74.0	-9.6	EUT on side
4882.070	32.7	10.5	269.0	1.2	3.0	0.0	V-Horn	AV	0.0	43.2	54.0	-10.8	EUT on side
7322.433	41.5	17.1	139.0	1.2	3.0	0.0	H-Horn	PK	0.0	58.6	74.0	-15.4	EUT on side
4882.143	27.9	10.5	110.0	1.2	3.0	0.0	H-Horn	AV	0.0	38.4	54.0	-15.6	EUT on side
4881.700	41.9	10.5	269.0	1.2	3.0	0.0	V-Horn	PK	0.0	52.4	74.0	-21.6	EUT on side
4882.327	39.3	10.5	110.0	1.2	3.0	0.0	H-Horn	PK	0.0	49.8	74.0	-24.2	EUT on side

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212	Work Order:	AVNE0020
Serial Number:	1	Date:	02/27/08
Customer:	Avnera	Temperature:	22
Attendees:	Fred Weiss	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

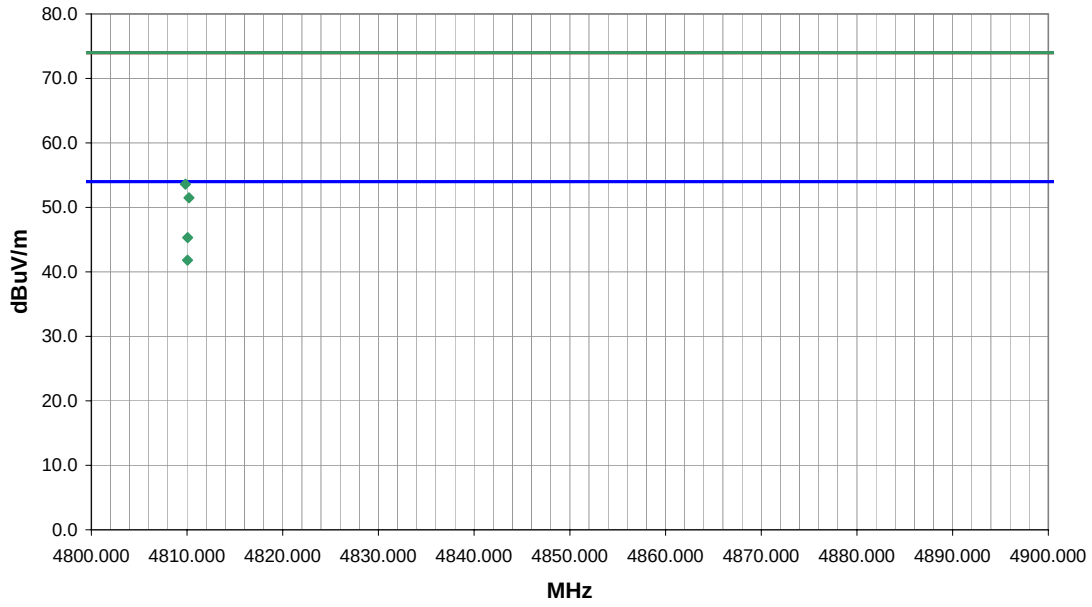
Transmitting PA enabled, low diversity antenna, low channel

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
4810.062	35.2	10.1	286.0	1.0	3.0	0.0	V-Horn	AV	0.0	45.3	54.0	-8.7	EUT on side
4810.052	31.7	10.1	46.0	1.1	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	EUT on side
4809.823	43.5	10.1	286.0	1.0	3.0	0.0	V-Horn	PK	0.0	53.6	74.0	-20.4	EUT on side
4810.207	41.4	10.1	46.0	1.1	3.0	0.0	H-Horn	PK	0.0	51.5	74.0	-22.5	EUT on side

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212	Work Order:	AVNE0020
Serial Number:	1	Date:	02/28/08
Customer:	Avnera	Temperature:	22
Attendees:	Fred Weiss, Phung Nguyen	Humidity:	29%
Project:	None	Barometric Pres.:	30.25
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

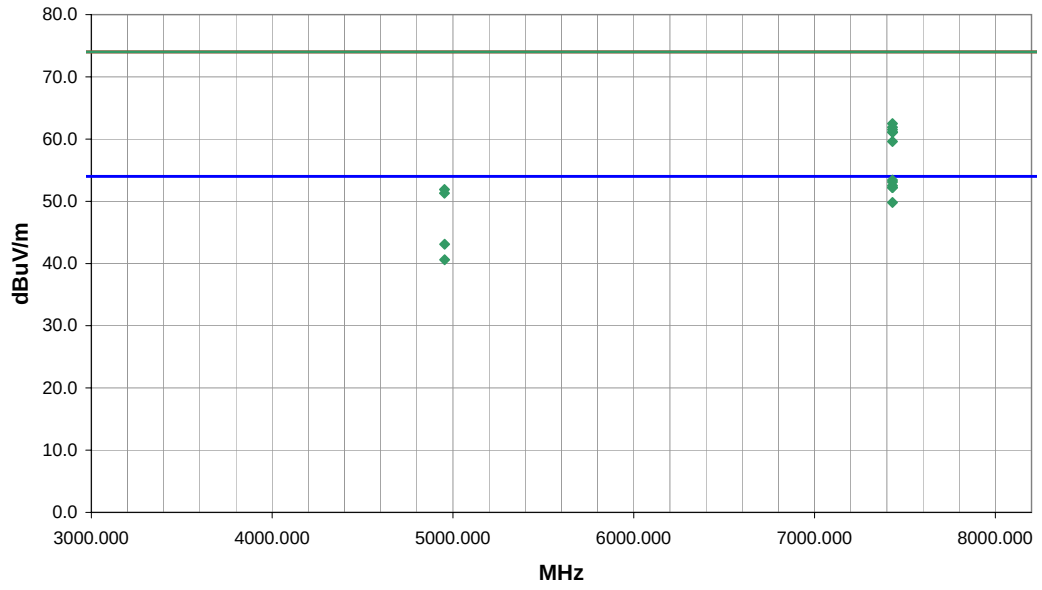
Transmitting PA enabled, high diversity, high channel

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
7431.105	35.8	17.6	86.0	1.2	3.0	0.0	H-Horn	AV	0.0	53.4	54.0	-0.6	EUT vertical
7431.120	35.5	17.6	109.0	1.3	3.0	0.0	V-Horn	AV	0.0	53.1	54.0	-0.9	EUT vertical
7431.085	34.9	17.6	124.0	1.3	3.0	0.0	V-Horn	AV	0.0	52.5	54.0	-1.5	EUT on side
7431.093	34.6	17.6	243.0	1.3	3.0	0.0	V-Horn	AV	0.0	52.2	54.0	-1.8	EUT horizontal
7431.105	34.6	17.6	143.0	1.2	3.0	0.0	H-Horn	AV	0.0	52.2	54.0	-1.8	EUT on side
7431.100	32.2	17.6	153.0	1.1	3.0	0.0	H-Horn	AV	0.0	49.8	54.0	-4.2	EUT horizontal
4954.070	32.1	11.0	273.0	1.0	3.0	0.0	H-Horn	AV	0.0	43.1	54.0	-10.9	EUT vertical
7431.400	44.9	17.6	86.0	1.2	3.0	0.0	H-Horn	PK	0.0	62.5	74.0	-11.5	EUT vertical
7430.595	44.3	17.6	109.0	1.3	3.0	0.0	V-Horn	PK	0.0	61.9	74.0	-12.1	EUT vertical
7430.855	43.9	17.6	143.0	1.2	3.0	0.0	H-Horn	PK	0.0	61.5	74.0	-12.5	EUT on side
7430.950	43.5	17.6	124.0	1.3	3.0	0.0	V-Horn	PK	0.0	61.1	74.0	-12.9	EUT on side
7431.510	43.5	17.6	243.0	1.3	3.0	0.0	V-Horn	PK	0.0	61.1	74.0	-12.9	EUT horizontal
4954.105	29.6	11.0	107.0	1.5	3.0	0.0	V-Horn	AV	0.0	40.6	54.0	-13.4	EUT vertical
7430.755	42.0	17.6	153.0	1.1	3.0	0.0	H-Horn	PK	0.0	59.6	74.0	-14.4	EUT horizontal
4953.525	40.9	11.0	273.0	1.0	3.0	0.0	H-Horn	PK	0.0	51.9	74.0	-22.1	EUT vertical
4953.460	40.3	11.0	107.0	1.5	3.0	0.0	V-Horn	PK	0.0	51.3	74.0	-22.7	EUT vertical

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212			Work Order:	AVNE0020
Serial Number:	1			Date:	02/28/08
Customer:	Avnera			Temperature:	22
Attendees:	Fred Weiss			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

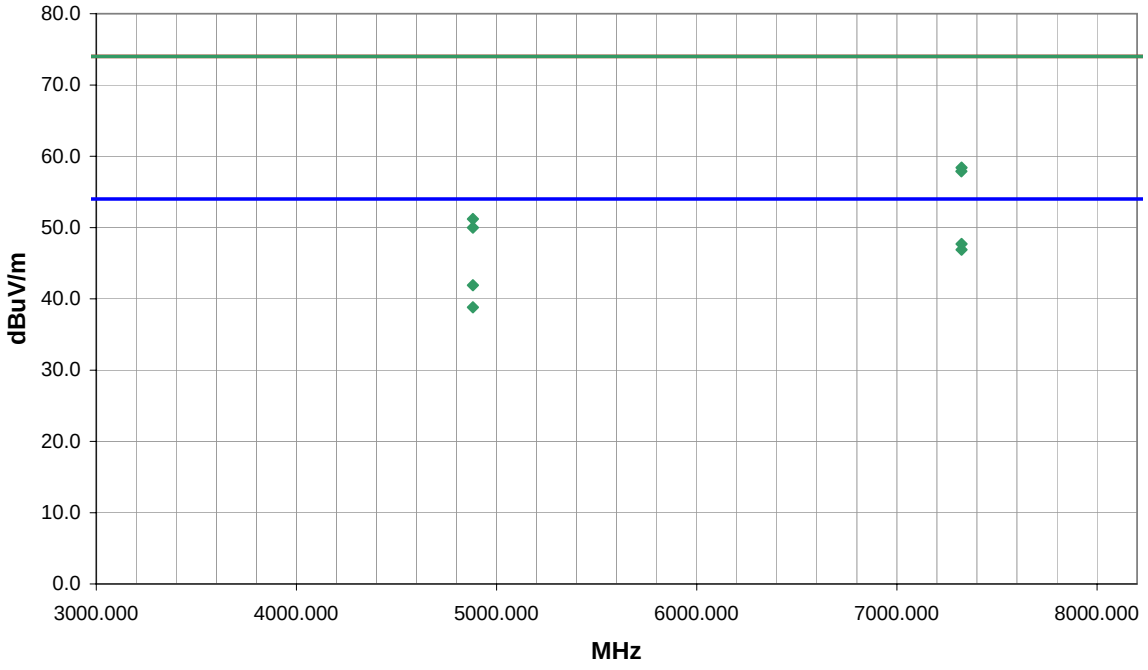
Transmitting PA enabled, high diversity, Mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	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)
7323.080	30.6	17.1	108.0	1.2	3.0	0.0	V-Horn	AV	0.0	47.7	54.0	-6.3
7323.075	29.8	17.1	88.0	1.2	3.0	0.0	H-Horn	AV	0.0	46.9	54.0	-7.1
4882.085	31.4	10.5	327.0	1.2	3.0	0.0	H-Horn	AV	0.0	41.9	54.0	-12.1
4882.060	28.3	10.5	134.0	1.4	3.0	0.0	V-Horn	AV	0.0	38.8	54.0	-15.2
7323.285	41.3	17.1	108.0	1.2	3.0	0.0	V-Horn	PK	0.0	58.4	74.0	-15.6
7322.640	40.8	17.1	88.0	1.2	3.0	0.0	H-Horn	PK	0.0	57.9	74.0	-16.1
4881.850	40.7	10.5	327.0	1.2	3.0	0.0	H-Horn	PK	0.0	51.2	74.0	-22.8
4881.725	39.5	10.5	134.0	1.4	3.0	0.0	V-Horn	PK	0.0	50.0	74.0	-24.0

NORTHWEST EMC

Spurious Radiated Emissions

PSA 2007.05.07
EMI 2006.11.29

EUT:	AVMD7212			Work Order:	AVNE0020
Serial Number:	1			Date:	02/28/08
Customer:	Avnera			Temperature:	22
Attendees:	Fred Weiss			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

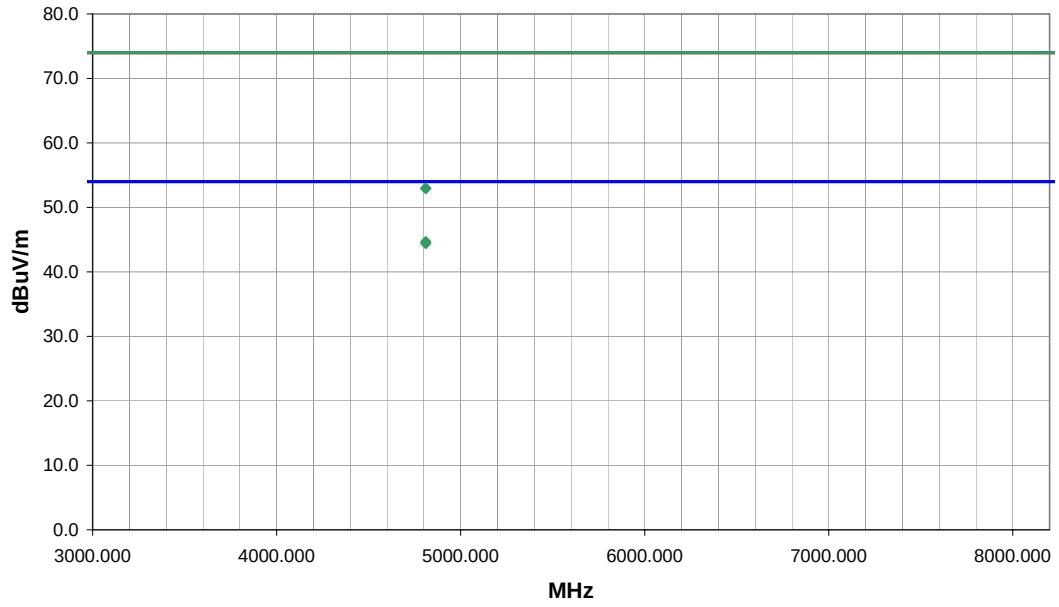
Transmitting PA enabled, High diversity, low channel

DEVIATIONS FROM TEST STANDARD

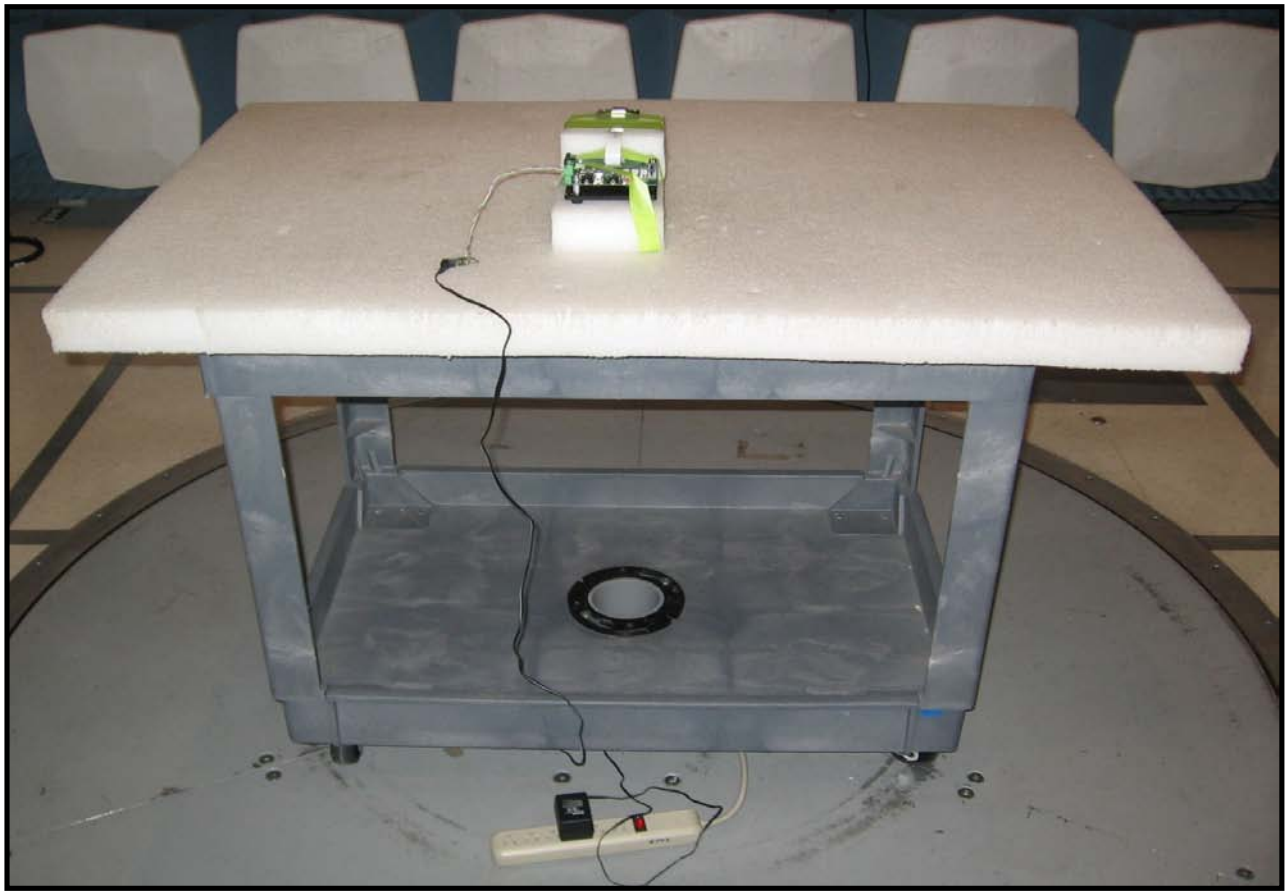
No deviations.

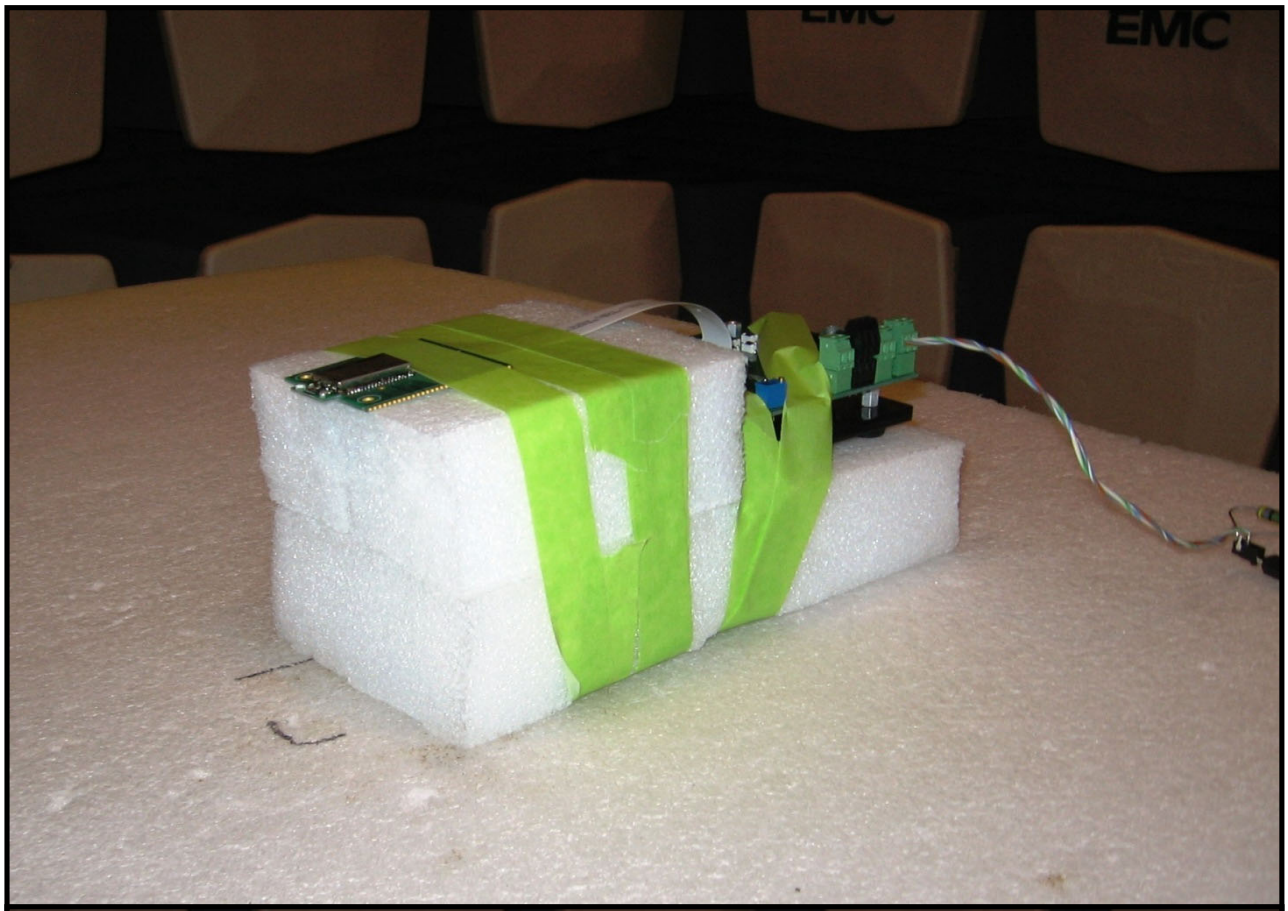
Run #	11
Configuration #	3
Results	Pass

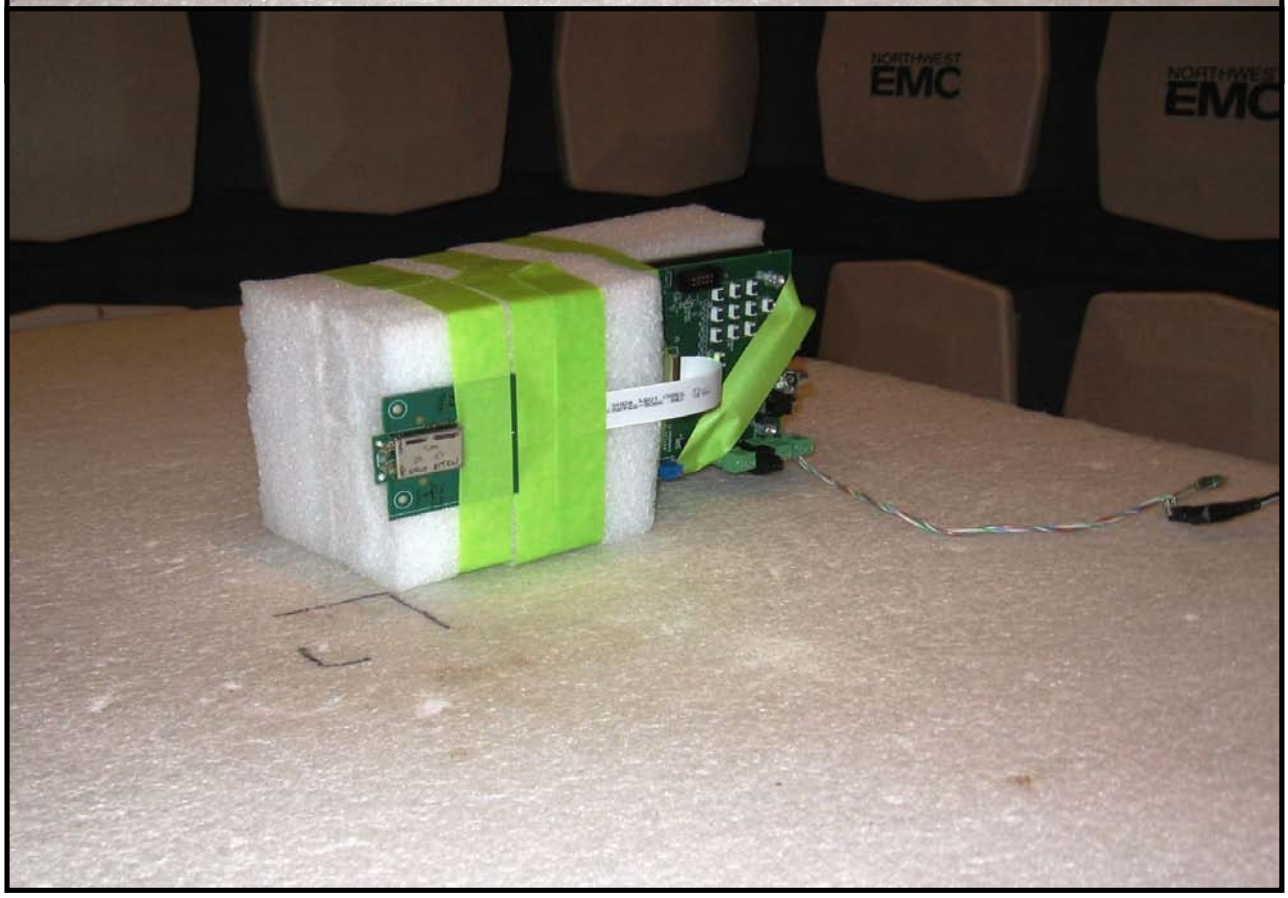
Signature

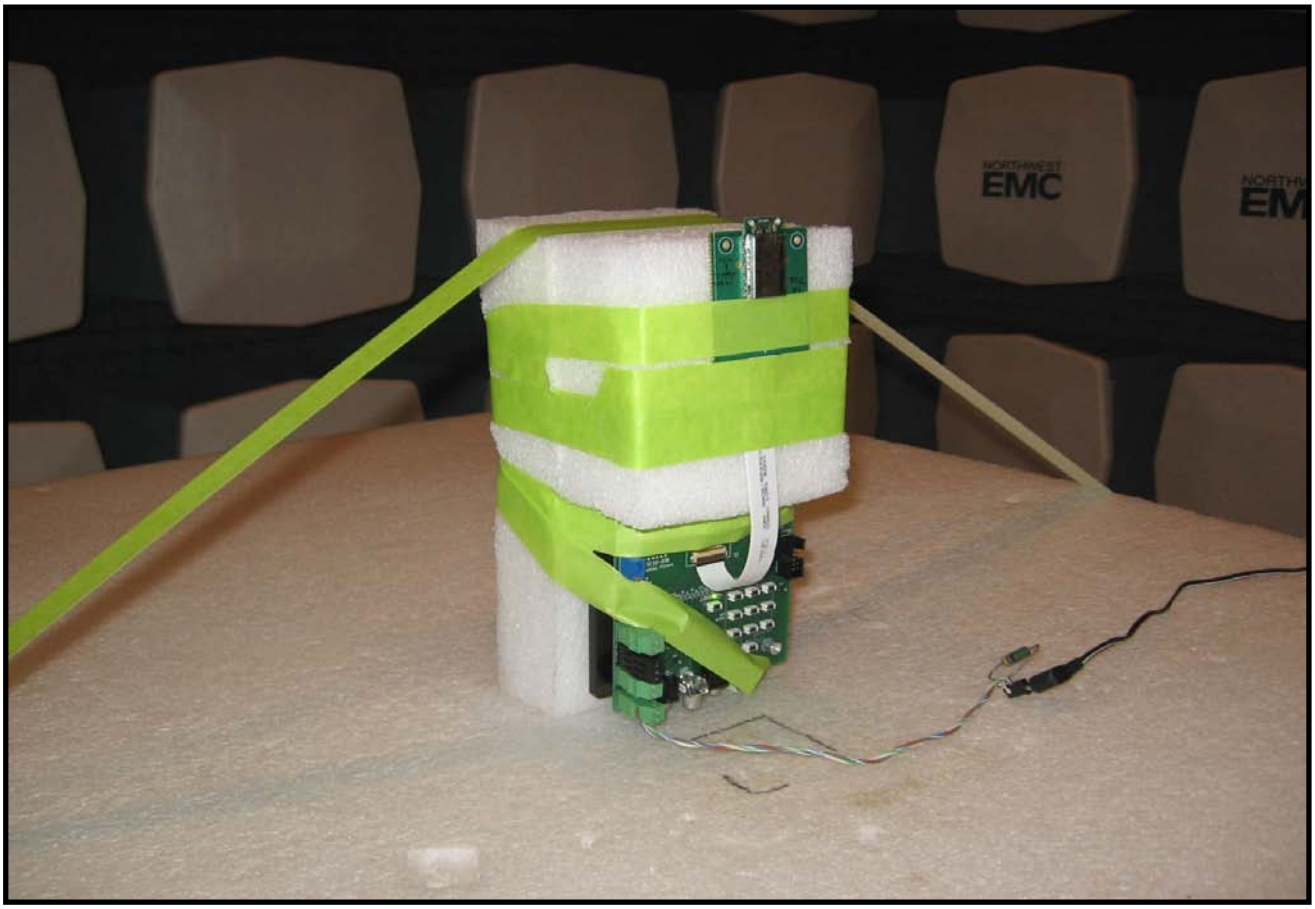


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
4810.077	34.6	10.1	94.0	1.3	3.0	0.0	H-Horn	AV	0.0	44.7	54.0	-9.3	EUT vertical
4810.078	34.3	10.1	71.0	1.0	3.0	0.0	V-Horn	AV	0.0	44.4	54.0	-9.6	EUT vertical
4810.395	42.9	10.1	94.0	1.3	3.0	0.0	H-Horn	PK	0.0	53.0	74.0	-21.0	EUT vertical
4809.870	42.8	10.1	71.0	1.0	3.0	0.0	V-Horn	PK	0.0	52.9	74.0	-21.1	EUT vertical




EMC


NORTHWEST
EMC


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:	AVMD7212			**Work Order:**	AVNE0020
Serial Number:	5 (with PA), 3 (without PA)			**Date:**	02/25/08
Customer:	Avnera			**Temperature:**	23°C
Attendees:	Phung Nguyen, Fred Weiss			**Humidity:**	28%
Project:	None			**Barometric Pres.:**	1010mb
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 with the low antenna port being worst case (see output power measurements).

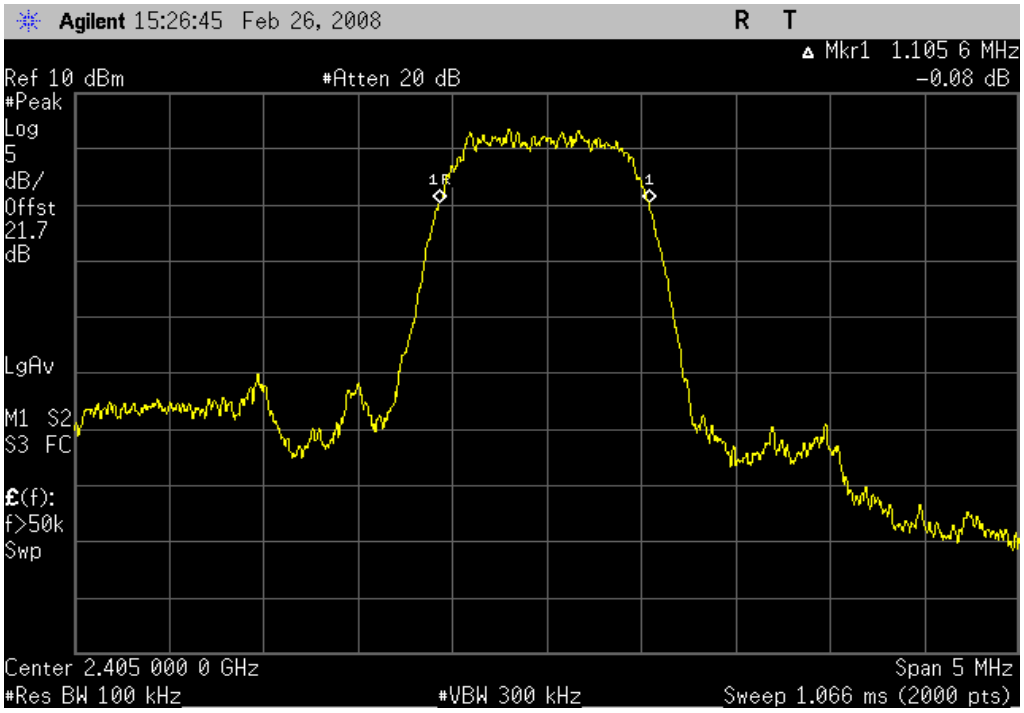
DEVIATIONS FROM TEST STANDARD

No Deviations

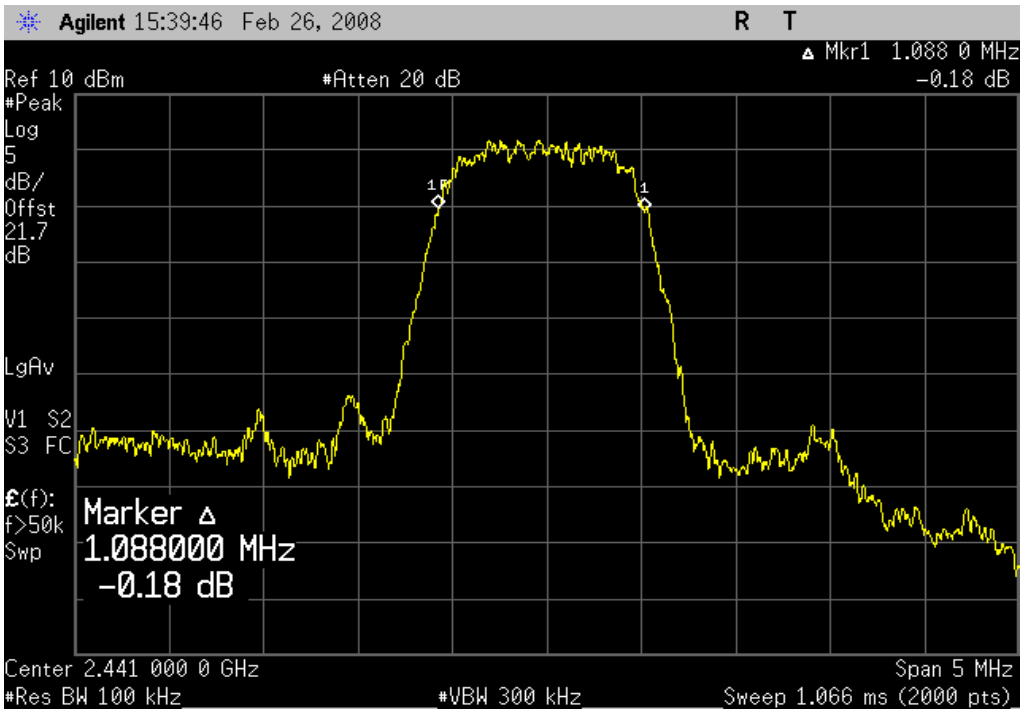
Configuration #	**1, 2**	*Signature* Holly Ashkannejhad

		Value	Limit	Results
AVMD7212 with PA, S/N: 5				
pi/4-DQPSK				
Low diversity antenna				
	Low channel, Ch. 2, 2405MHz	1.1056 MHz	≥ 500 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	1.0880 MHz	≥ 500 kHz	Pass
	High channel, Ch. 38, 2477MHz	1.1031 MHz	≥ 500 kHz	Pass
AVMD7212 with out PA, S/N: 3				
pi/4-DQPSK				
Low diversity antenna				
	Low channel, Ch. 2, 2405MHz	1.0780 MHz	≥ 500 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	1.1006 MHz	≥ 500 kHz	Pass
	High channel, Ch. 38, 2477MHz	1.1031 MHz	≥ 500 kHz	Pass

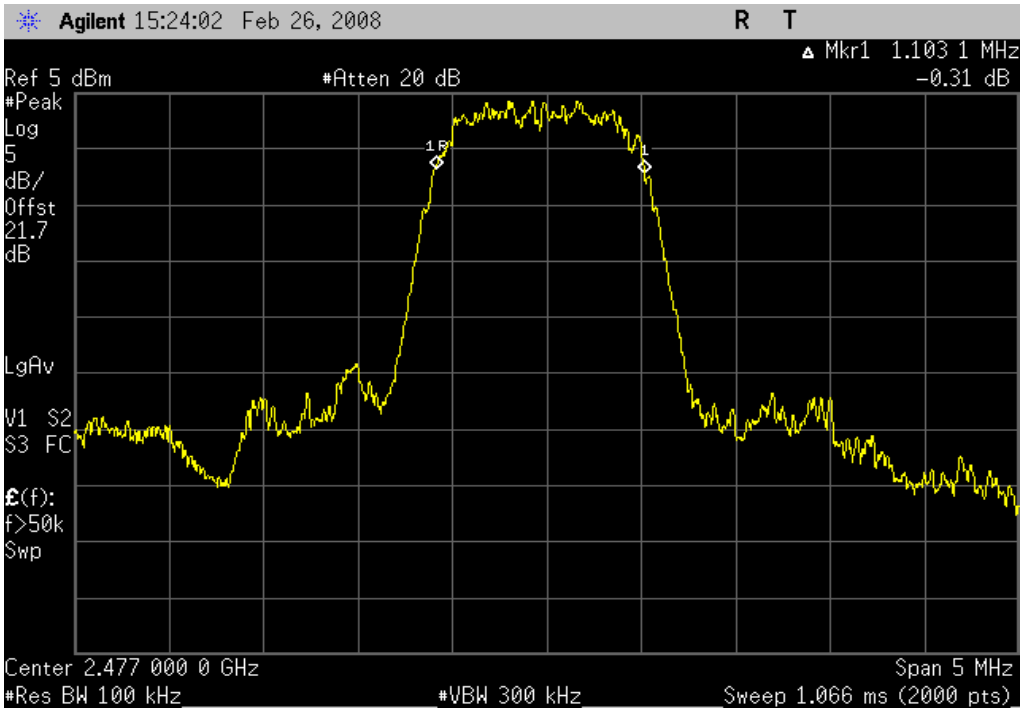
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.1056 MHz	**Limit:**	≥ 500 kHz



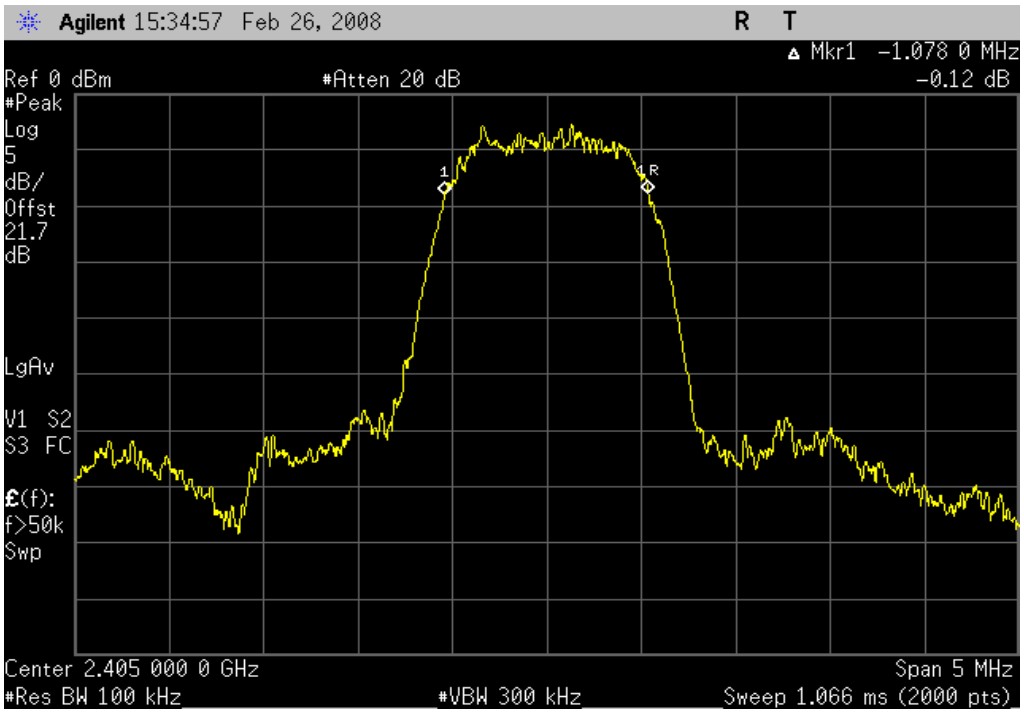
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.0880 MHz	**Limit:**	≥ 500 kHz



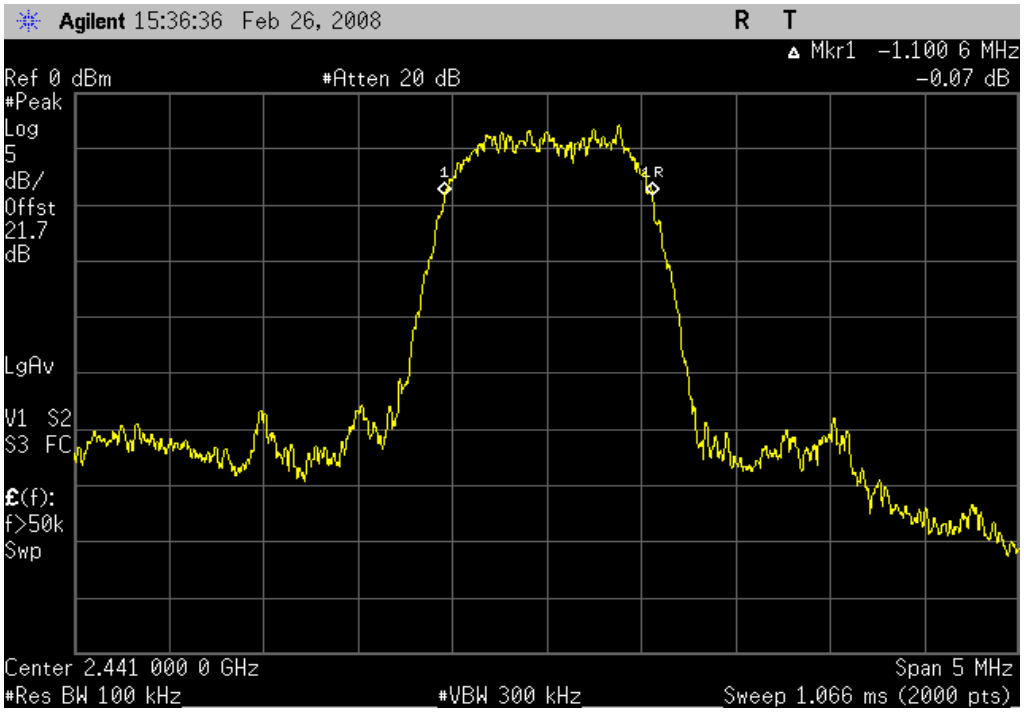
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	1.1031 MHz	**Limit:**	≥ 500 kHz



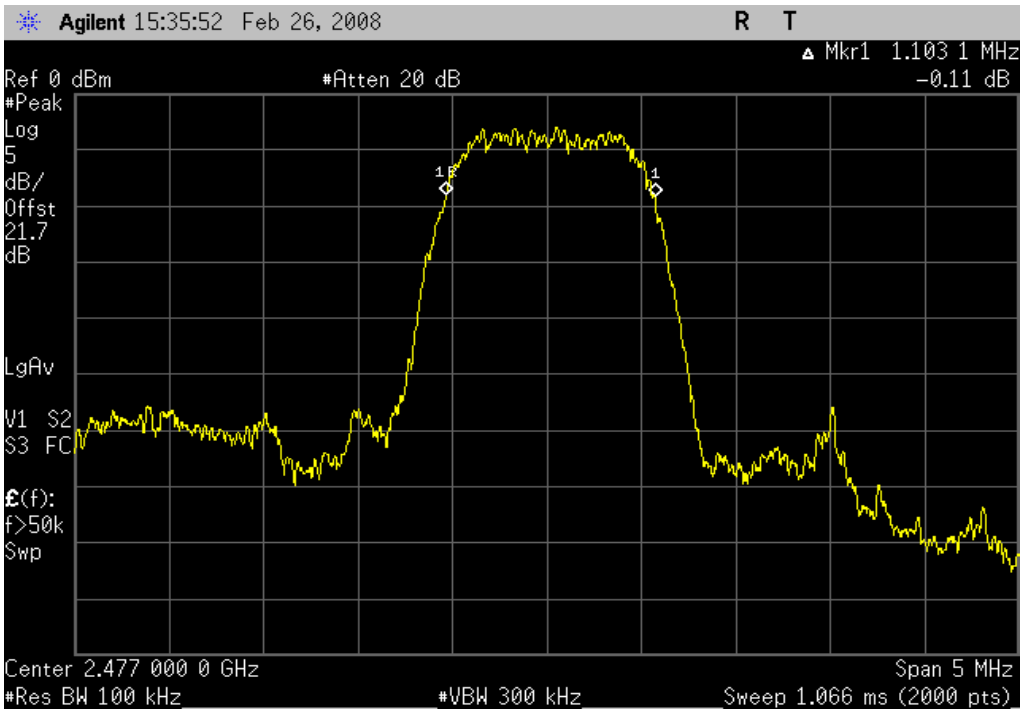
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.0780 MHz	**Limit:**	≥ 500 kHz

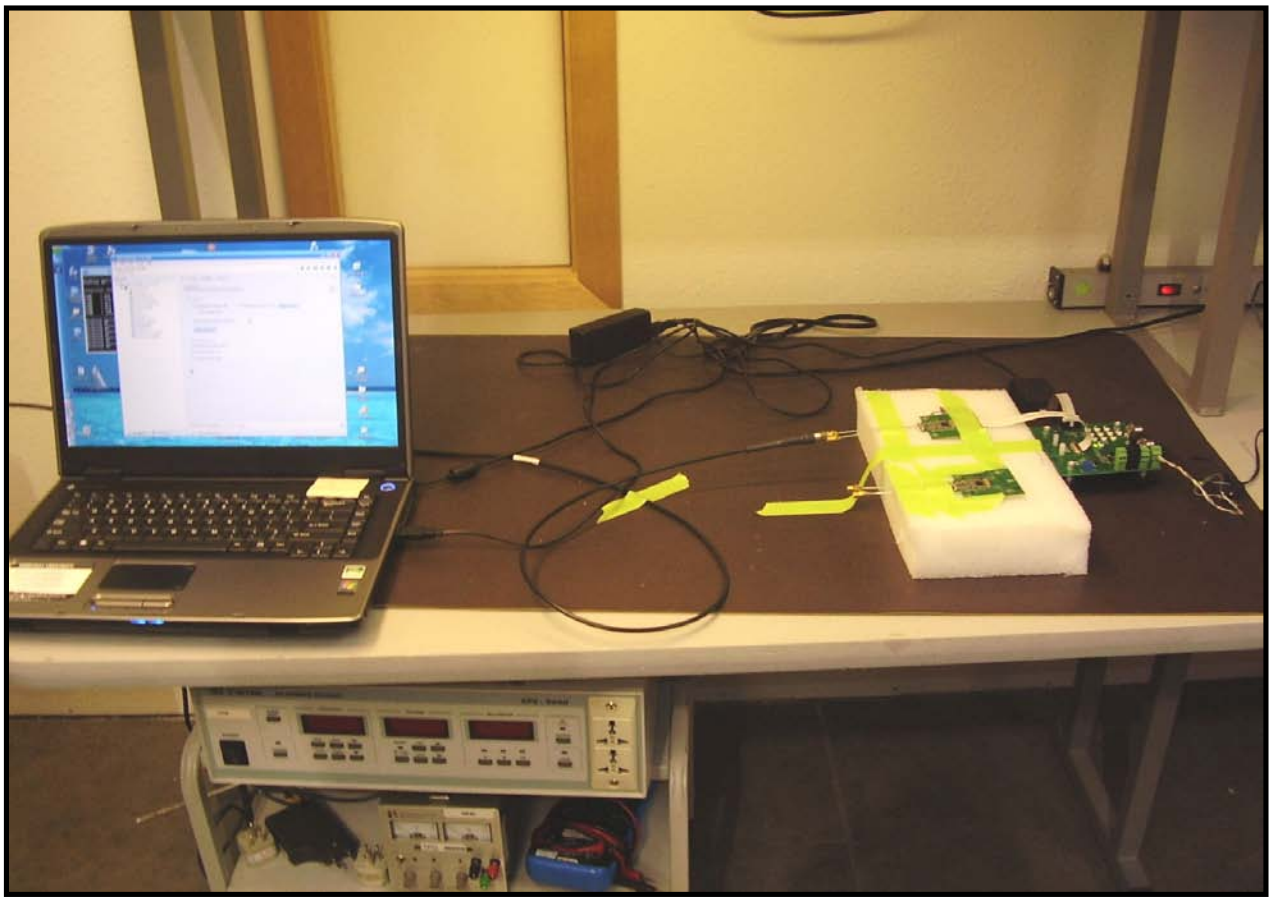


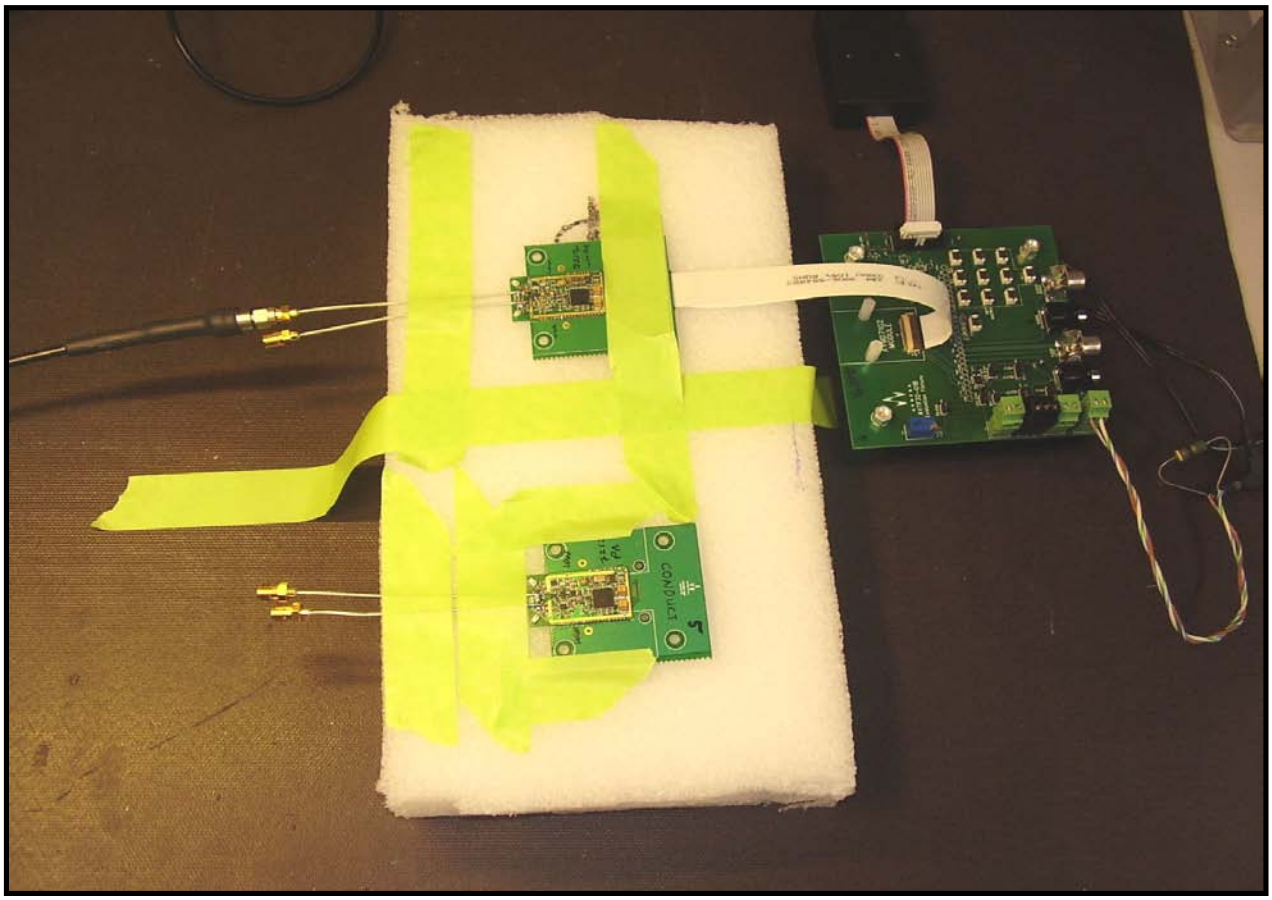
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.1006 MHz	**Limit:**	≥ 500 kHz



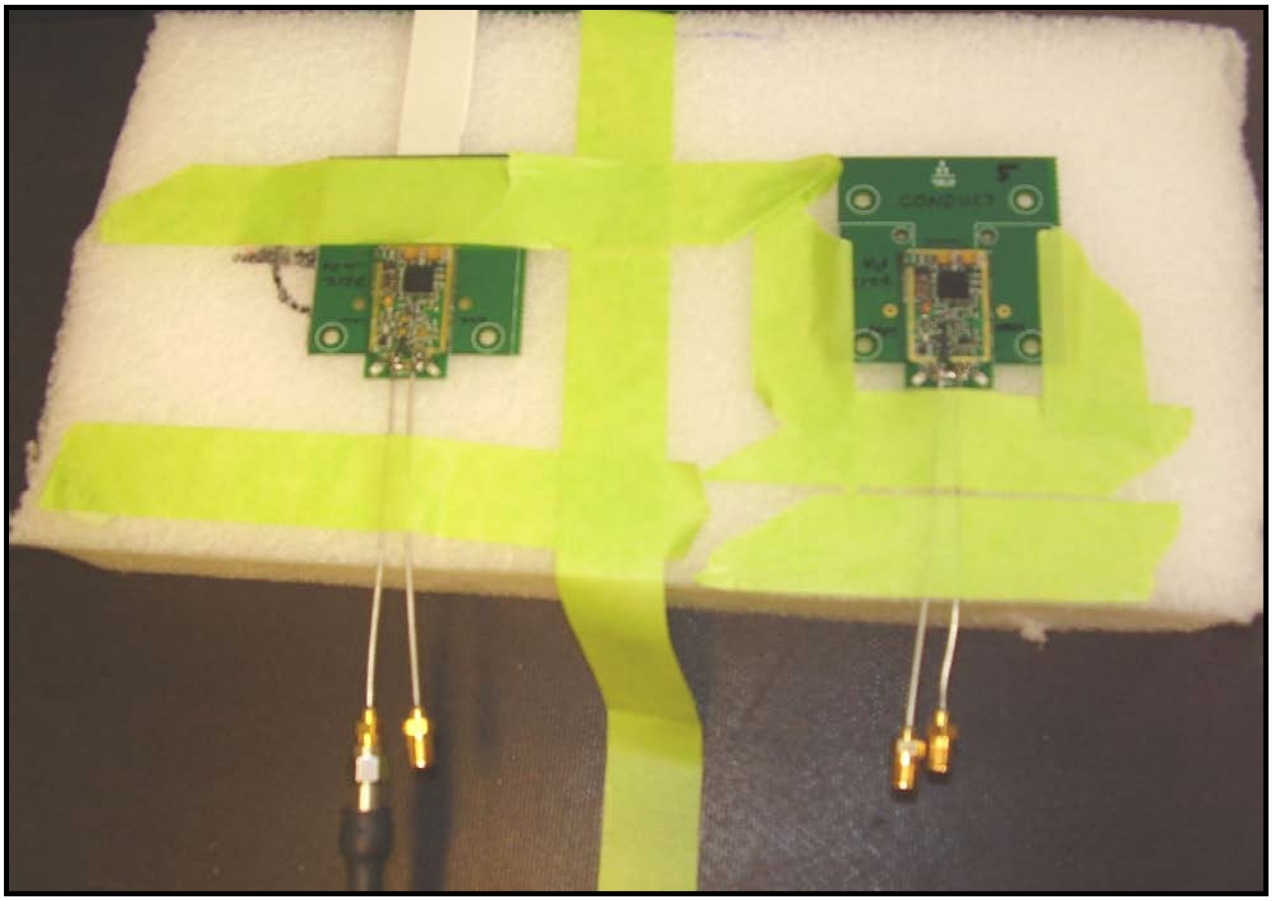
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	1.1031 MHz	**Limit:**	≥ 500 kHz







Occupied Bandwidth



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:	AVMD7212			**Work Order:**	AVNE0020
Serial Number:	5 (with PA), 3 (without PA)			**Date:**	02/25/08
Customer:	Avnera			**Temperature:**	23°C
Attendees:	Phung Nguyen, Fred Weiss			**Humidity:**	28%
Project:	None			**Barometric Pres.:**	1010mb
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.

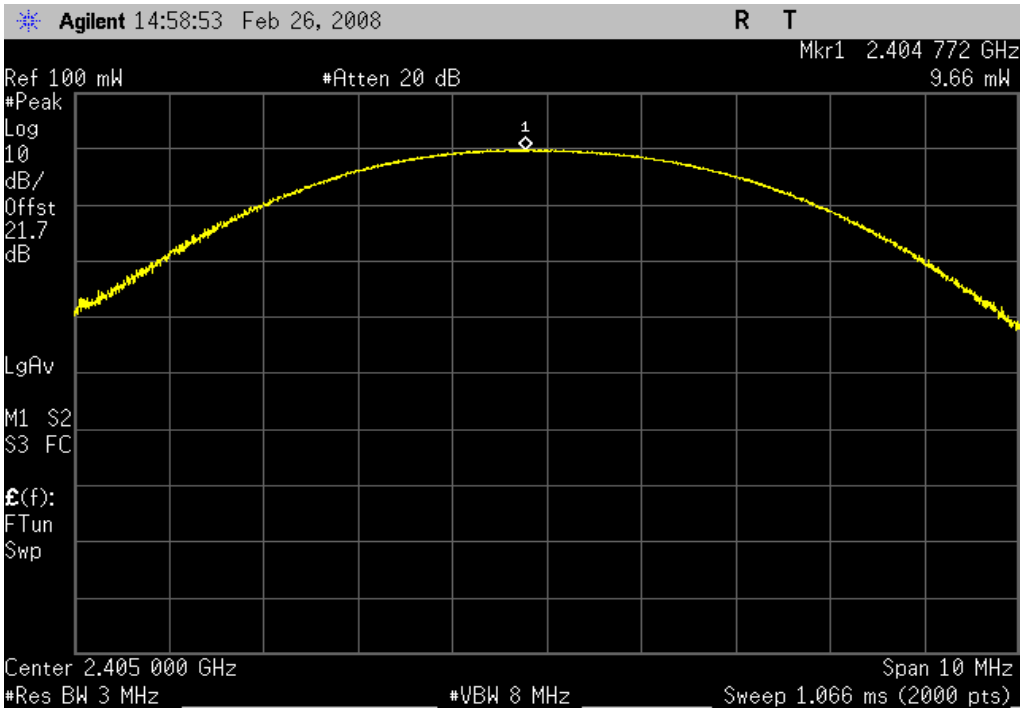
DEVIATIONS FROM TEST STANDARD

No Deviations

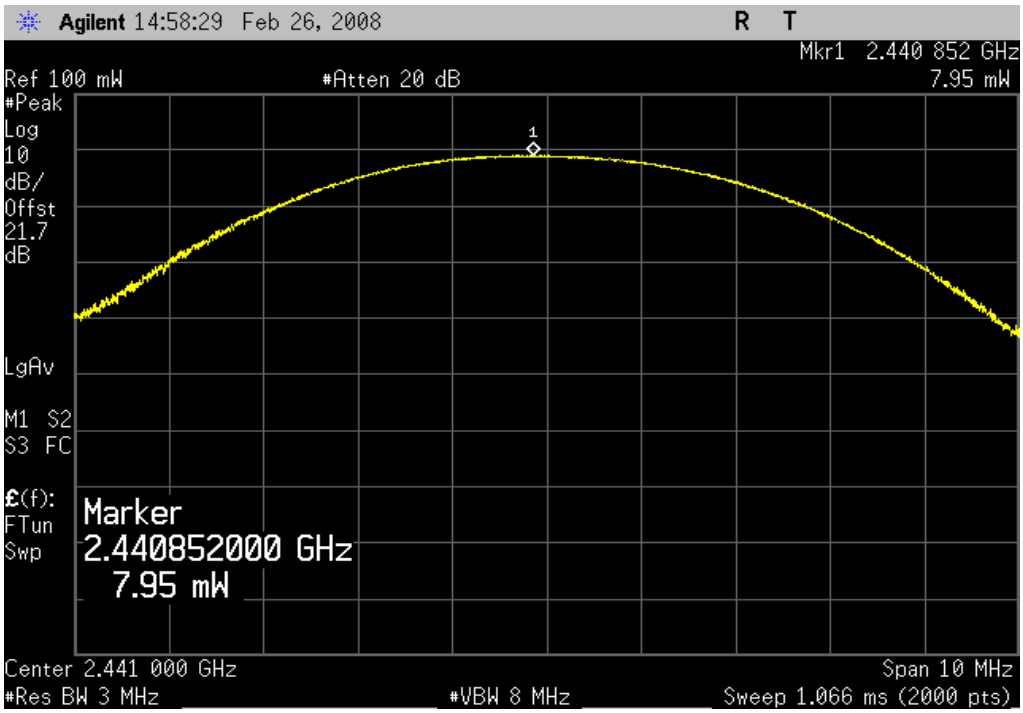
Configuration #	1, 2	Signature Holly Ashkannejhad

		Value (mW)	Limit (mW)	Results
AVMD7212 with PA, S/N: 5				
pi/4-DQPSK				
Low antenna port				
	Low channel, Ch. 2, 2405MHz	9.66	1000	Pass
	Mid channel, Ch. 20, 2441MHz	7.95	1000	Pass
	High channel, Ch. 40, 2477MHz	6.24	1000	Pass
High antenna port				
	Low channel, Ch. 2, 2405MHz	9.33	1000	Pass
	Mid channel, Ch. 20, 2441MHz	7.48	1000	Pass
	High channel, Ch. 40, 2477MHz	5.82	1000	Pass
AVMD7212 with out PA, S/N: 3				
pi/4-DQPSK				
Low antenna port				
	Low channel, Ch. 2, 2405MHz	1.05	1000	Pass
	Mid channel, Ch. 20, 2441MHz	1.08	1000	Pass
	High channel, Ch. 40, 2477MHz	1.18	1000	Pass
High antenna port				
	Low channel, Ch. 2, 2405MHz	1.07	1000	Pass
	Mid channel, Ch. 20, 2441MHz	1.05	1000	Pass
	High channel, Ch. 40, 2477MHz	1.15	1000	Pass

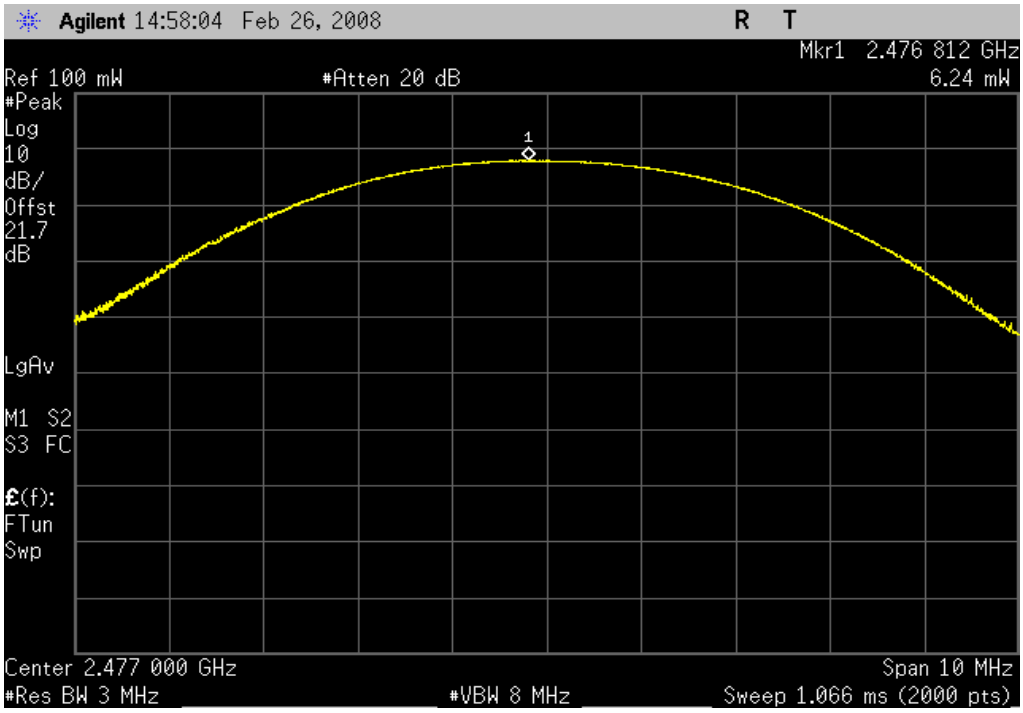
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	9.66 mW	**Limit:**	1 Watt



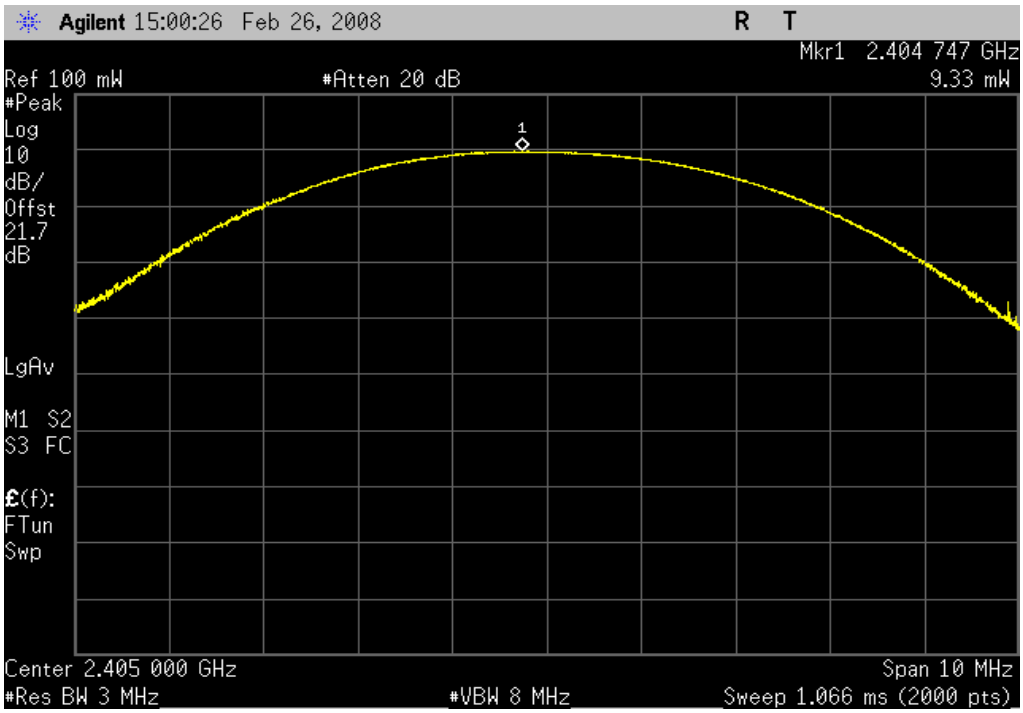
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	7.95 mW	**Limit:**	1 Watt



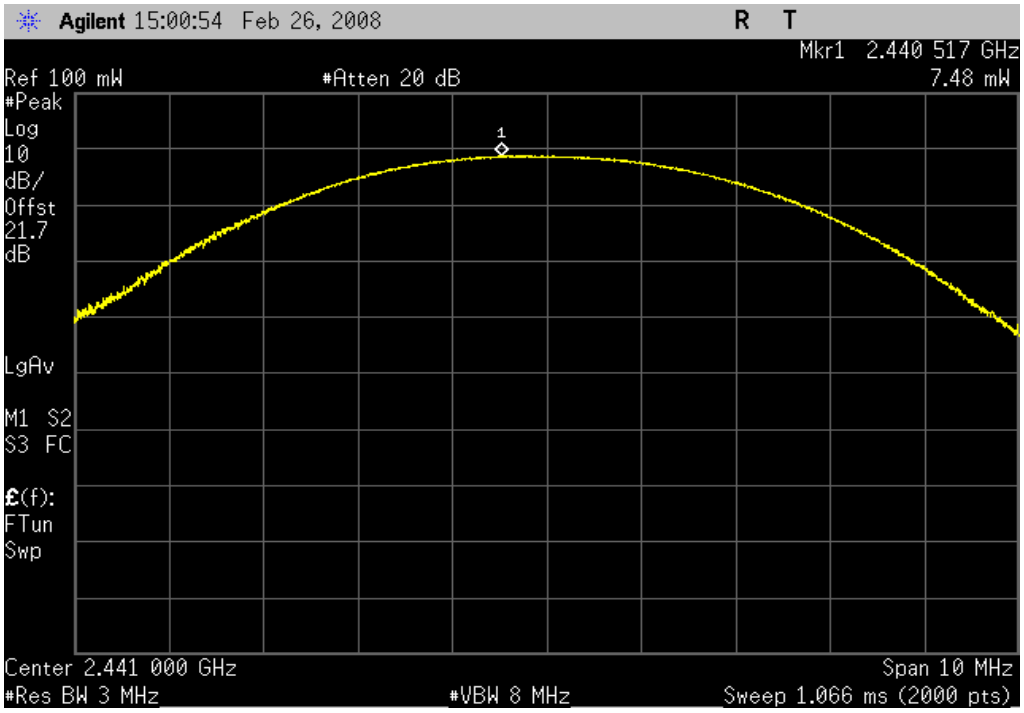
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	6.24 mW	**Limit:**	1 Watt



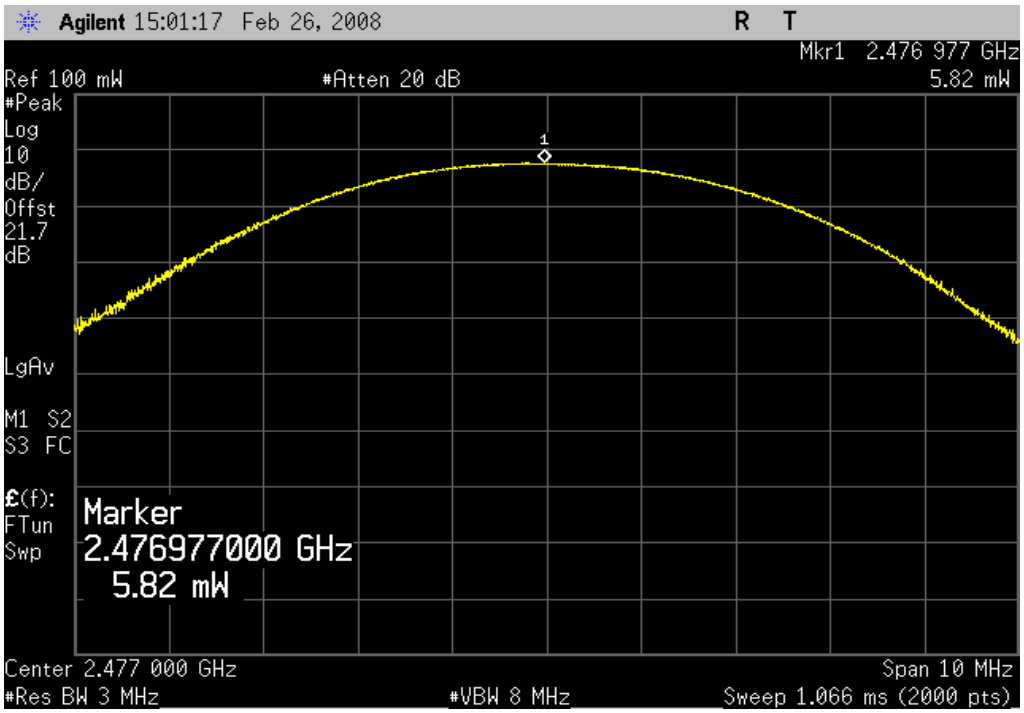
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, High antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	9.33 mW	**Limit:**	1 Watt



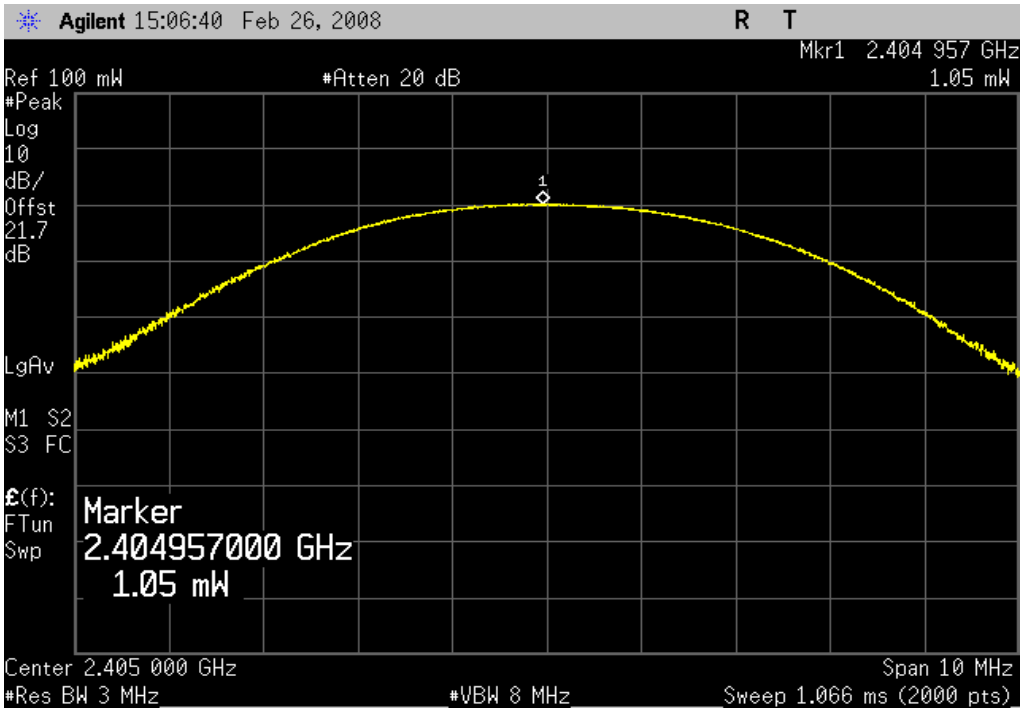
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, High antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	7.48 mW	**Limit:**	1 Watt



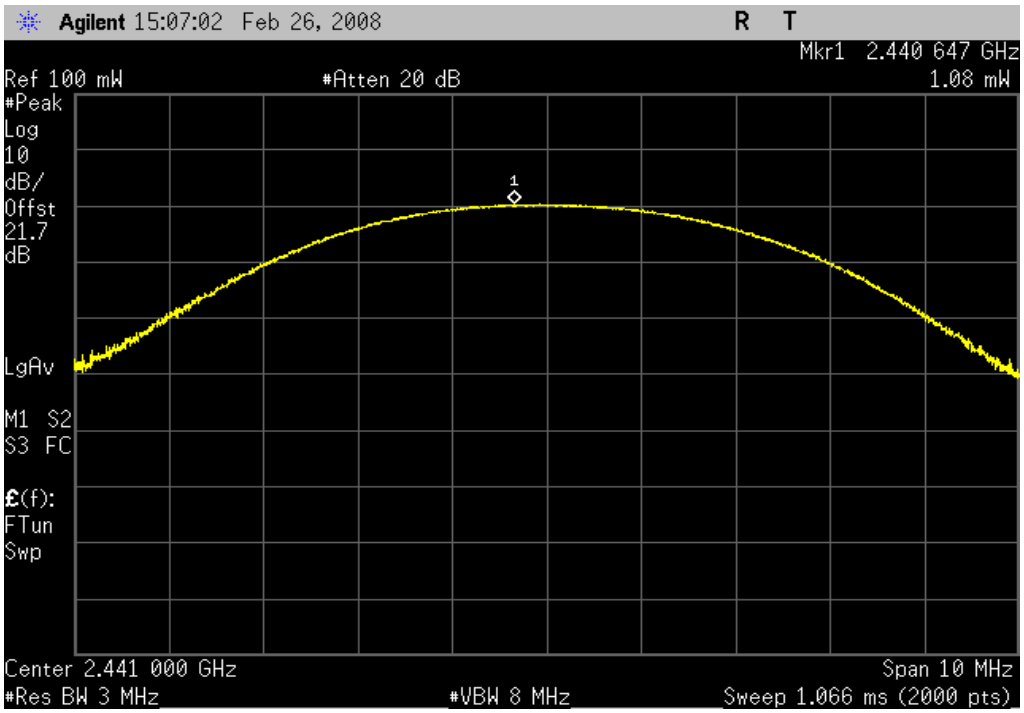
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, High antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	5.82 mW	**Limit:**	1 Watt



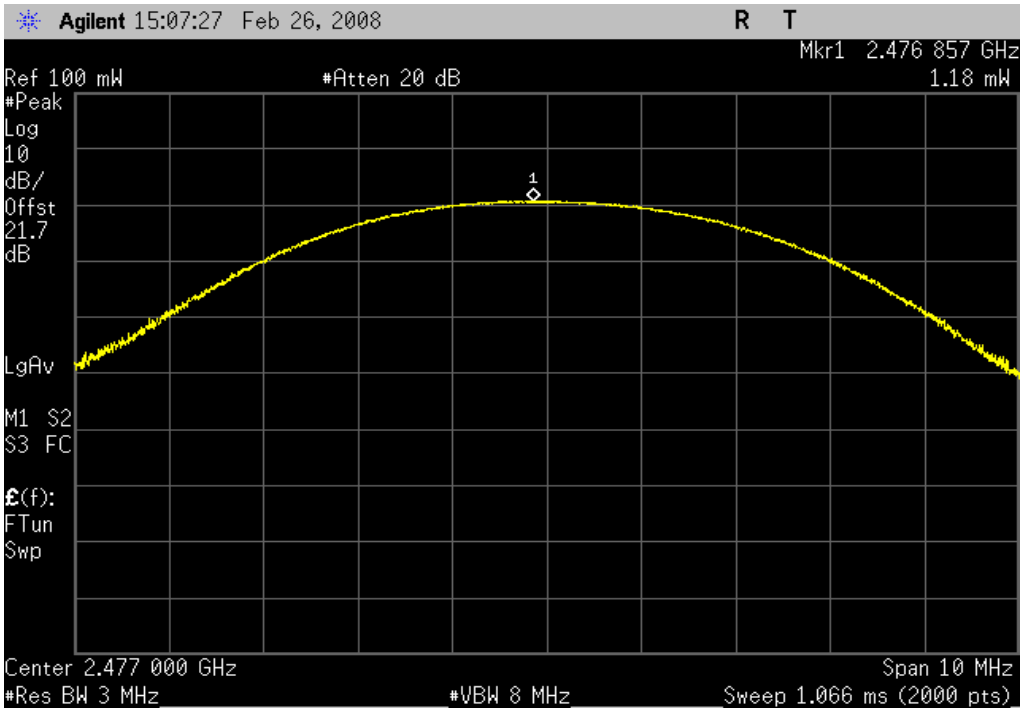
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.05 mW	**Limit:**	1 Watt



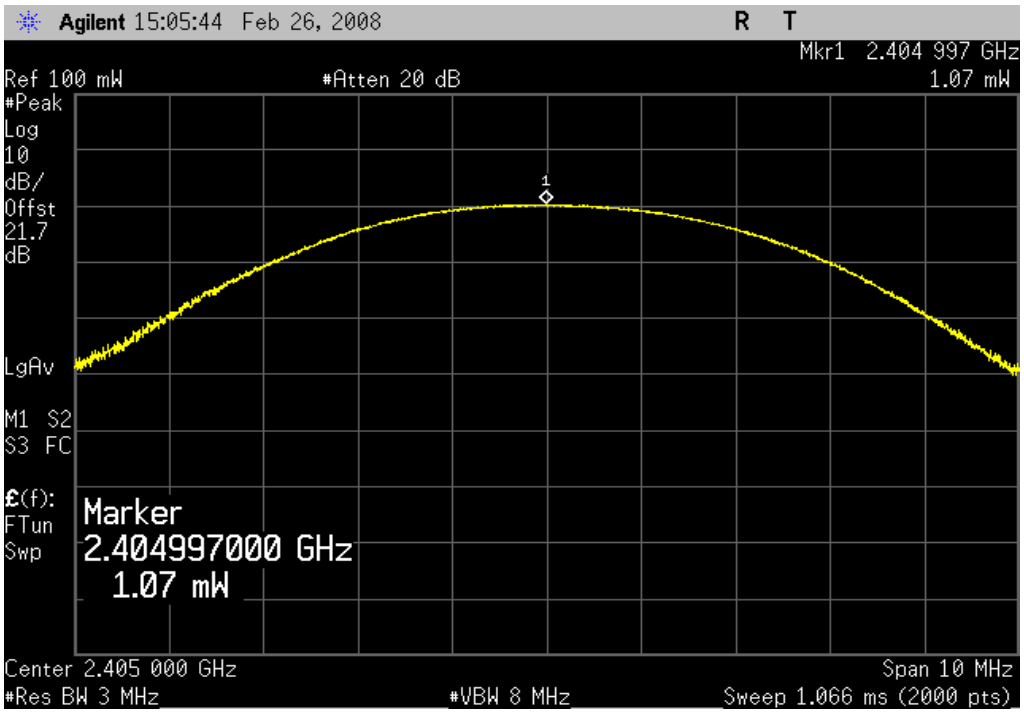
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.08 mW	**Limit:**	1 Watt



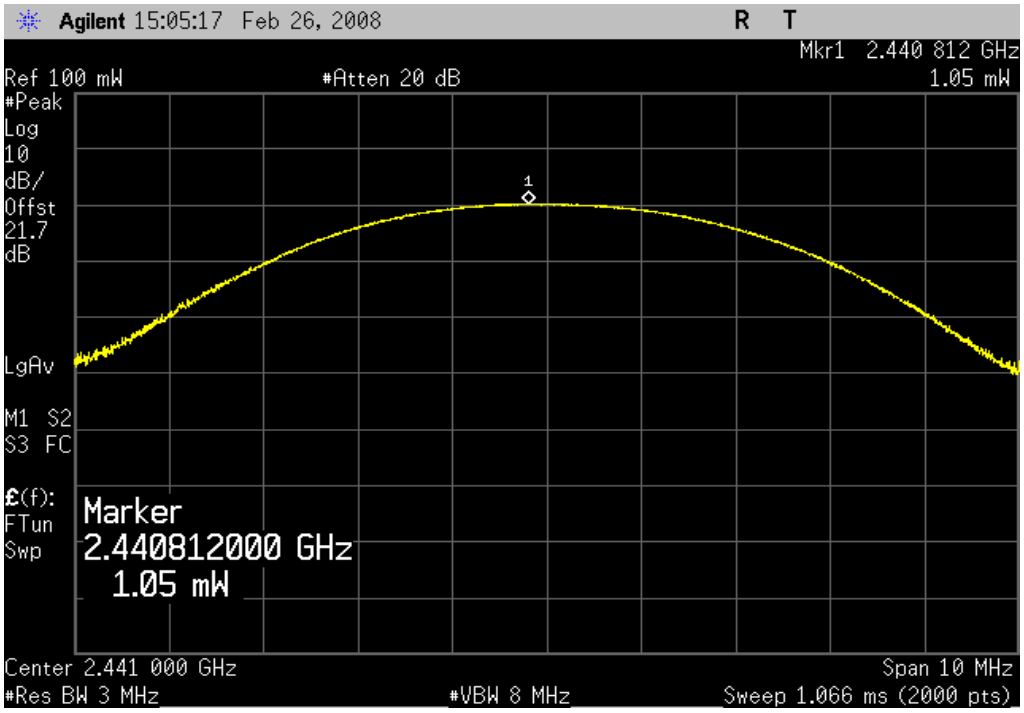
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	1.18 mW	**Limit:**	1 Watt



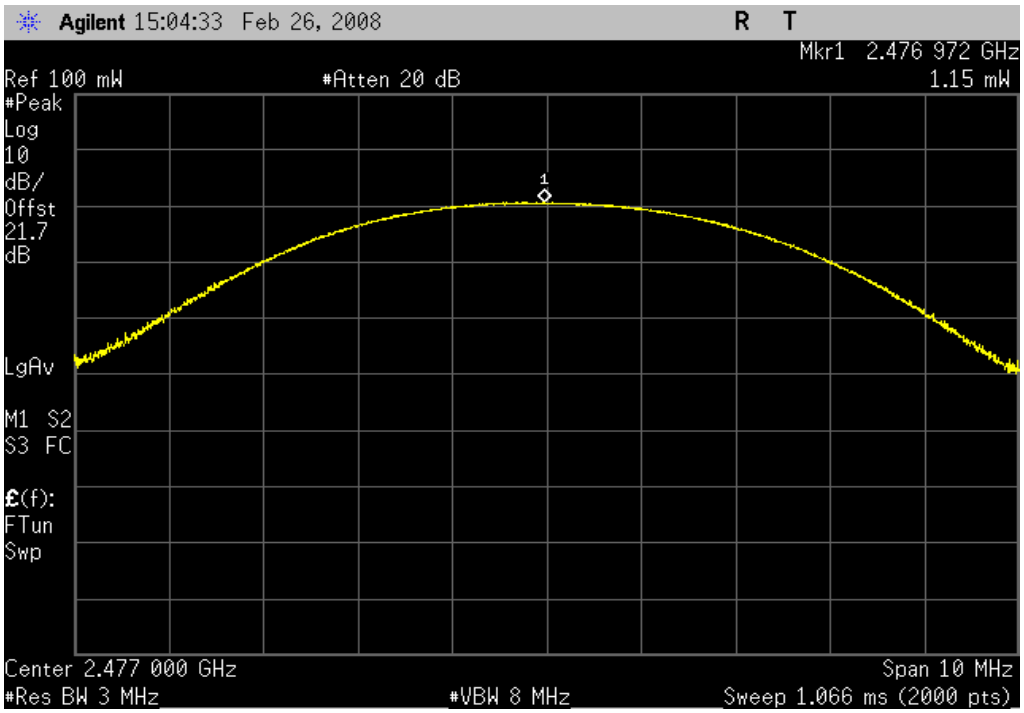
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, High antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	1.07 mW	**Limit:**	1 Watt

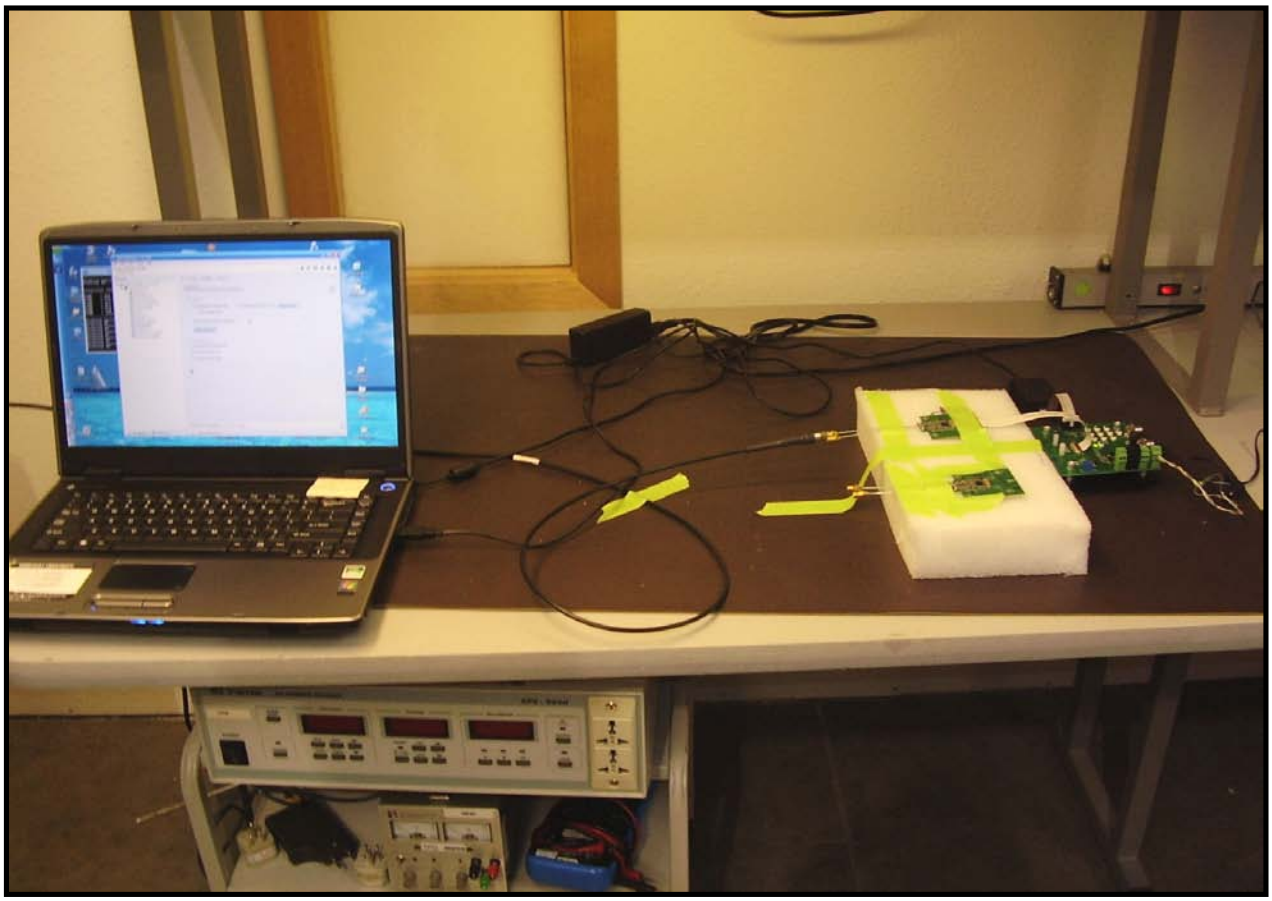


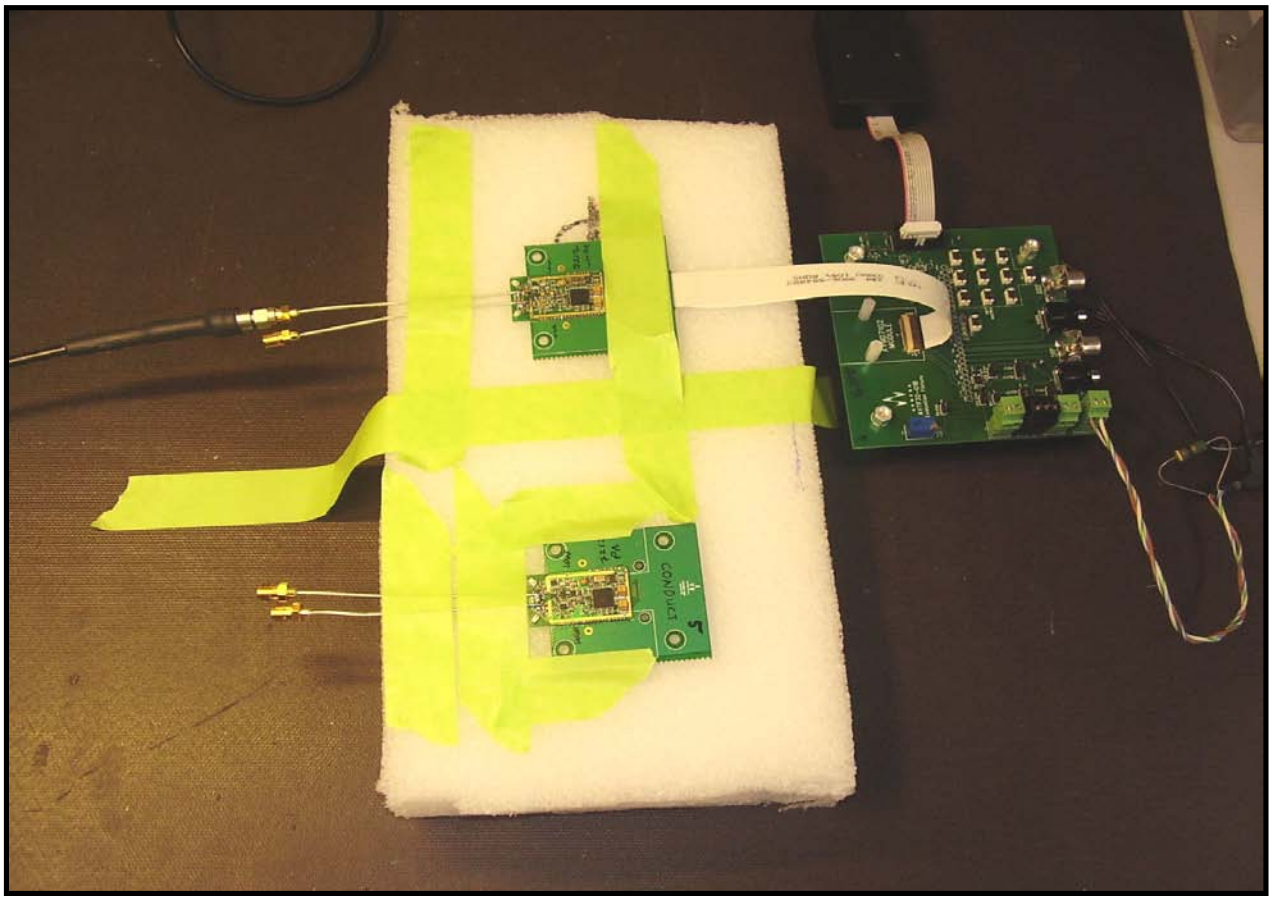
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, High antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	1.05 mW	**Limit:**	1 Watt

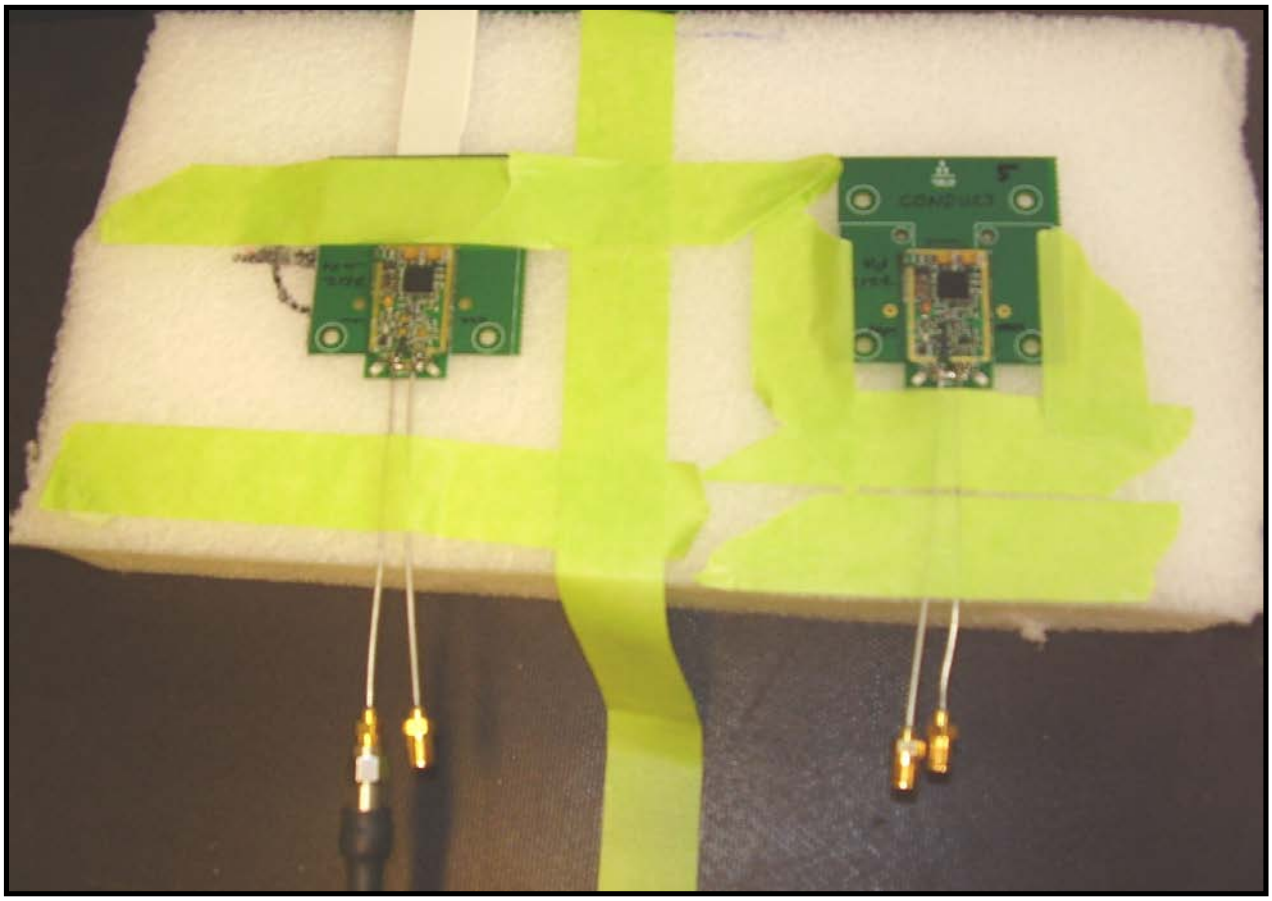


AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, High antenna port, High channel, Ch. 40, 2477MHz					
Result:	Pass	**Value:**	1.15 mW	**Limit:**	1 Watt









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:	AVMD7212			**Work Order:**	AVNE0020
Serial Number:	5 (with PA), 3 (without PA)			**Date:**	02/25/08
Customer:	Avnera			**Temperature:**	23°C
Attendees:	Phung Nguyen, Fred Weiss			**Humidity:**	28%
Project:	None			**Barometric Pres.:**	1010mb
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 with the low antenna port being worst case (see output power measurements).

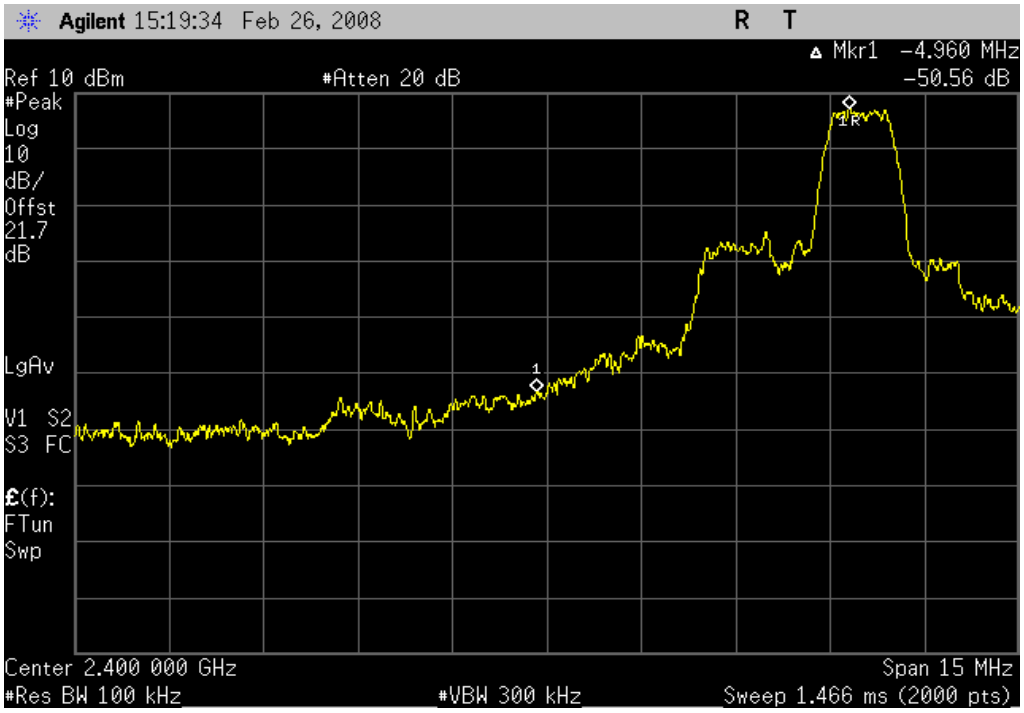
DEVIATIONS FROM TEST STANDARD

No Deviations

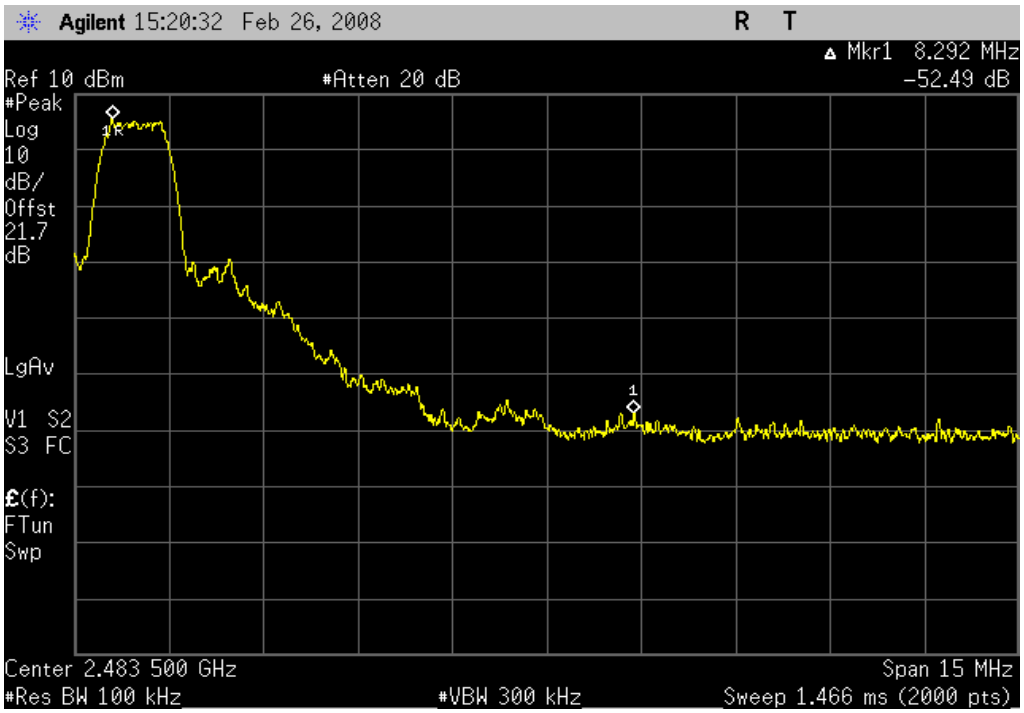
Configuration #	**1, 2**	*Signature* Holly Ashkannejhad

		Value	Limit	Results
AVMD7212 with PA, S/N; 5				
	pi/4-DQPSK			
	Low diversity antenna			
	Low channel, Ch. 2, 2405Mhz	-50.56 dBc	≤ -20 dBc	Pass
	High channel, Ch. 38, 2477Mhz	-52.49 dBc	≤ -20 dBc	Pass
AVMD7212 with out PA, S/N: 3				
	pi/4-DQPSK			
	Low diversity antenna			
	Low channel, Ch. 2, 2405Mhz	-44.78 dBc	≤ -20 dBc	Pass
	High channel, Ch. 38, 2477Mhz	-46.44 dBc	≤ -20 dBc	Pass

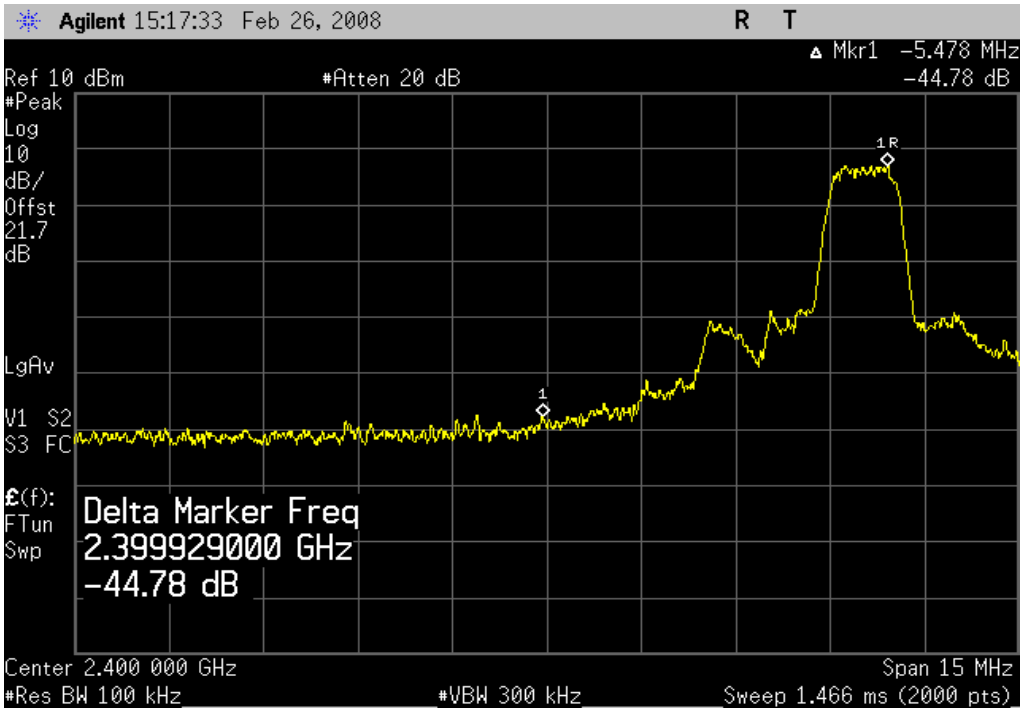
AVMD7212 with PA, S/N; 5, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405Mhz					
Result:	Pass	**Value:**	-50.56 dBc	**Limit:**	≤ -20 dBc



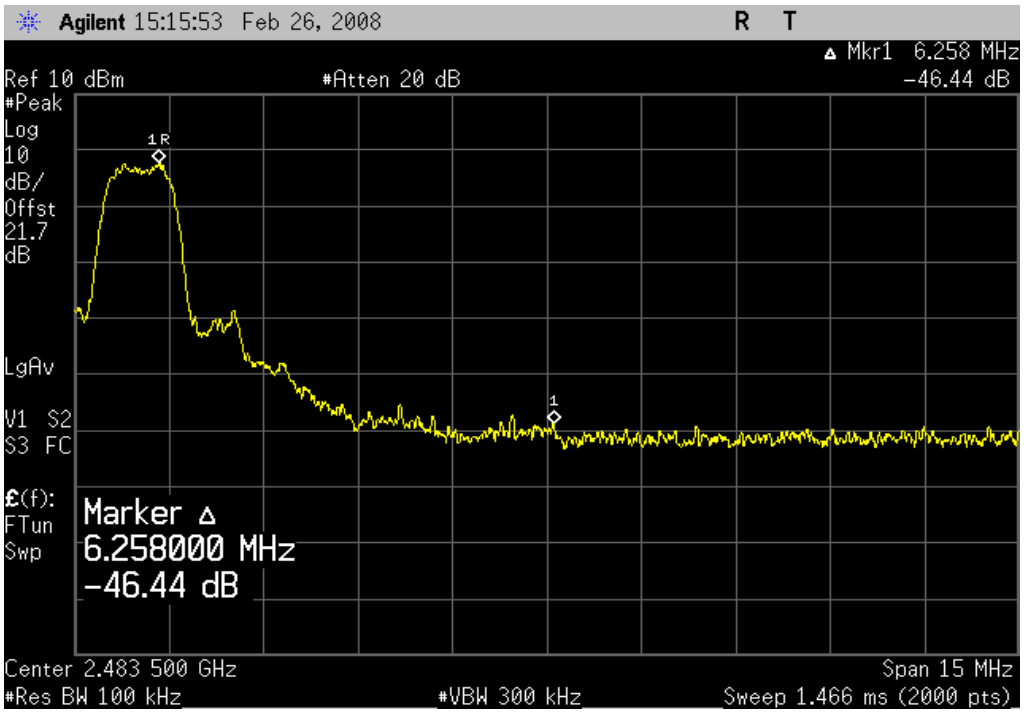
AVMD7212 with PA, S/N; 5, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477Mhz					
Result:	Pass	**Value:**	-52.49 dBc	**Limit:**	≤ -20 dBc



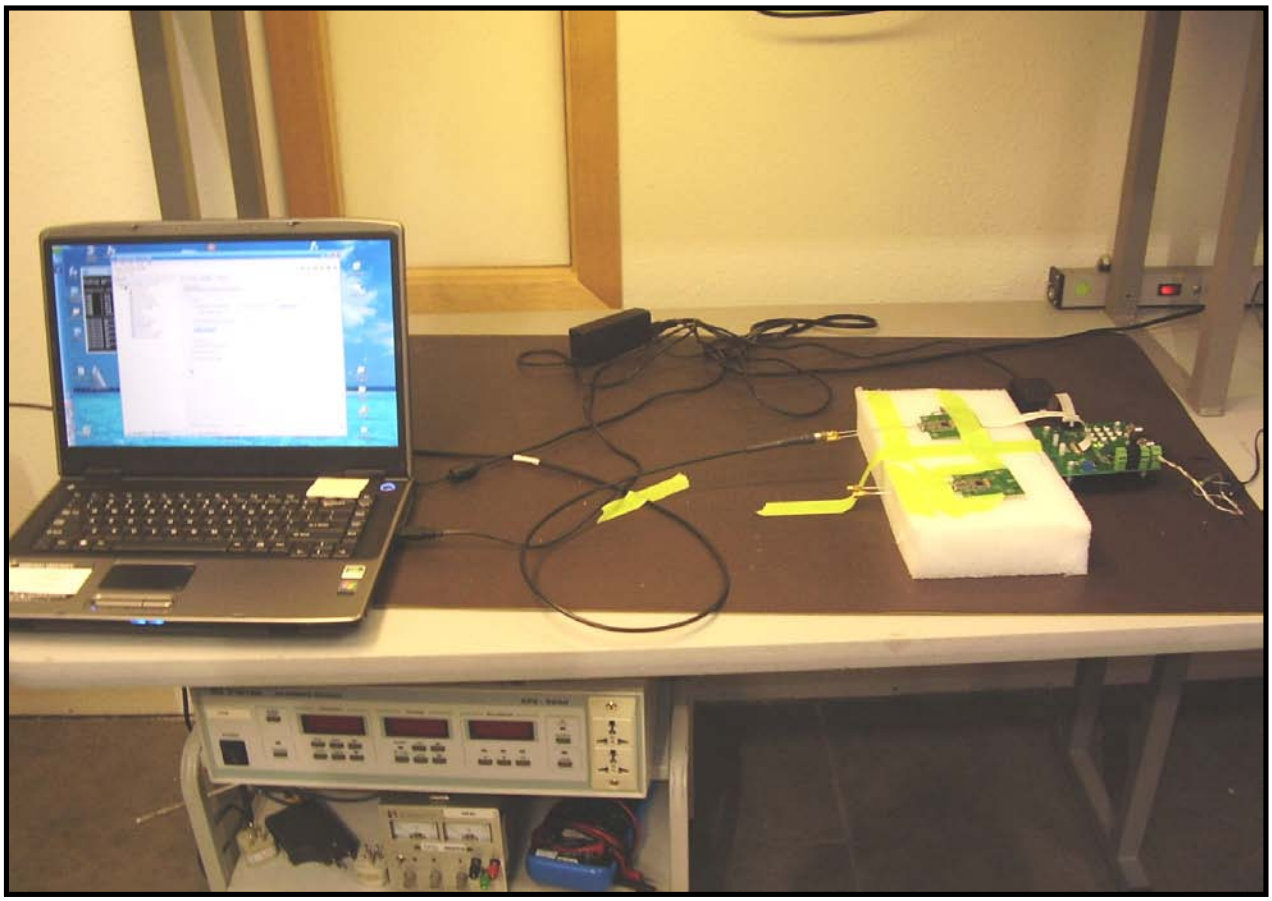
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405Mhz					
Result:	Pass	**Value:**	-44.78 dBc	**Limit:**	≤ -20 dBc

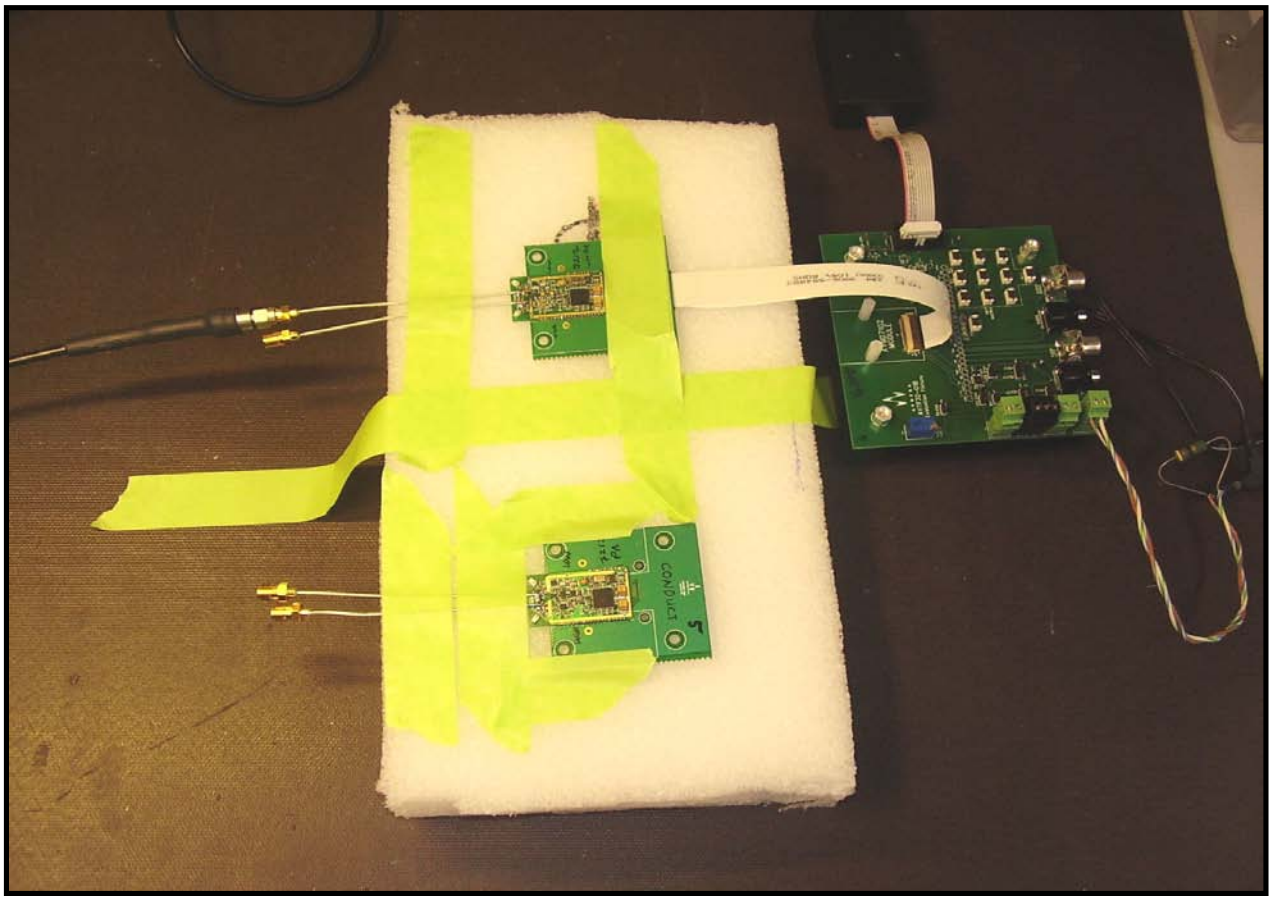


AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477Mhz					
Result:	Pass	**Value:**	-46.44 dBc	**Limit:**	≤ -20 dBc

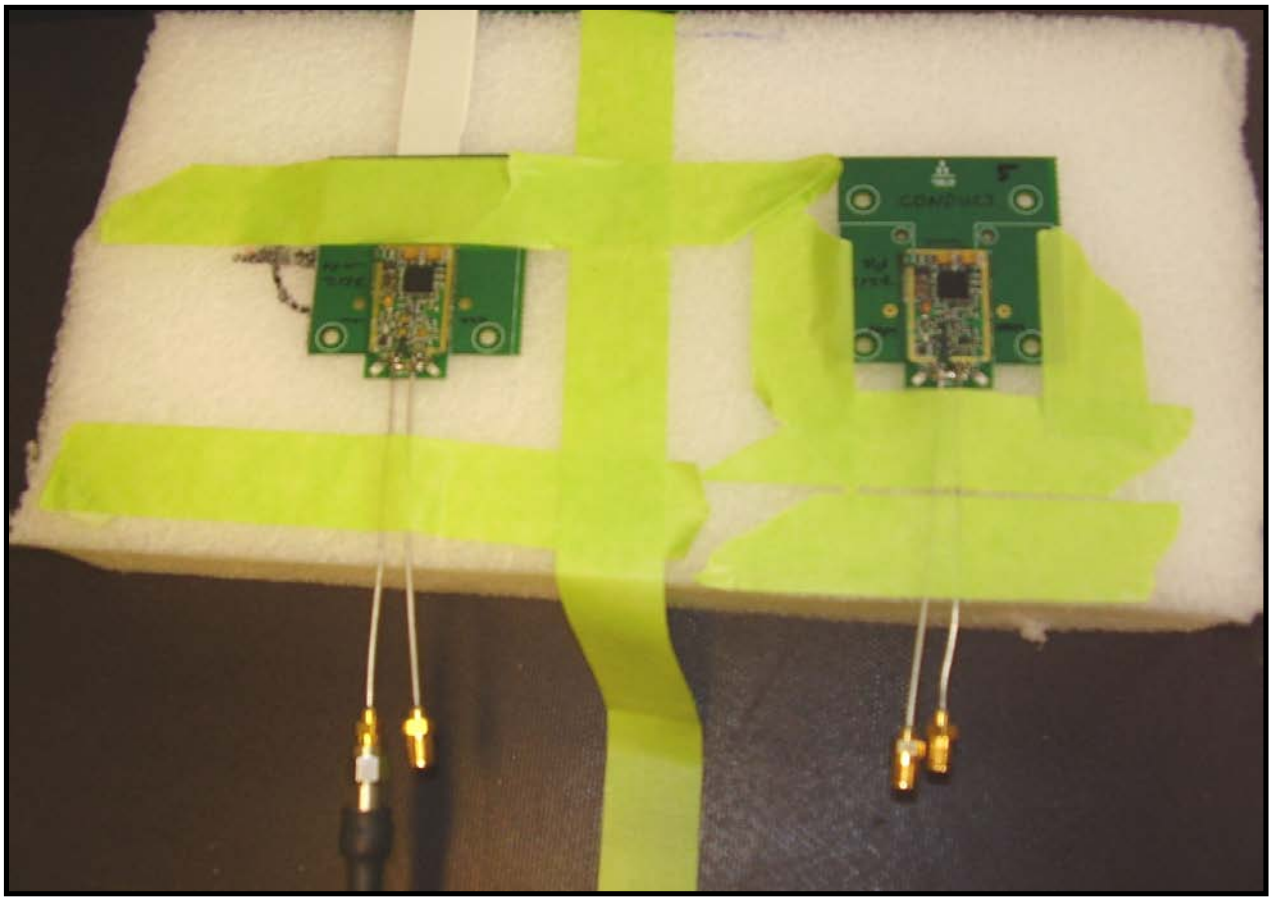


Bandedge Compliance





Bandedge Compliance



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:	AVMD7212			Work Order:	AVNE0020
Serial Number:	5 (with PA), 3 (without PA)			Date:	02/25/08
Customer:	Avnera			Temperature:	23°C
Attendees:	Phung Nguyen, Fred Weiss			Humidity:	28%
Project:	None			Barometric Pres.:	1010mb
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 with the low antenna port being worst case (see output power measurements).

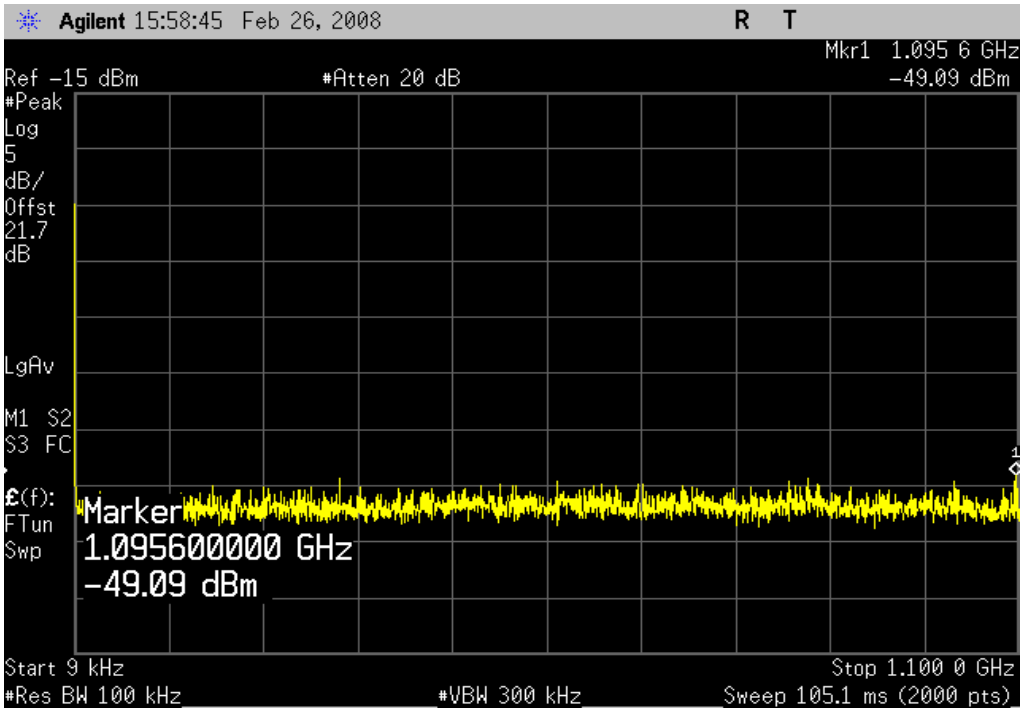
DEVIATIONS FROM TEST STANDARD

No Deviations

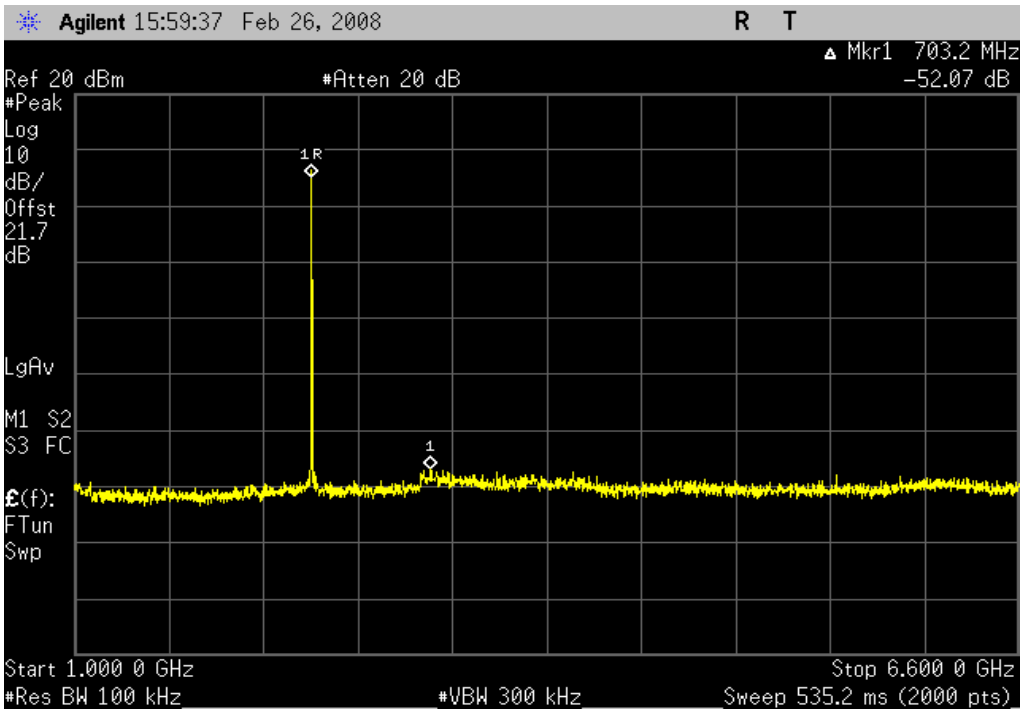
Configuration #	1, 2	Signature

		Value	Limit	Results
AVMD7212 with PA, S/N: 5				
pi/4-DQPSK				
Low diversity antenna				
Low channel, Ch. 2, 2405MHz				
	9kHz - 1.1GHz	≤ - 50 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 50 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	≤ - 50 dBc	≤ - 20 dBc	Pass
	1GHz - 6.6GHz	≤ - 50 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
AVMD7212 with out PA, S/N: 3				
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

AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 50 dBc	**Limit:**	≤ - 20 dBc

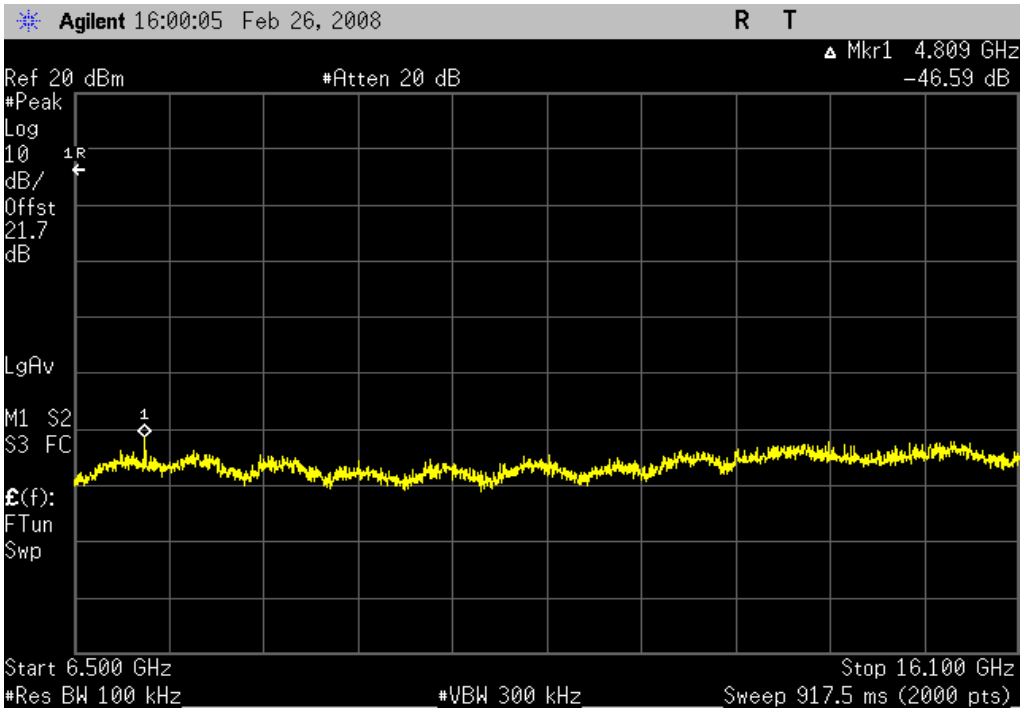


AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 50 dBc	**Limit:**	≤ - 20 dBc

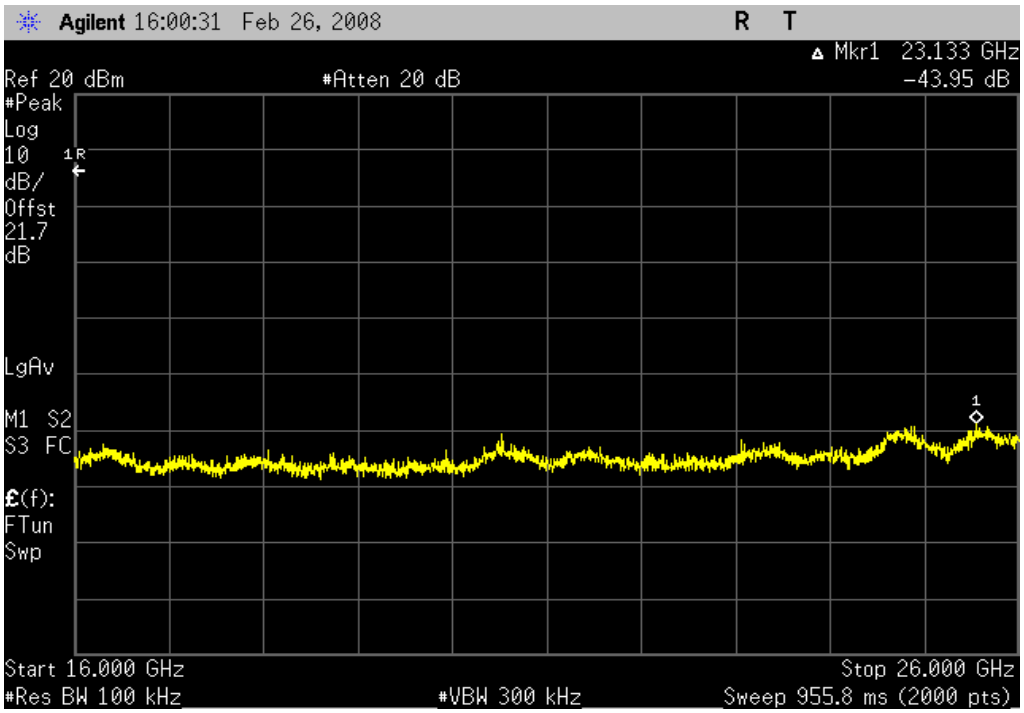


Spurious Conducted Emissions

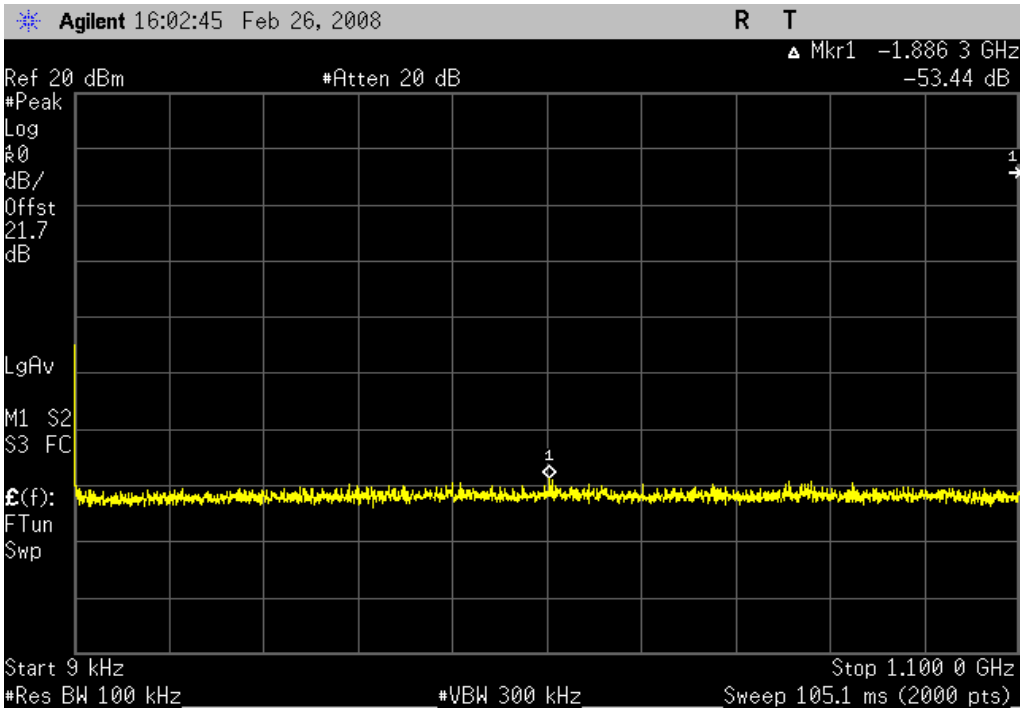
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



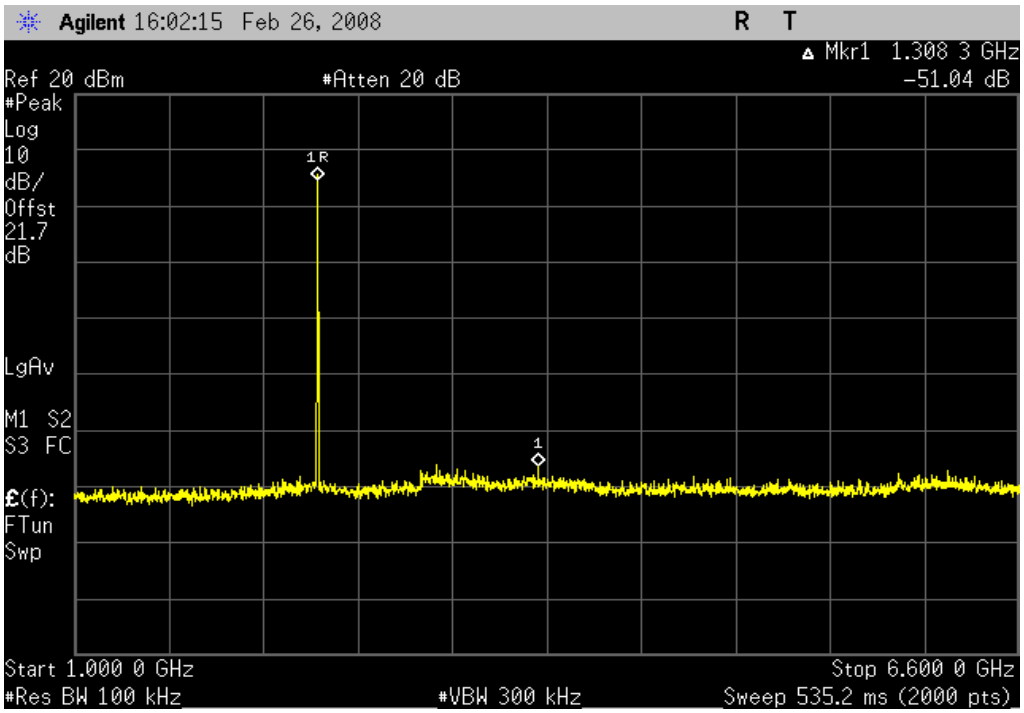
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



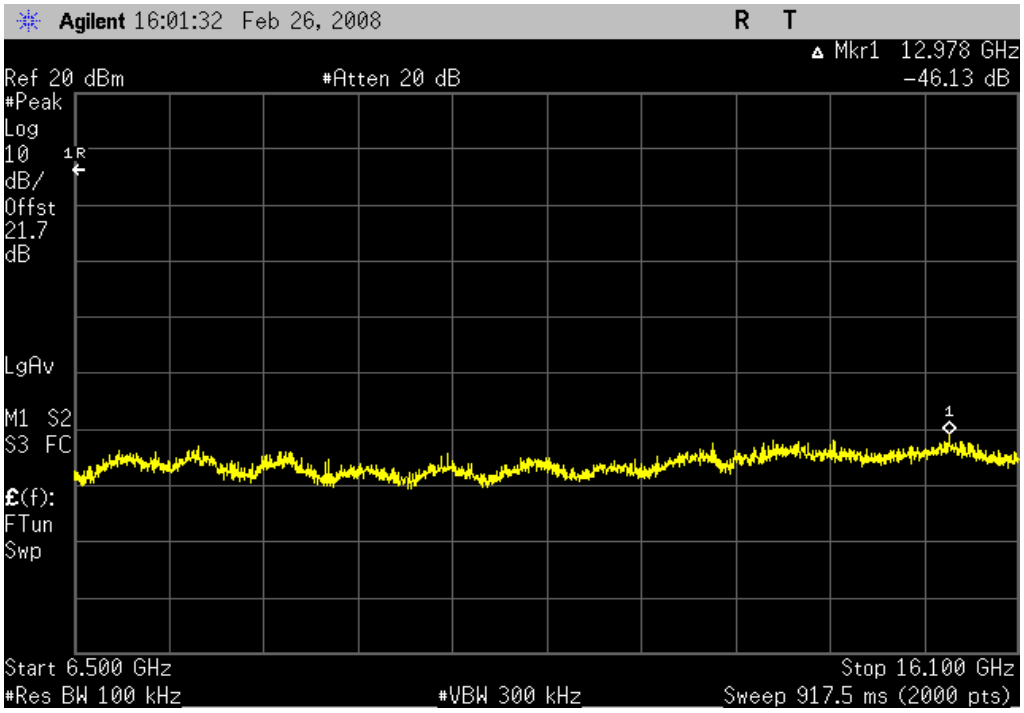
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 50 dBc	**Limit:**	≤ - 20 dBc



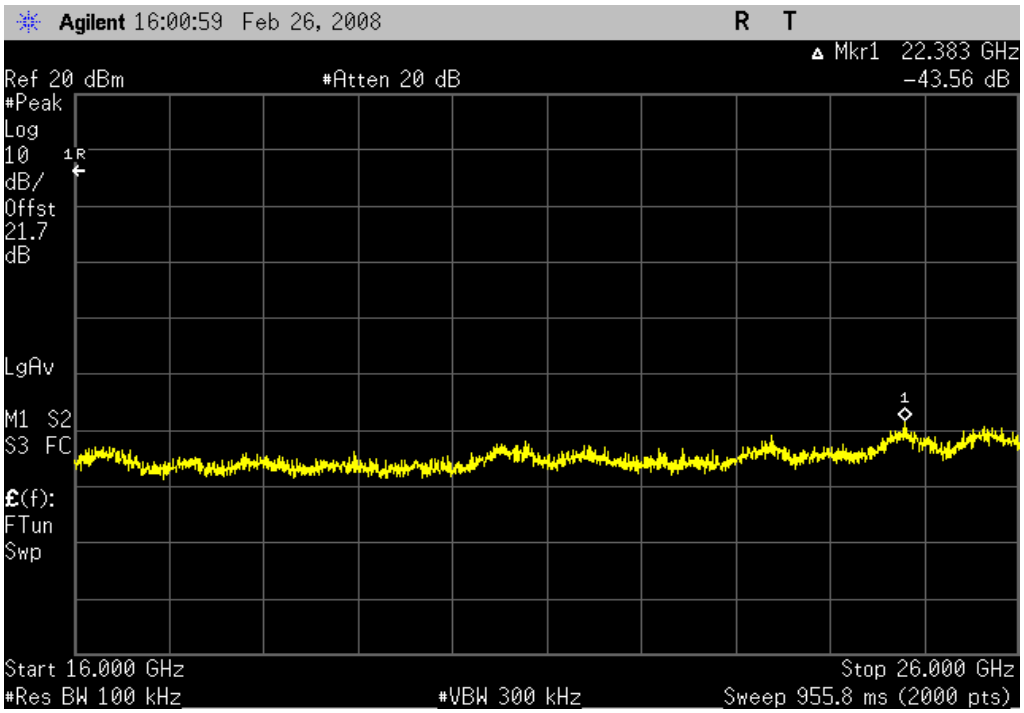
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 50 dBc	**Limit:**	≤ - 20 dBc



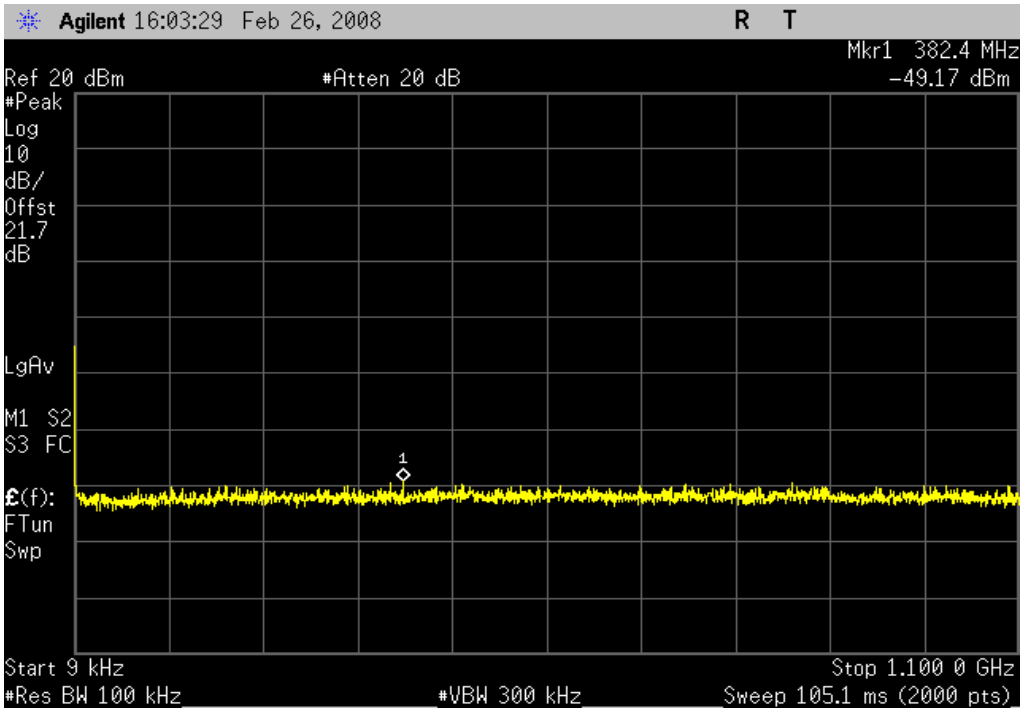
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



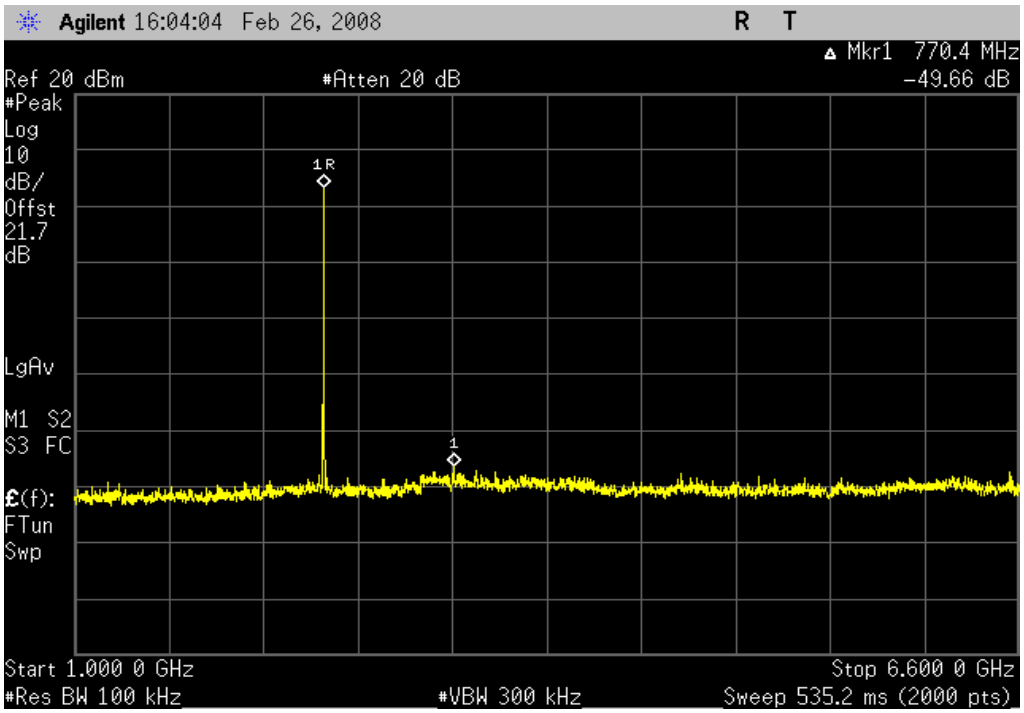
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

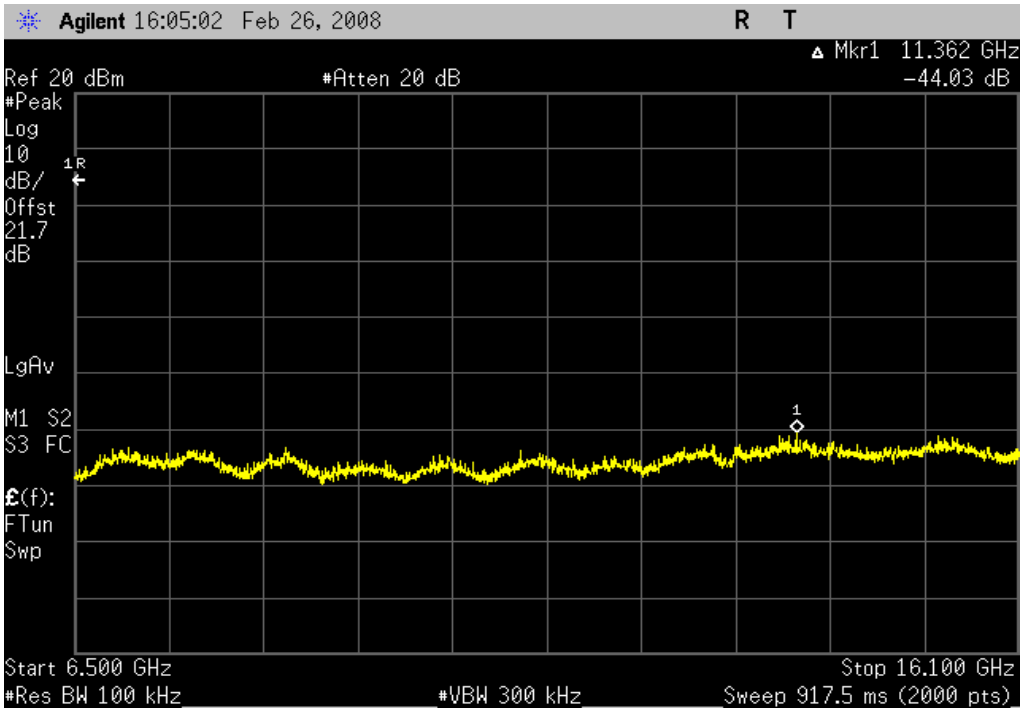


AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

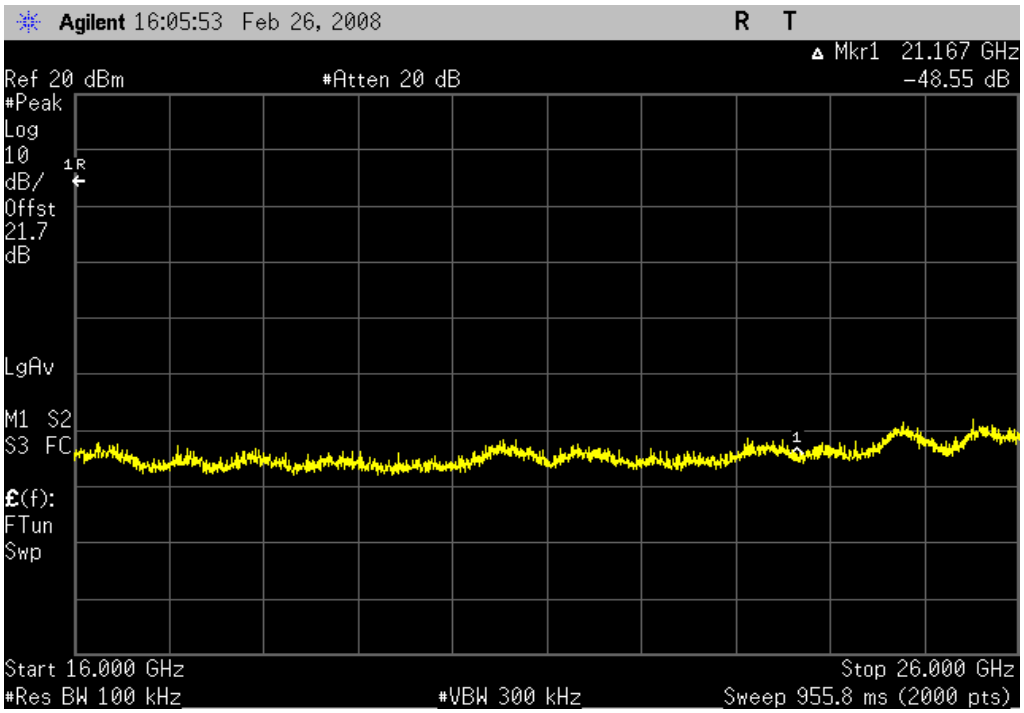


Spurious Conducted Emissions

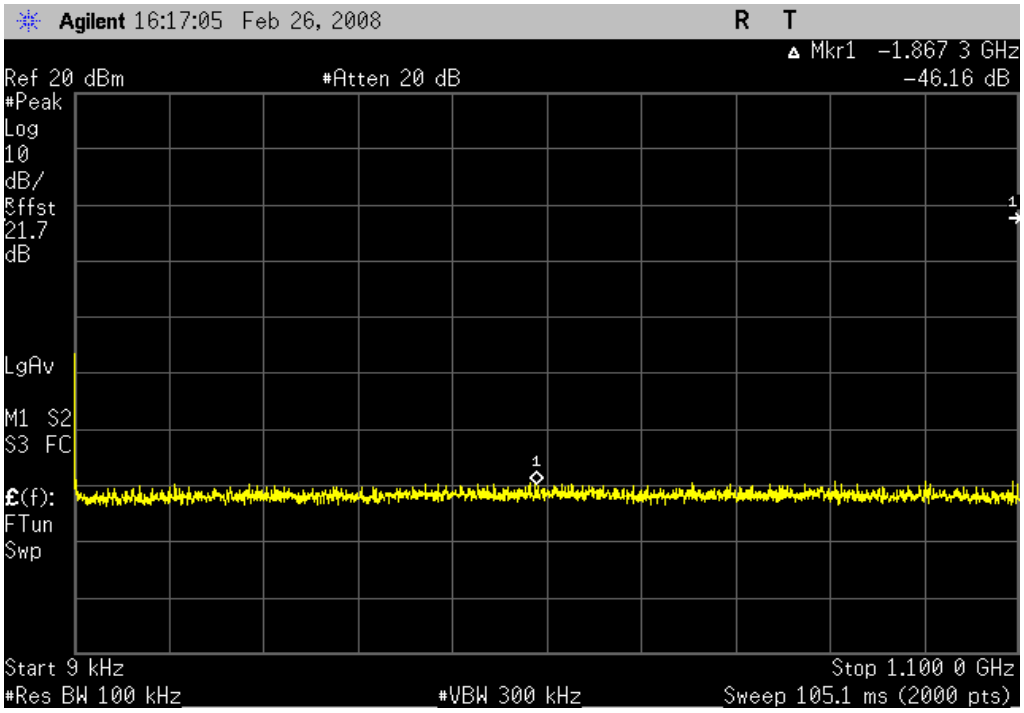
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



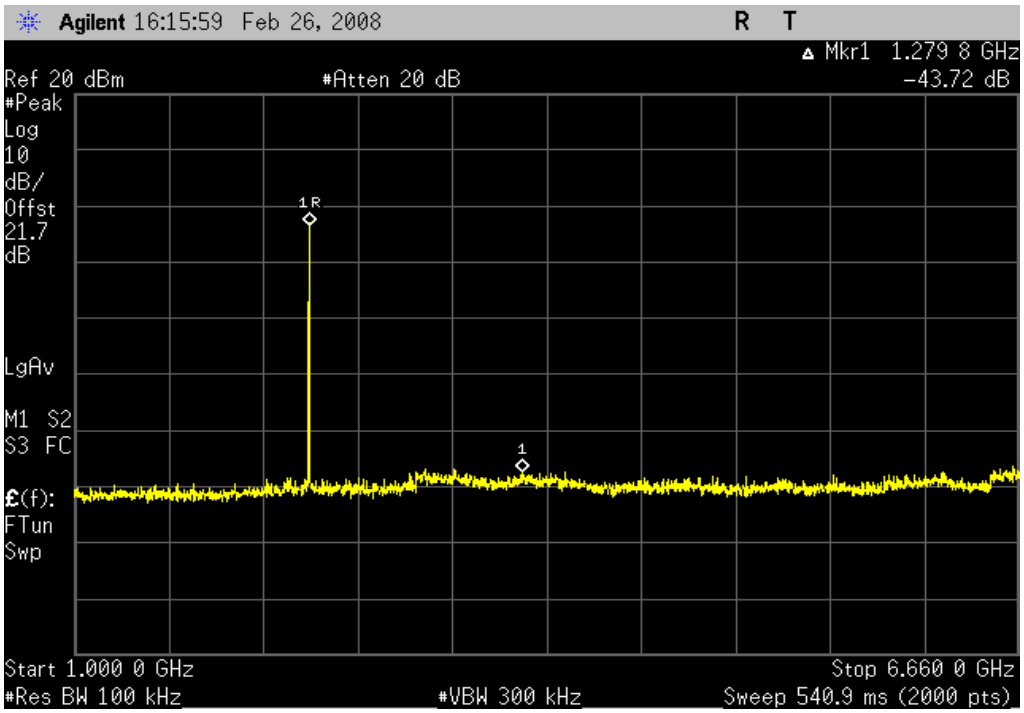
AVMD7212 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

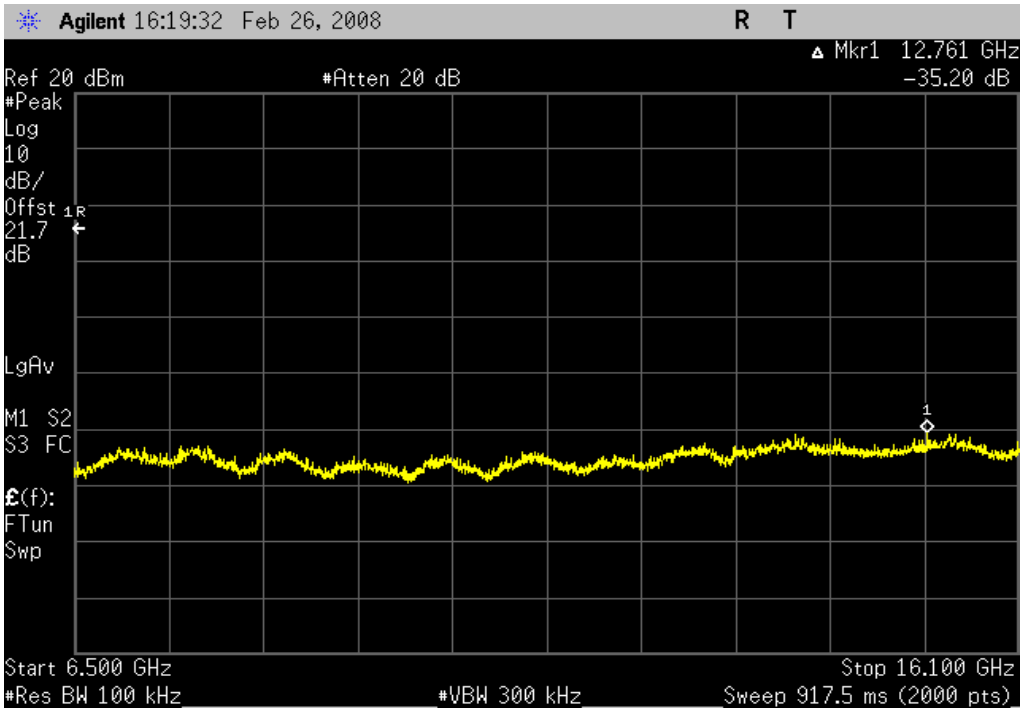


AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

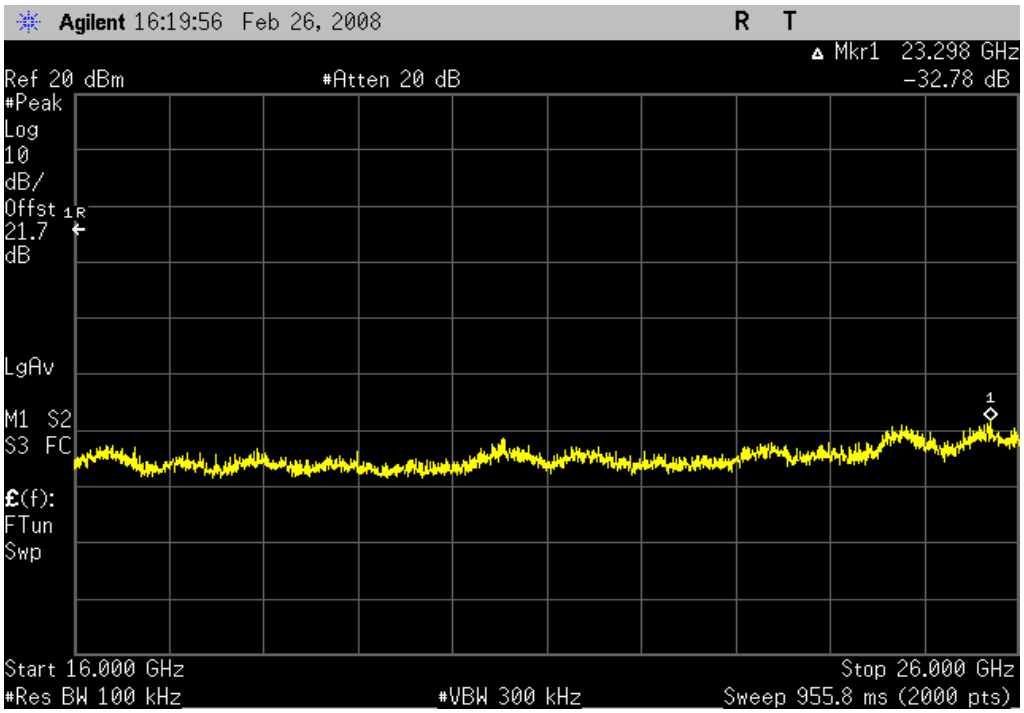


Spurious Conducted Emissions

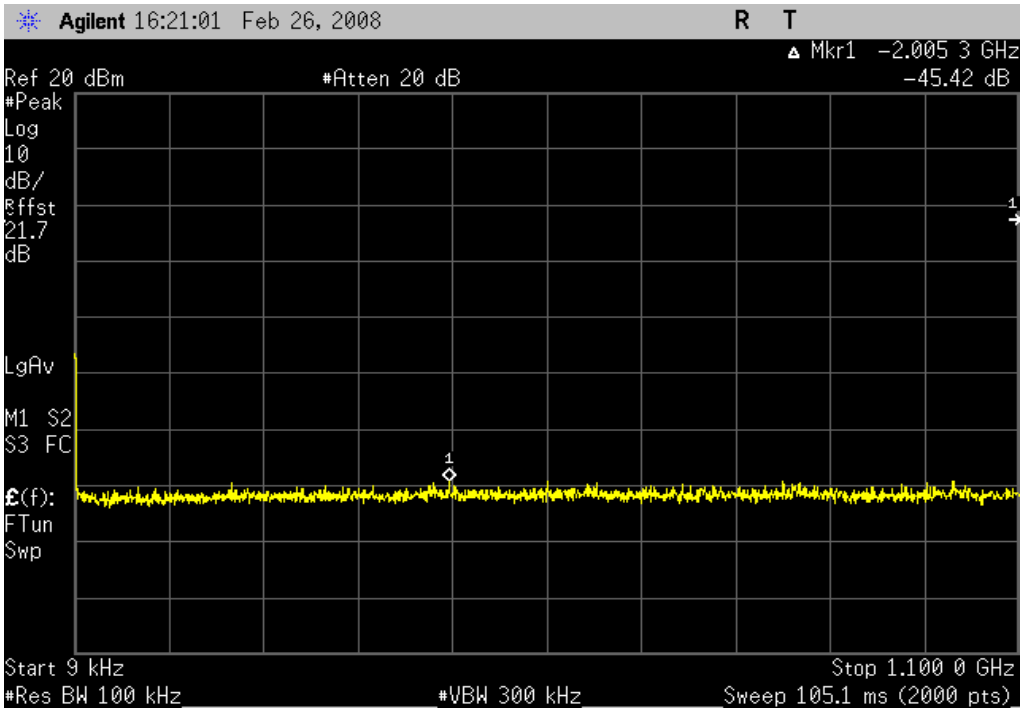
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



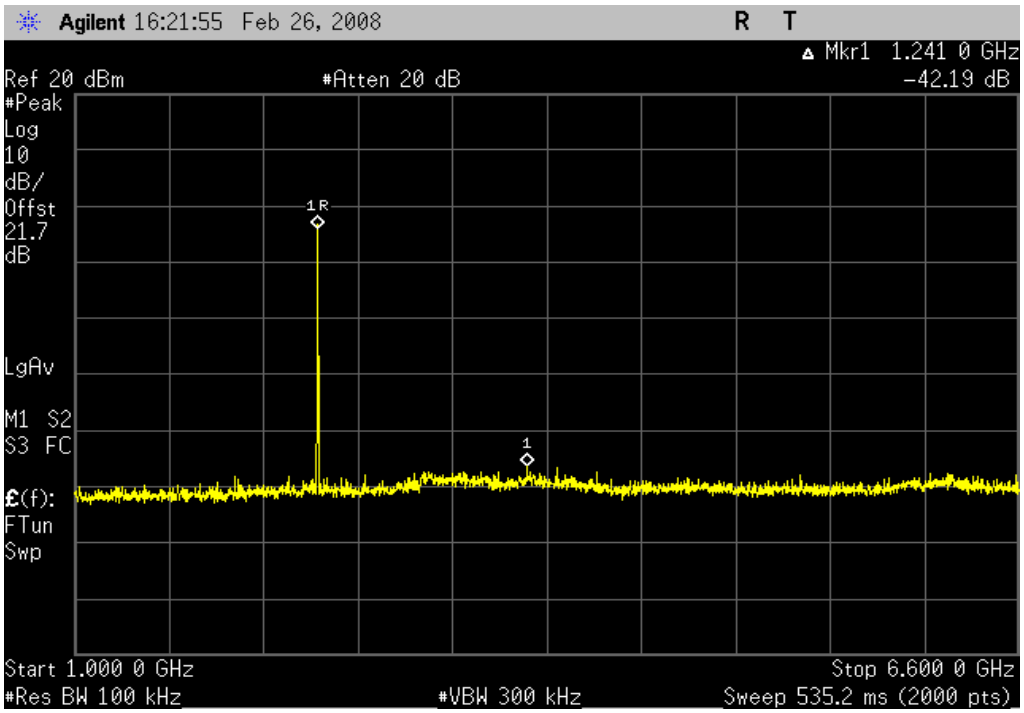
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Low channel, Ch. 2, 2405MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



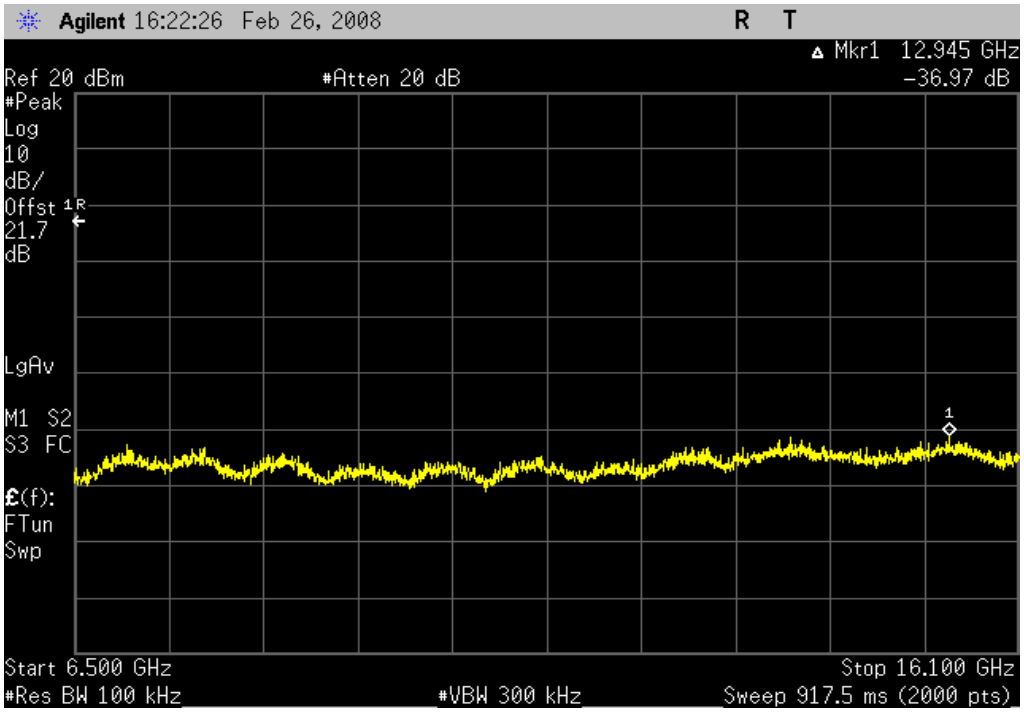
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



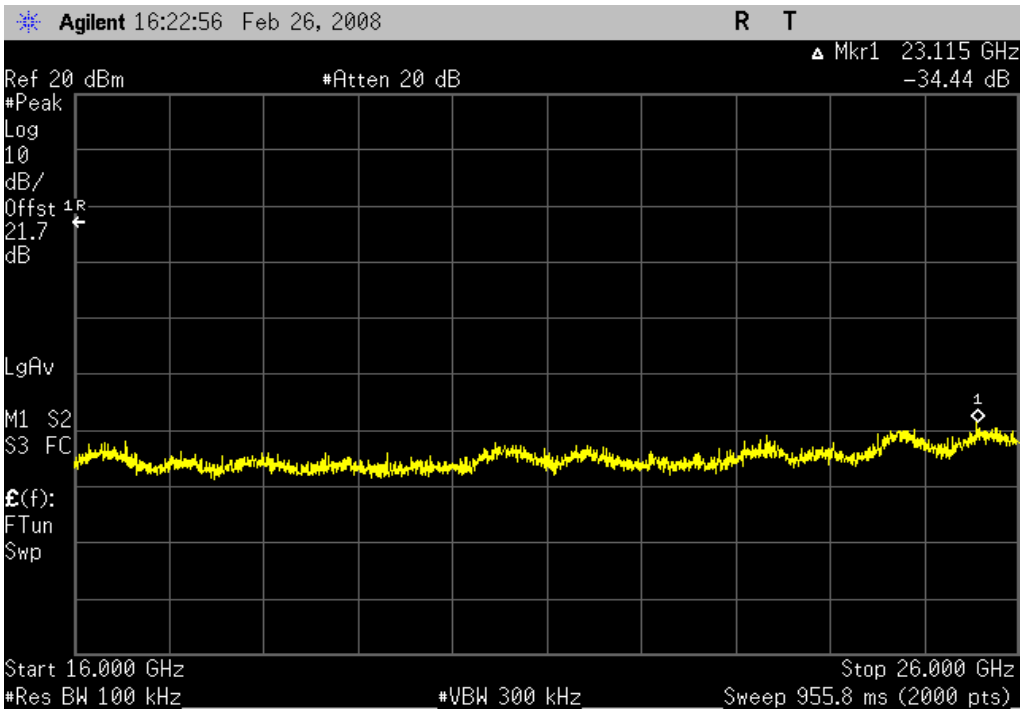
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



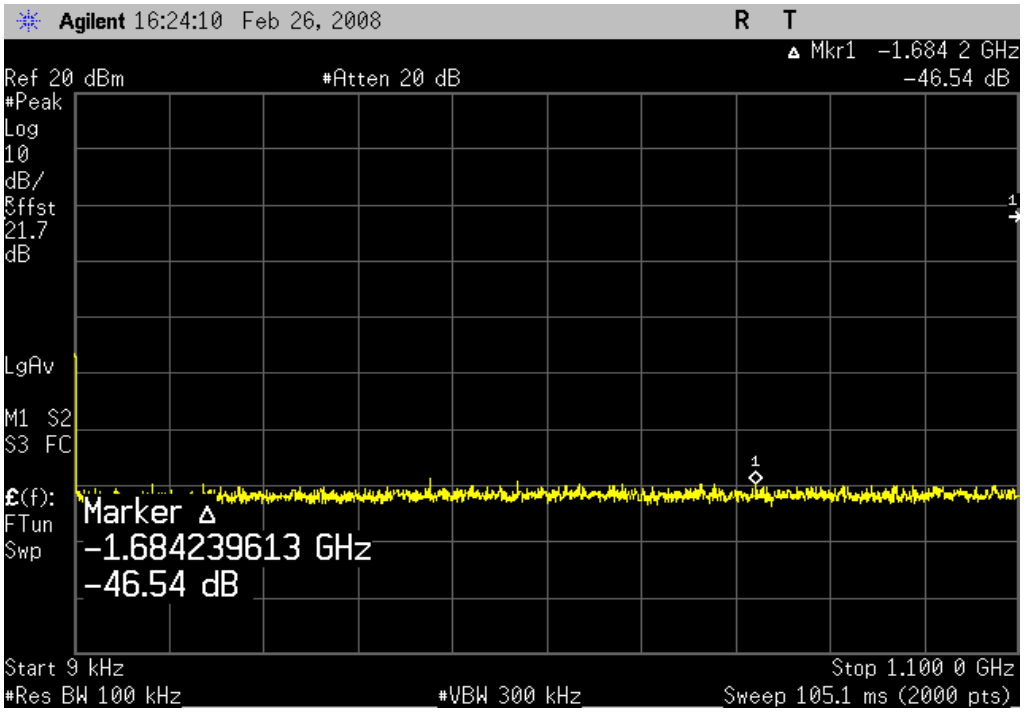
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



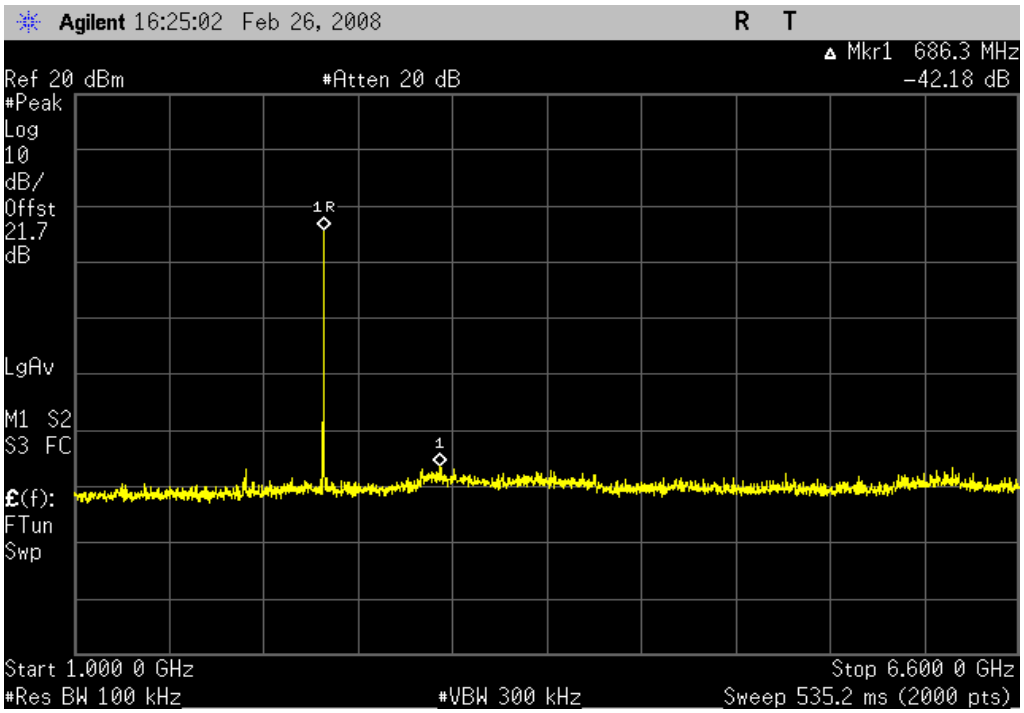
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, Mid channel, Ch. 20, 2441MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



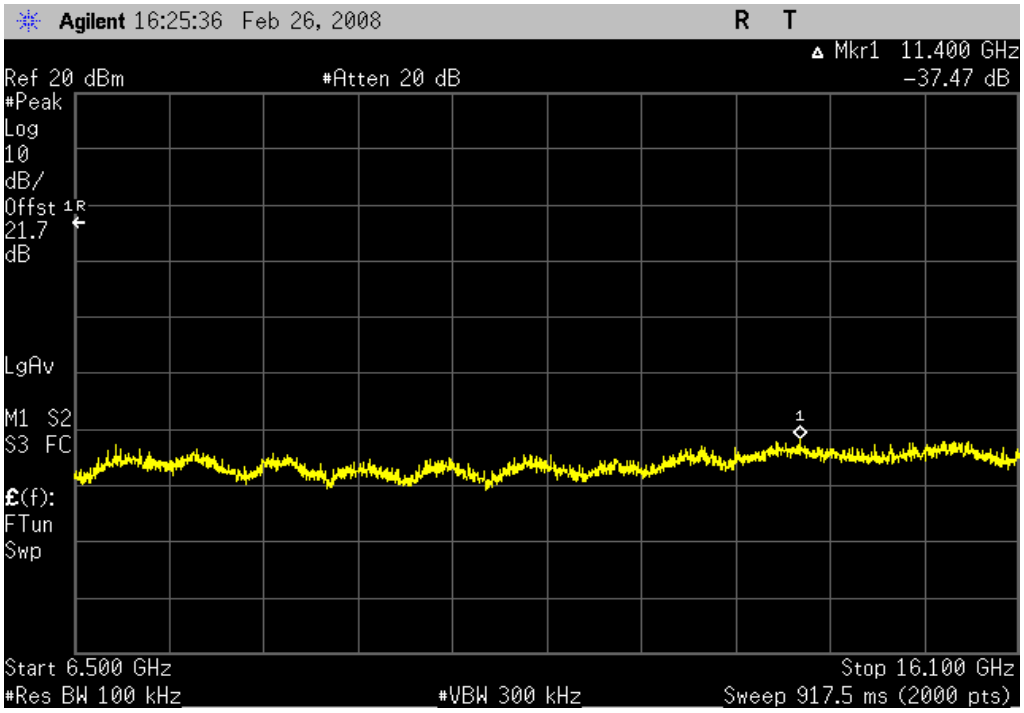
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 9kHz - 1.1GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc



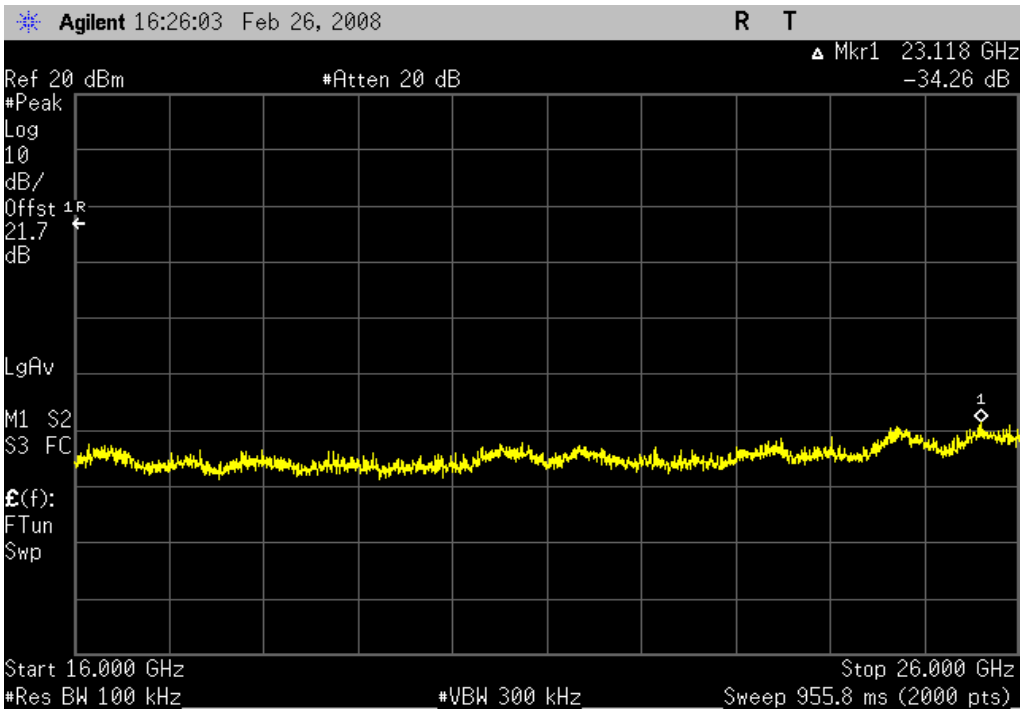
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 1GHz - 6.6GHz					
Result:	Pass	**Value:**	≤ - 40 dBc	**Limit:**	≤ - 20 dBc

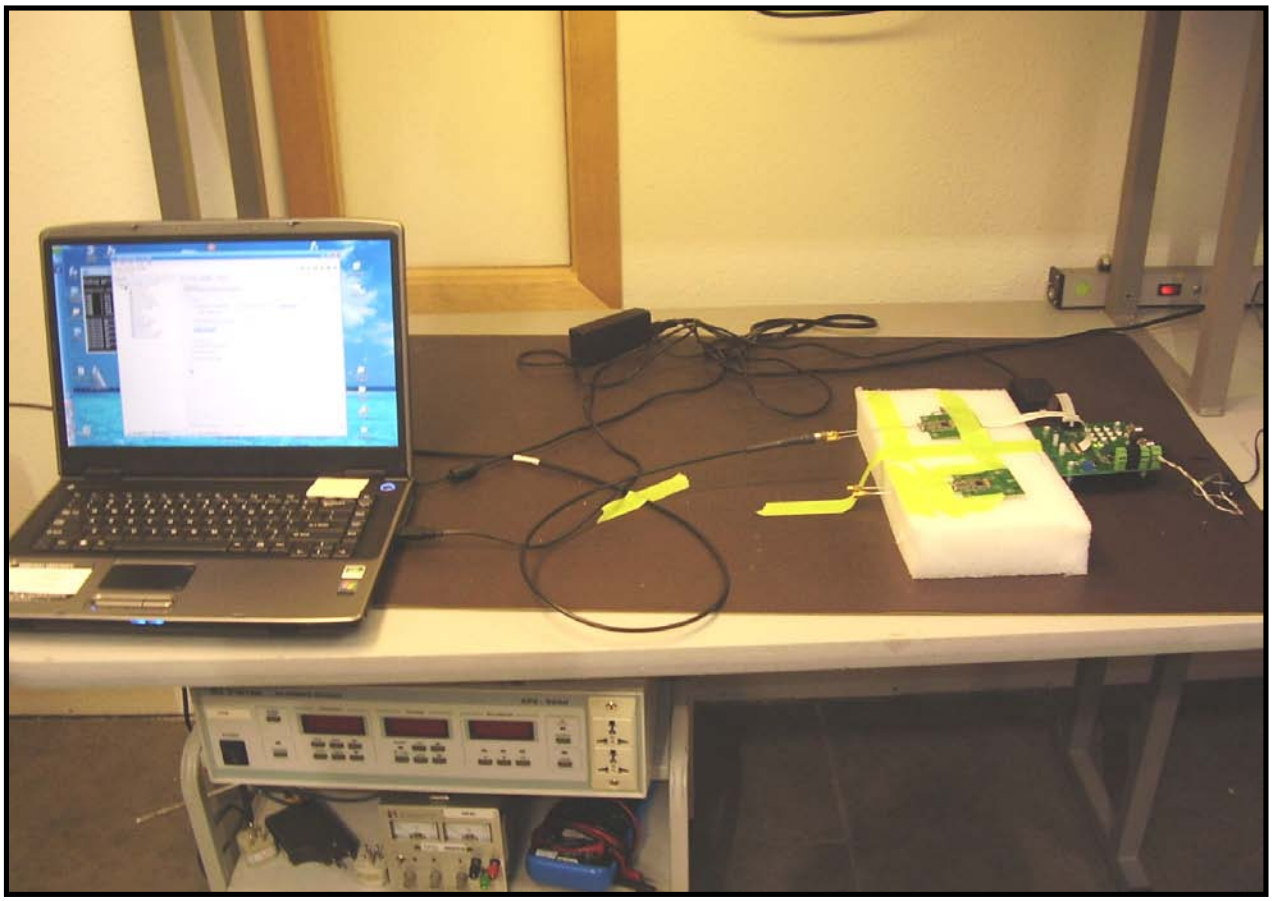


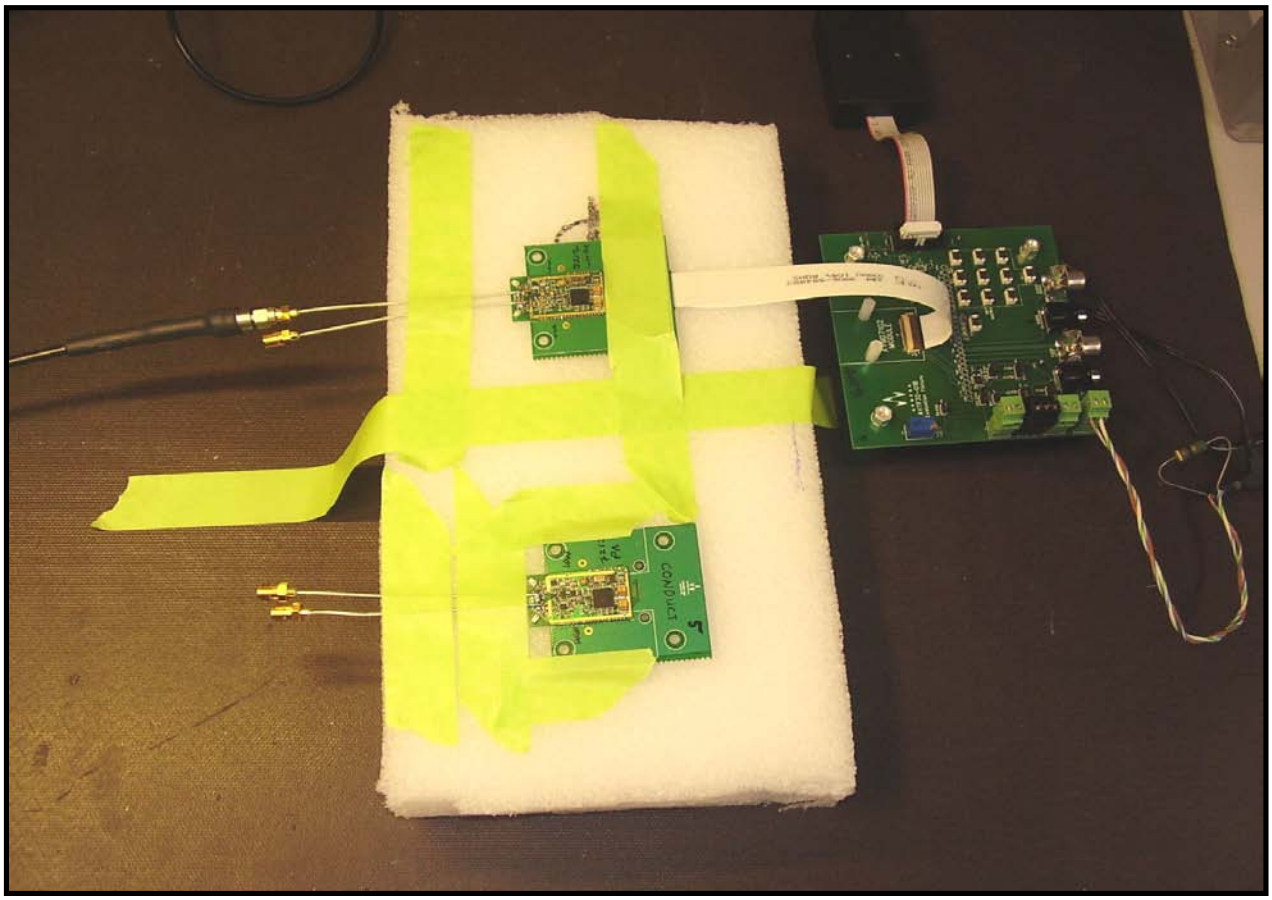
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 6.5GHz - 16.1GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



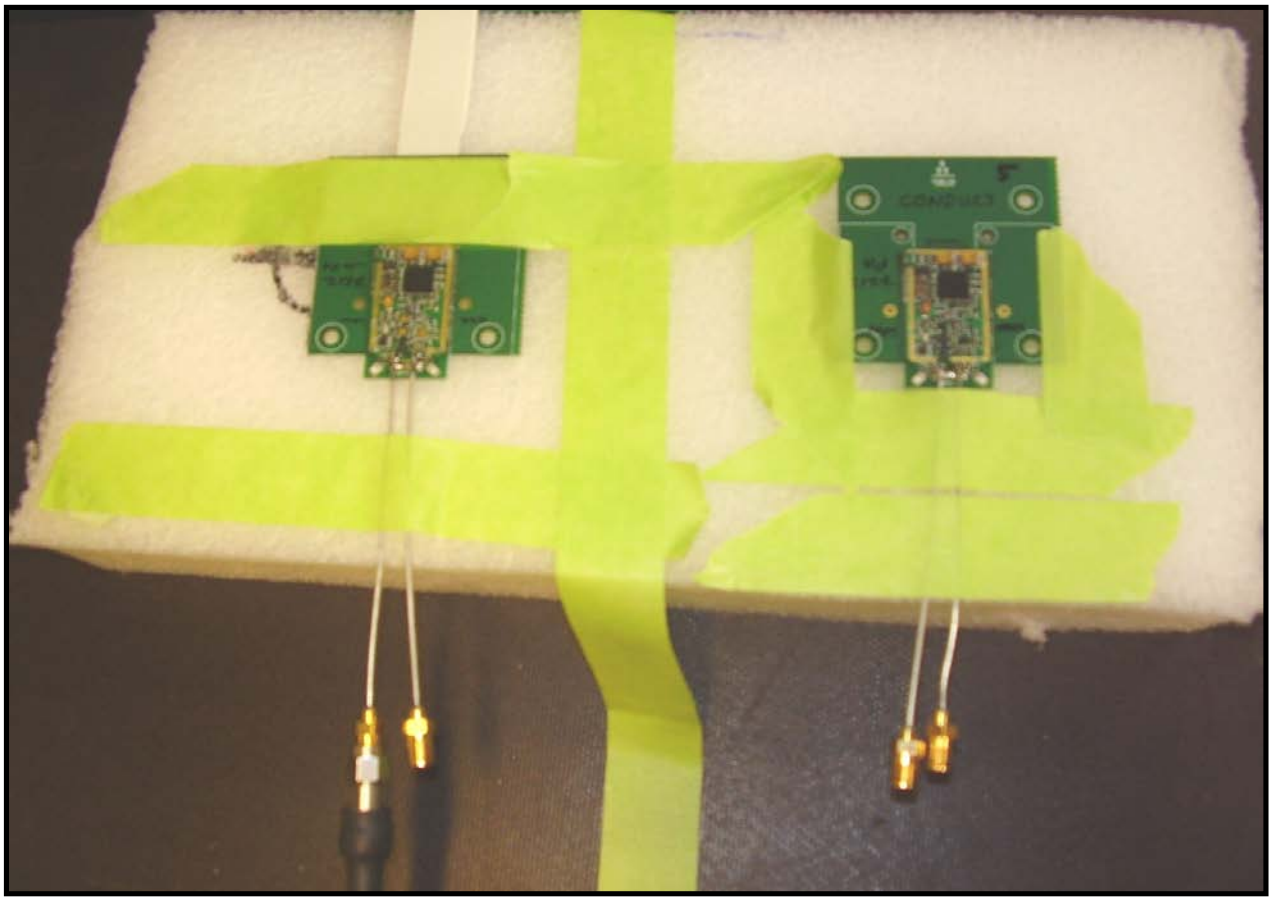
AVMD7212 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna, High channel, Ch. 38, 2477MHz, 16GHz - 26GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc







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 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:	AVMD7212			**Work Order:**	AVNE0020
Serial Number:	5 (with PA), 3 (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

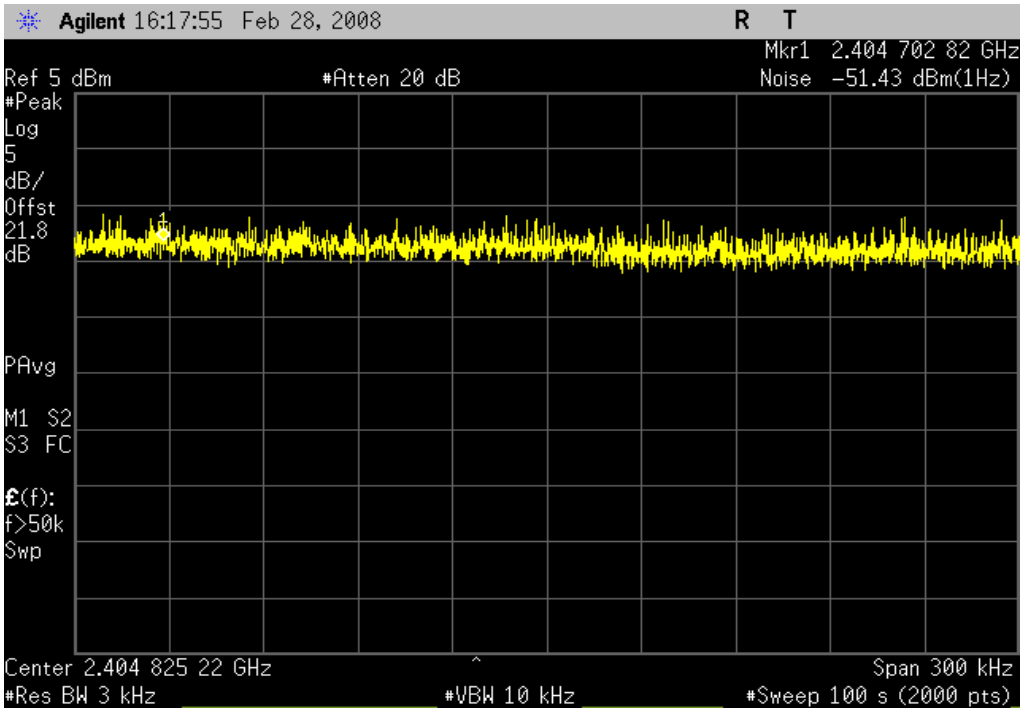
COMMENTS

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).

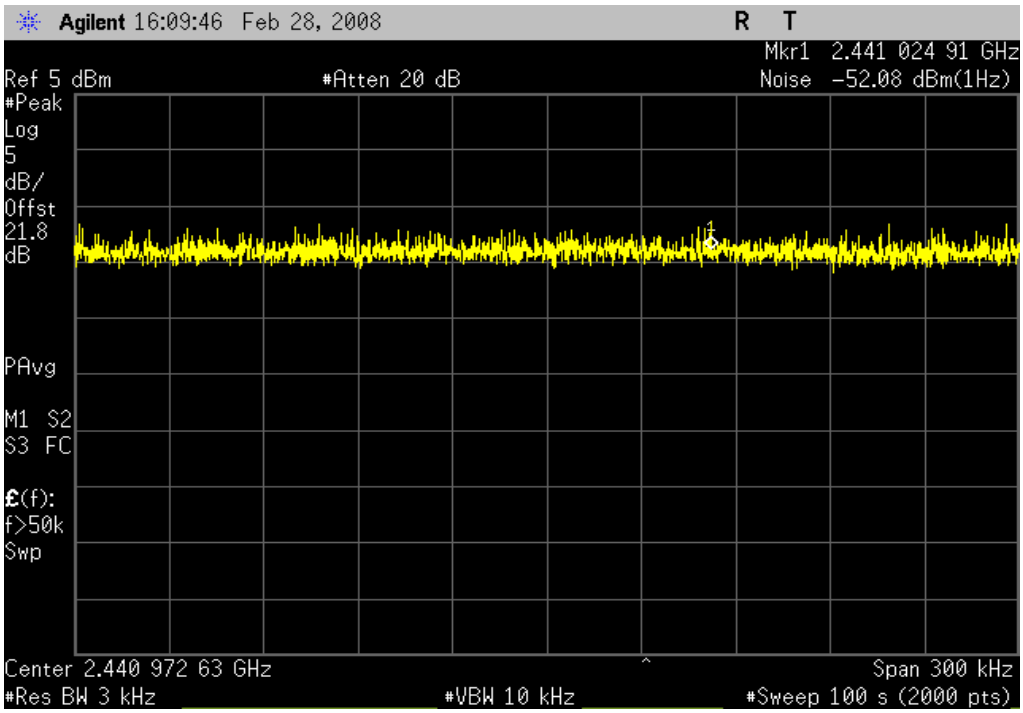
Configuration #	1, 2	Signature Holly Ashkannejhad

		Value	Limit	Results
AVMD7112 with PA, S/N: 5				
pi/4-DQPSK				
Low diversity antenna port				
	Low channel, Ch. 2, 2405MHz	-16.43 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	-17.08 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High channel, Ch. 38, 2477MHz	-18.44 dBm / 3 kHz	8 dBm / 3 kHz	Pass
AVMD7112 with out PA, S/N: 3				
pi/4-DQPSK				
Low diversity antenna port				
	Low channel, Ch. 2, 2405MHz	-26.26 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid channel, Ch. 20, 2441MHz	-26.66 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High channel, Ch. 38, 2477MHz	-25.66 dBm / 3 kHz	8 dBm / 3 kHz	Pass

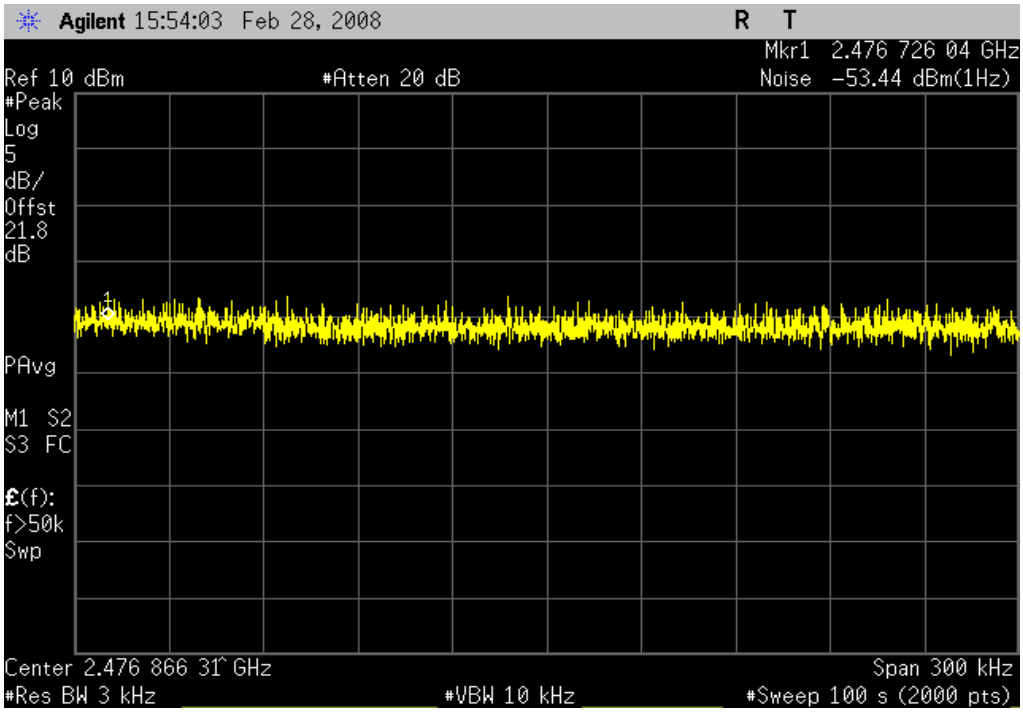
AVMD7112 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	-16.43 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



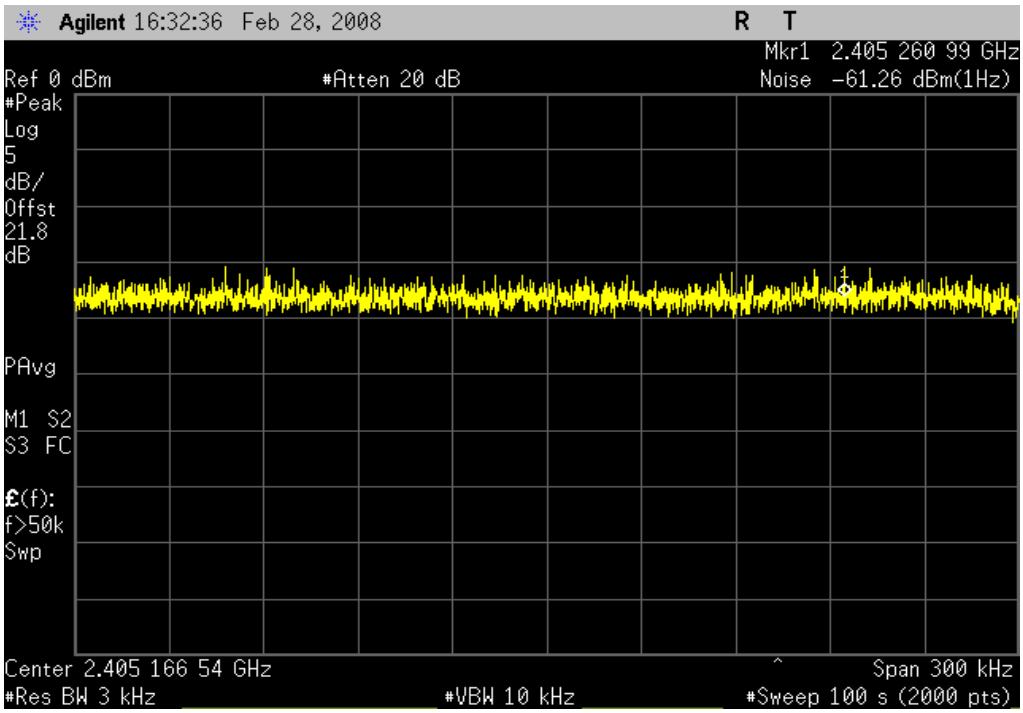
AVMD7112 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	-17.08 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



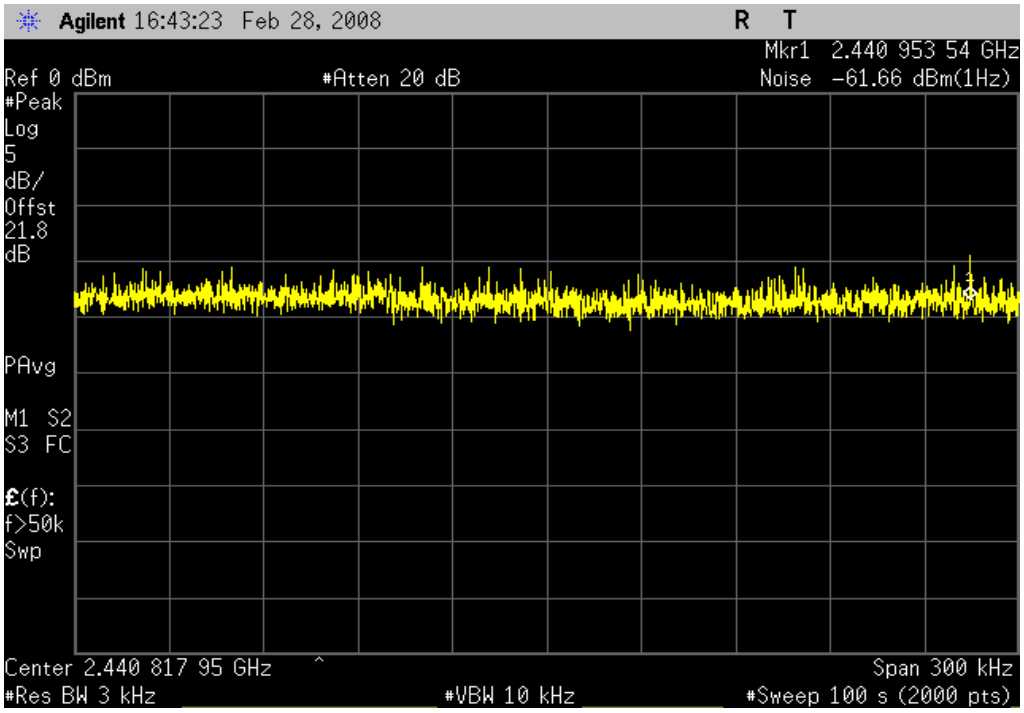
AVMD7112 with PA, S/N: 5, pi/4-DQPSK, Low diversity antenna port, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	-18.44 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



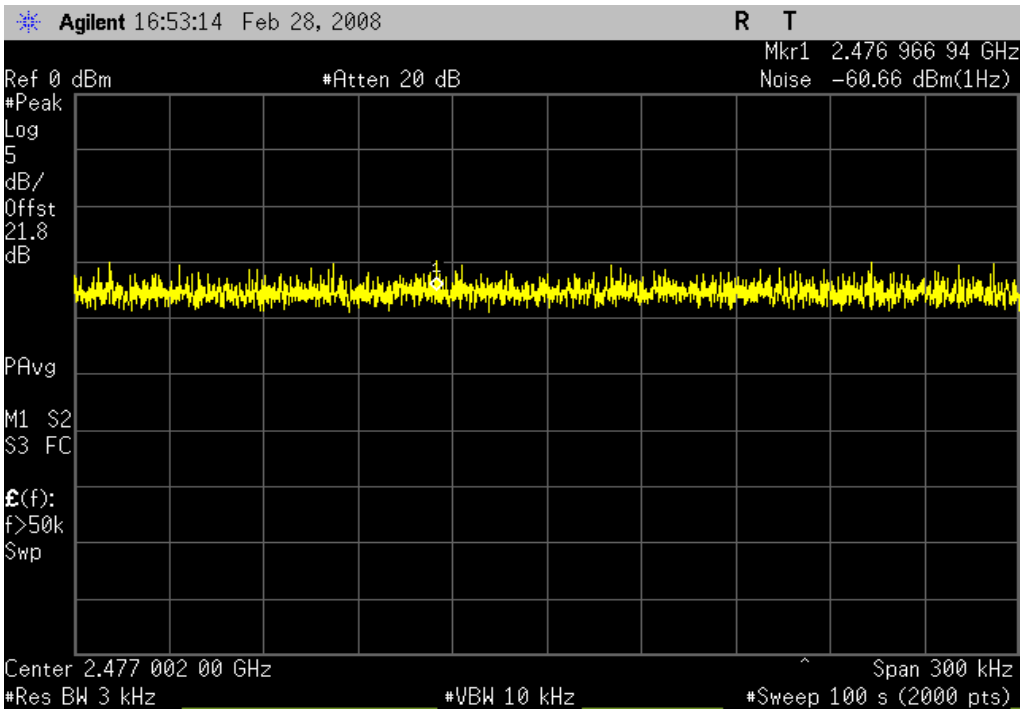
AVMD7112 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna port, Low channel, Ch. 2, 2405MHz					
Result:	Pass	**Value:**	-26.26 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

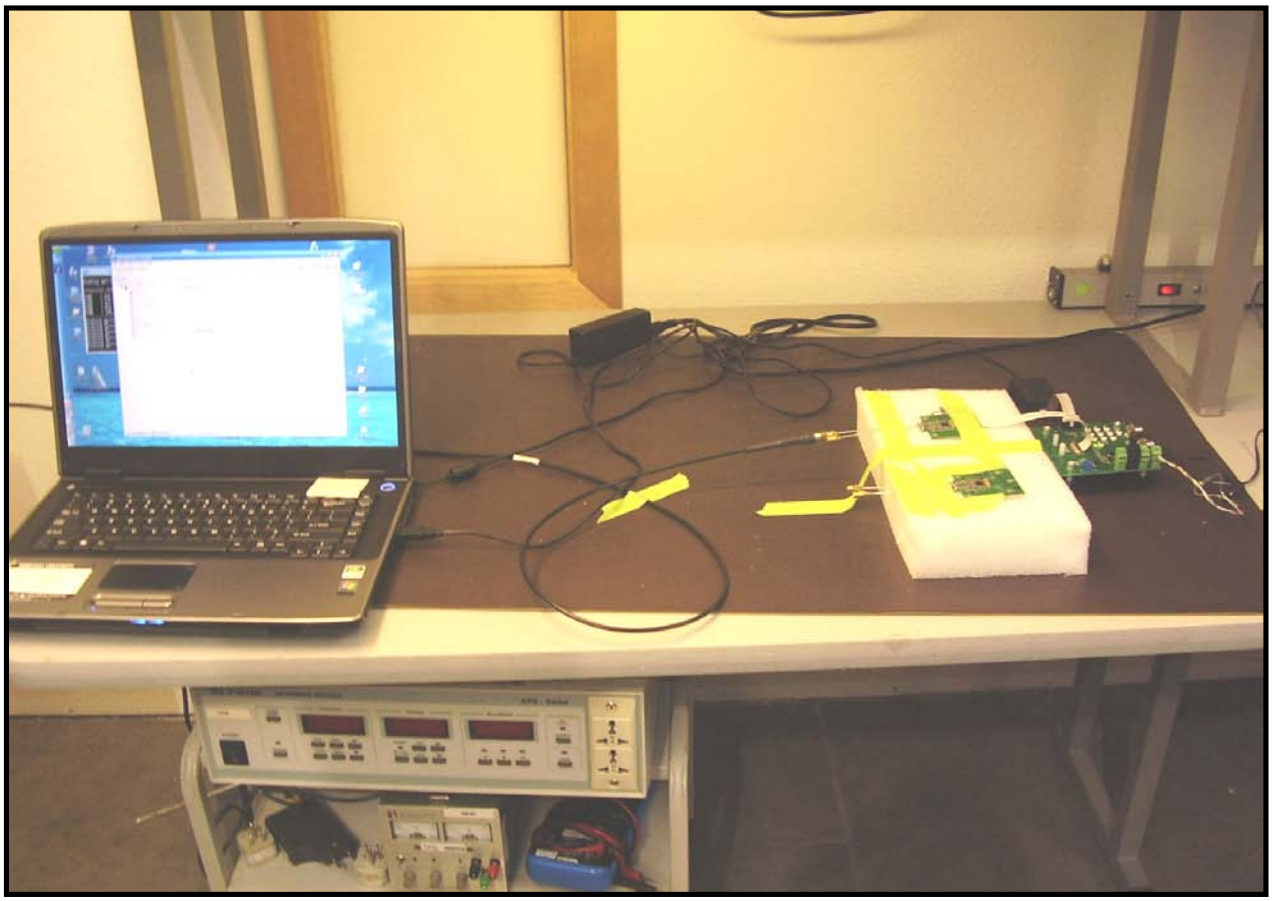


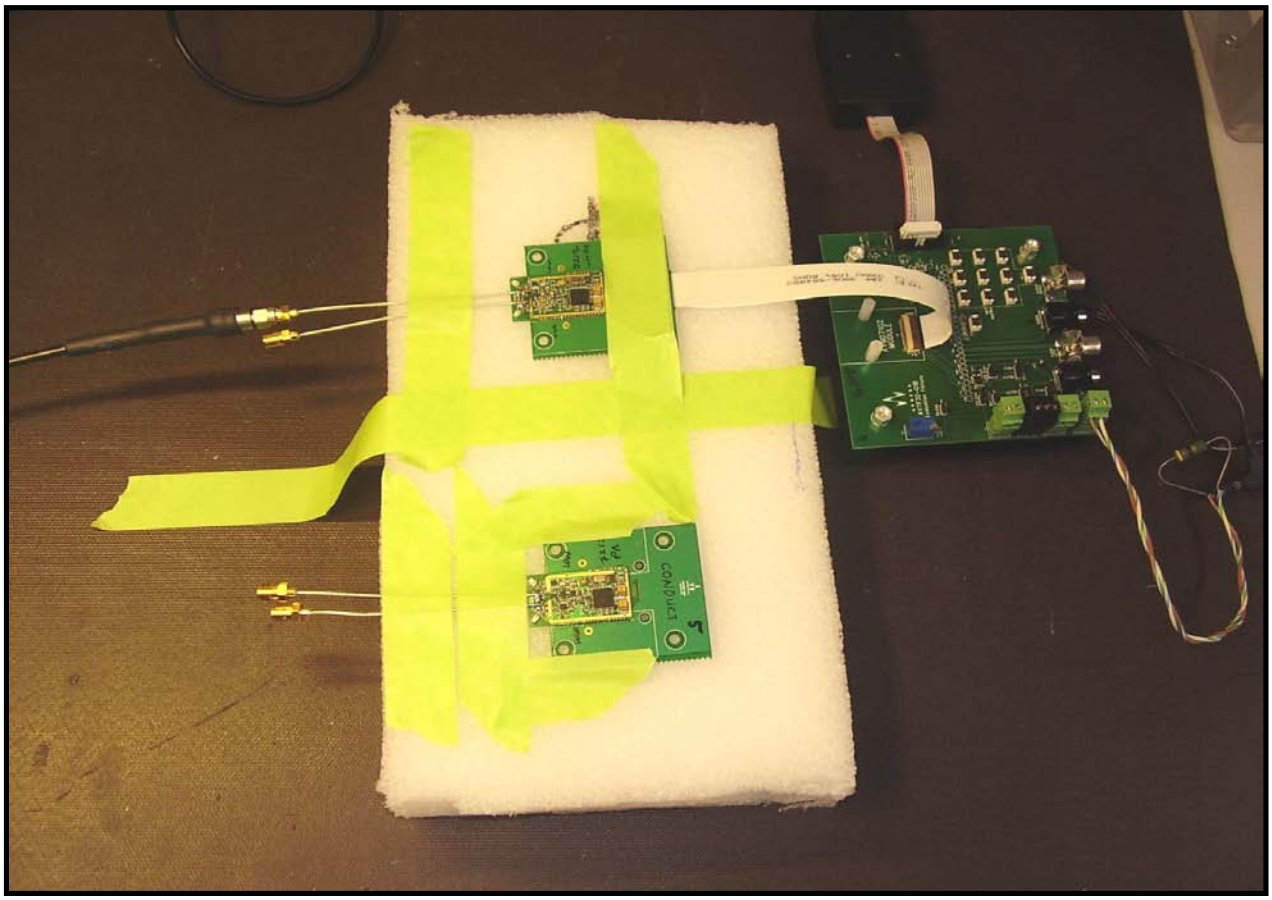
AVMD7112 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna port, Mid channel, Ch. 20, 2441MHz					
Result:	Pass	**Value:**	-26.66 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



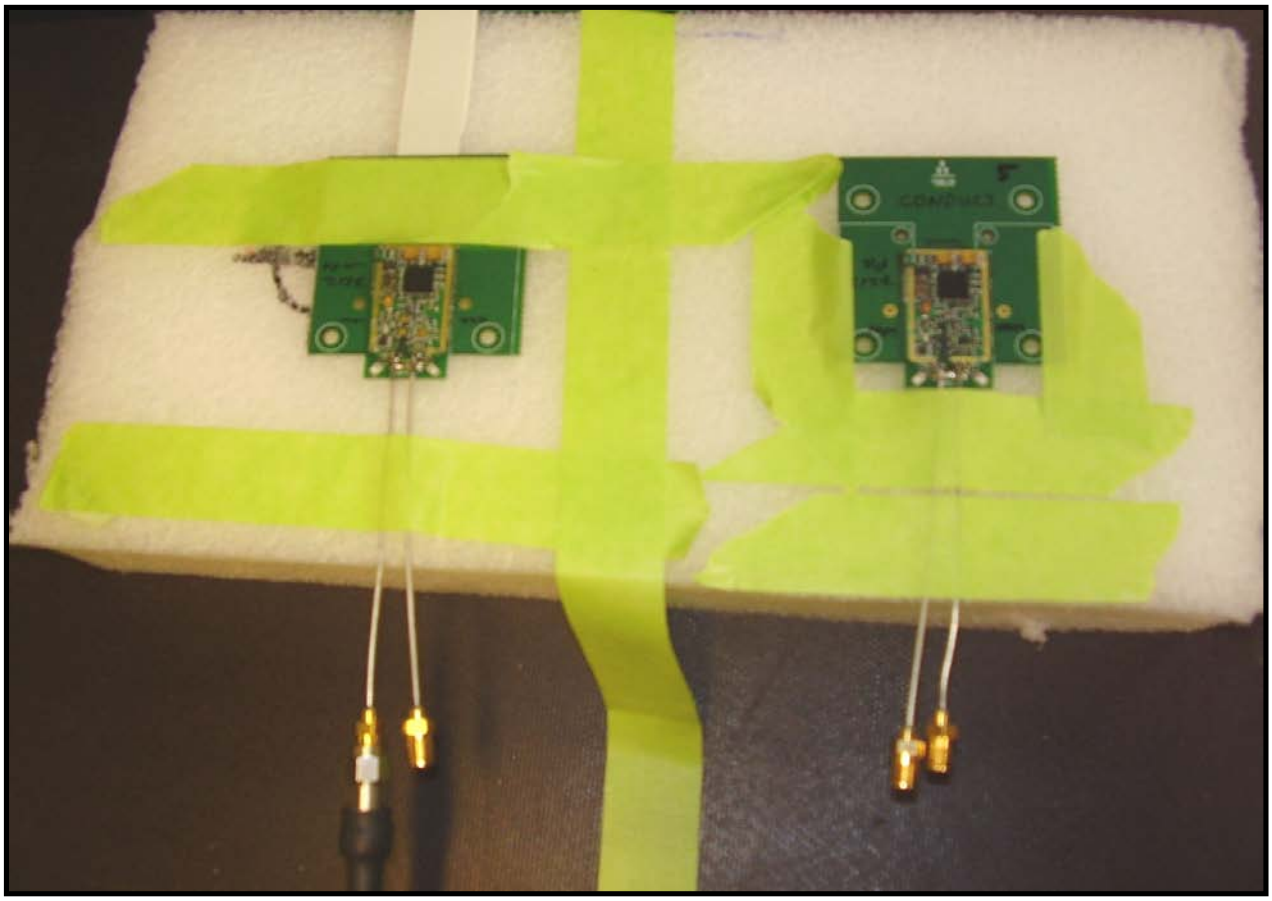
AVMD7112 with out PA, S/N: 3, pi/4-DQPSK, Low diversity antenna port, High channel, Ch. 38, 2477MHz					
Result:	Pass	**Value:**	-25.66 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz







Power Spectral Density



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

AVNE0020 - 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
High Pass Filter	T.T.E.	7766	HFG	2/5/2008	13 mo
Attenuator	Coaxicom	66702 2910-20	RBR	5/25/2007	13 mo
EV07 Cables		Conducted Cables	EVG	4/17/2007	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	1/4/2008	13 mo

MEASUREMENT BANDWIDTHS

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

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

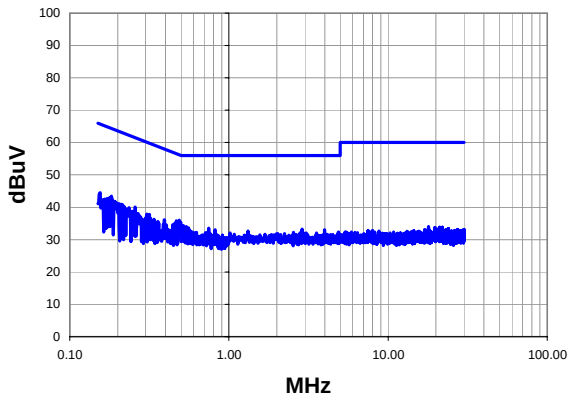
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:					

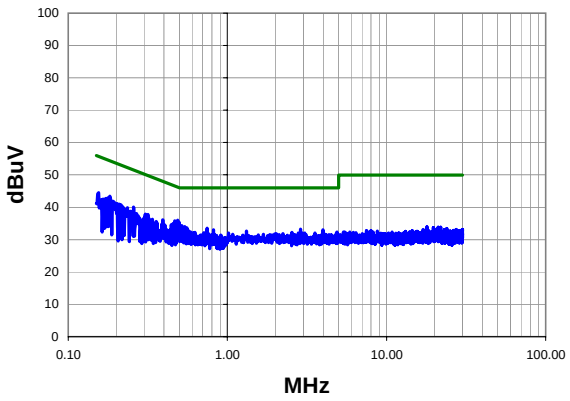
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



yes

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.487	15.2	20.8	36.0	56.2	-20.2
0.468	15.0	20.8	35.8	56.6	-20.7
0.182	22.1	21.4	43.5	64.4	-20.9
0.155	22.6	21.9	44.5	65.7	-21.2
0.257	19.1	21.0	40.1	61.5	-21.5
0.177	21.5	21.5	43.0	64.6	-21.7
0.516	13.5	20.8	34.3	56.0	-21.7
0.456	14.2	20.8	35.0	56.8	-21.7
0.391	15.2	20.9	36.1	58.0	-22.0
0.317	16.9	20.9	37.8	59.8	-22.0
0.539	13.2	20.8	34.0	56.0	-22.0
0.193	20.7	21.2	41.9	63.9	-22.1
0.172	21.2	21.6	42.8	64.9	-22.1
0.504	13.0	20.8	33.8	56.0	-22.2
0.210	20.0	21.0	41.0	63.2	-22.2
0.215	19.8	21.0	40.8	63.0	-22.2
0.305	16.9	20.9	37.8	60.1	-22.3
0.556	12.9	20.8	33.7	56.0	-22.3
0.444	13.8	20.8	34.6	57.0	-22.3
0.235	18.9	21.0	39.9	62.3	-22.4

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.487	15.2	20.8	36.0	46.2	-10.2
0.468	15.0	20.8	35.8	46.6	-10.7
0.182	22.1	21.4	43.5	54.4	-10.9
0.155	22.6	21.9	44.5	55.7	-11.2
0.257	19.1	21.0	40.1	51.5	-11.5
0.177	21.5	21.5	43.0	54.6	-11.7
0.516	13.5	20.8	34.3	46.0	-11.7
0.456	14.2	20.8	35.0	46.8	-11.7
0.391	15.2	20.9	36.1	48.0	-12.0
0.317	16.9	20.9	37.8	49.8	-12.0
0.539	13.2	20.8	34.0	46.0	-12.0
0.193	20.7	21.2	41.9	53.9	-12.1
0.172	21.2	21.6	42.8	54.9	-12.1
0.504	13.0	20.8	33.8	46.0	-12.2
0.210	20.0	21.0	41.0	53.2	-12.2
0.215	19.8	21.0	40.8	53.0	-12.2
0.305	16.9	20.9	37.8	50.1	-12.3
0.556	12.9	20.8	33.7	46.0	-12.3
0.444	13.8	20.8	34.6	47.0	-12.3
0.235	18.9	21.0	39.9	52.3	-12.4

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

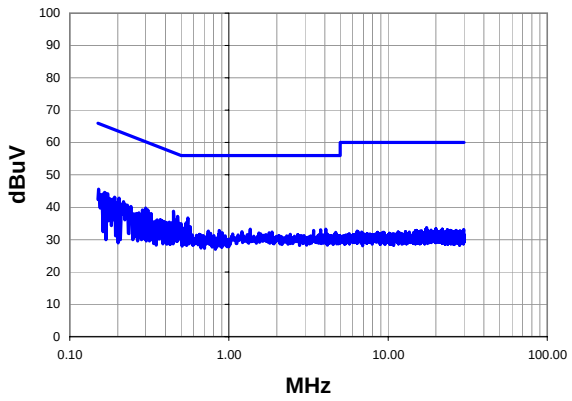
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:					

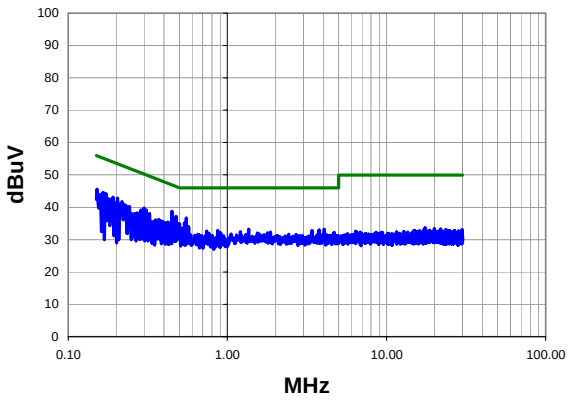
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.449	17.9	20.8	38.7	56.9	-18.1
0.476	16.4	20.8	37.2	56.4	-19.2
0.551	15.9	20.8	36.7	56.0	-19.3
0.471	15.4	20.8	36.2	56.5	-20.3
0.152	23.6	22.0	45.6	65.9	-20.3
0.300	18.8	20.9	39.7	60.3	-20.5
0.165	22.9	21.7	44.6	65.2	-20.6
0.172	22.7	21.6	44.3	64.9	-20.6
0.204	21.8	21.0	42.8	63.4	-20.6
0.544	14.5	20.8	35.3	56.0	-20.7
0.310	18.2	20.9	39.1	60.0	-20.8
0.538	14.3	20.8	35.1	56.0	-20.9
0.191	21.9	21.2	43.1	64.0	-20.9
0.500	14.1	20.8	34.9	56.0	-21.1
0.218	20.8	21.0	41.8	62.9	-21.1
0.488	14.2	20.8	35.0	56.2	-21.2
0.458	14.7	20.8	35.5	56.7	-21.2
0.293	18.1	20.9	39.0	60.4	-21.4
0.286	18.2	20.9	39.1	60.6	-21.5
0.323	17.2	20.9	38.1	59.6	-21.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.449	17.9	20.8	38.7	46.9	-8.1
0.476	16.4	20.8	37.2	46.4	-9.2
0.551	15.9	20.8	36.7	46.0	-9.3
0.471	15.4	20.8	36.2	46.5	-10.3
0.152	23.6	22.0	45.6	55.9	-10.3
0.300	18.8	20.9	39.7	50.3	-10.5
0.165	22.9	21.7	44.6	55.2	-10.6
0.172	22.7	21.6	44.3	54.9	-10.6
0.204	21.8	21.0	42.8	53.4	-10.6
0.544	14.5	20.8	35.3	46.0	-10.7
0.310	18.2	20.9	39.1	50.0	-10.8
0.538	14.3	20.8	35.1	46.0	-10.9
0.191	21.9	21.2	43.1	54.0	-10.9
0.500	14.1	20.8	34.9	46.0	-11.1
0.218	20.8	21.0	41.8	52.9	-11.1
0.488	14.2	20.8	35.0	46.2	-11.2
0.458	14.7	20.8	35.5	46.7	-11.2
0.293	18.1	20.9	39.0	50.4	-11.4
0.286	18.2	20.9	39.1	50.6	-11.5
0.323	17.2	20.9	38.1	49.6	-11.5

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

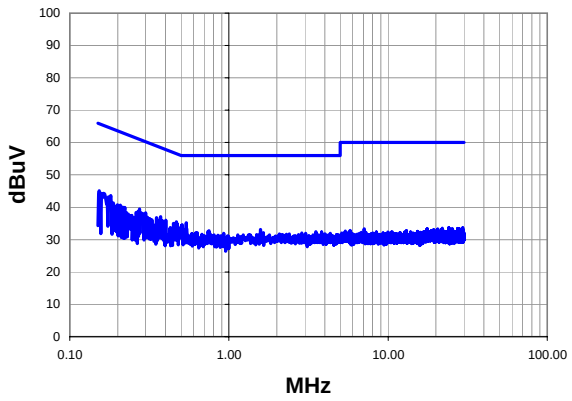
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:					

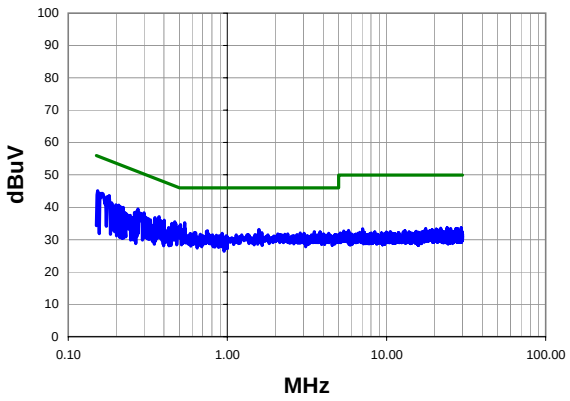
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.153	23.2	21.9	45.1	65.8	-20.7
0.539	14.4	20.8	35.2	56.0	-20.8
0.181	22.2	21.4	43.6	64.5	-20.9
0.466	14.7	20.8	35.5	56.6	-21.0
0.159	22.5	21.8	44.3	65.5	-21.2
0.373	16.2	20.9	37.1	58.4	-21.3
0.507	13.8	20.8	34.6	56.0	-21.4
0.475	14.1	20.8	34.9	56.4	-21.5
0.274	18.5	21.0	39.5	61.0	-21.5
0.504	13.5	20.8	34.3	56.0	-21.7
0.402	15.1	20.9	36.0	57.8	-21.8
0.448	14.2	20.8	35.0	56.9	-21.9
0.300	17.3	20.9	38.2	60.3	-22.0
0.351	15.9	20.9	36.8	58.9	-22.1
0.381	15.0	20.9	35.9	58.3	-22.4
0.281	17.3	20.9	38.2	60.8	-22.5
0.208	19.7	21.0	40.7	63.3	-22.6
0.543	12.6	20.8	33.4	56.0	-22.6
0.485	12.8	20.8	33.6	56.3	-22.6
0.267	17.6	21.0	38.6	61.2	-22.6

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.153	23.2	21.9	45.1	55.8	-10.7
0.539	14.4	20.8	35.2	46.0	-10.8
0.181	22.2	21.4	43.6	54.5	-10.9
0.466	14.7	20.8	35.5	46.6	-11.0
0.159	22.5	21.8	44.3	55.5	-11.2
0.373	16.2	20.9	37.1	48.4	-11.3
0.507	13.8	20.8	34.6	46.0	-11.4
0.475	14.1	20.8	34.9	46.4	-11.5
0.274	18.5	21.0	39.5	51.0	-11.5
0.504	13.5	20.8	34.3	46.0	-11.7
0.402	15.1	20.9	36.0	47.8	-11.8
0.448	14.2	20.8	35.0	46.9	-11.9
0.300	17.3	20.9	38.2	50.3	-12.0
0.351	15.9	20.9	36.8	48.9	-12.1
0.381	15.0	20.9	35.9	48.3	-12.4
0.281	17.3	20.9	38.2	50.8	-12.5
0.208	19.7	21.0	40.7	53.3	-12.6
0.543	12.6	20.8	33.4	46.0	-12.6
0.485	12.8	20.8	33.6	46.3	-12.6
0.267	17.6	21.0	38.6	51.2	-12.6

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

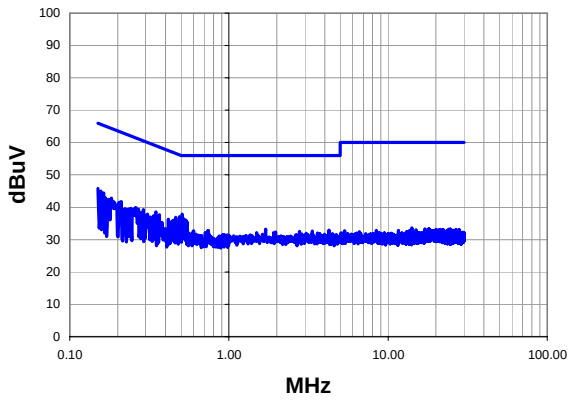
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:					

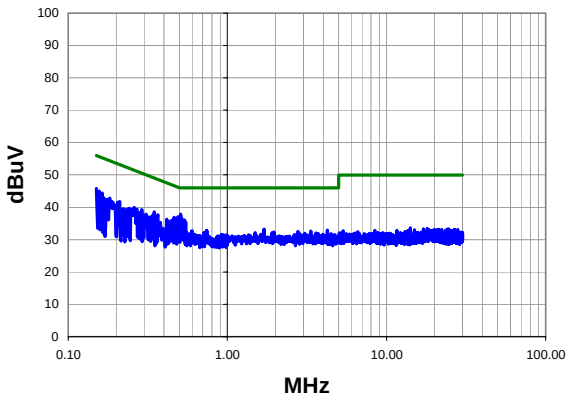
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.509	17.1	20.8	37.9	56.0	-18.1
0.488	16.3	20.8	37.1	56.2	-19.1
0.516	15.8	20.8	36.6	56.0	-19.4
0.463	16.1	20.8	36.9	56.6	-19.7
0.493	15.4	20.8	36.2	56.1	-19.9
0.534	15.3	20.8	36.1	56.0	-19.9
0.150	23.8	22.0	45.8	66.0	-20.2
0.539	15.0	20.8	35.8	56.0	-20.2
0.527	14.8	20.8	35.6	56.0	-20.4
0.347	17.7	20.9	38.6	59.0	-20.4
0.548	14.6	20.8	35.4	56.0	-20.6
0.157	23.1	21.9	45.0	65.6	-20.7
0.500	14.5	20.8	35.3	56.0	-20.7
0.451	15.2	20.8	36.0	56.9	-20.8
0.164	22.7	21.7	44.4	65.3	-20.9
0.366	16.8	20.9	37.7	58.6	-20.9
0.442	15.0	20.8	35.8	57.0	-21.2
0.417	15.4	20.9	36.3	57.5	-21.2
0.289	18.3	20.9	39.2	60.5	-21.3
0.182	21.5	21.4	42.9	64.4	-21.5

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.509	17.1	20.8	37.9	46.0	-8.1
0.488	16.3	20.8	37.1	46.2	-9.1
0.516	15.8	20.8	36.6	46.0	-9.4
0.463	16.1	20.8	36.9	46.6	-9.7
0.493	15.4	20.8	36.2	46.1	-9.9
0.534	15.3	20.8	36.1	46.0	-9.9
0.150	23.8	22.0	45.8	56.0	-10.2
0.539	15.0	20.8	35.8	46.0	-10.2
0.527	14.8	20.8	35.6	46.0	-10.4
0.347	17.7	20.9	38.6	49.0	-10.4
0.548	14.6	20.8	35.4	46.0	-10.6
0.157	23.1	21.9	45.0	55.6	-10.7
0.500	14.5	20.8	35.3	46.0	-10.7
0.451	15.2	20.8	36.0	46.9	-10.8
0.164	22.7	21.7	44.4	55.3	-10.9
0.366	16.8	20.9	37.7	48.6	-10.9
0.442	15.0	20.8	35.8	47.0	-11.2
0.417	15.4	20.9	36.3	47.5	-11.2
0.289	18.3	20.9	39.2	50.5	-11.3
0.182	21.5	21.4	42.9	54.4	-11.5

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

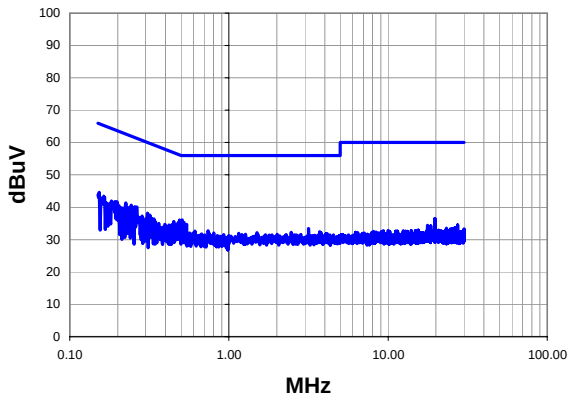
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:					

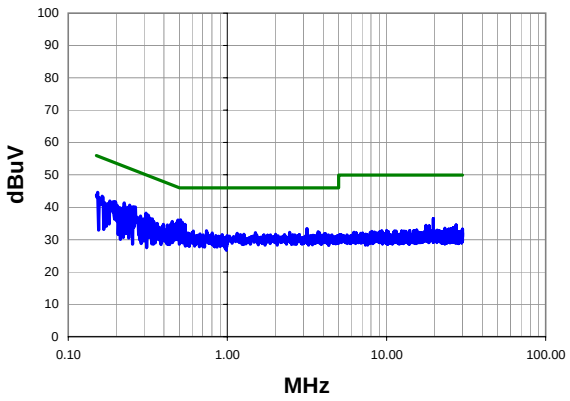
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.509	15.3	20.8	36.1	56.0	-19.9
0.490	15.2	20.8	36.0	56.2	-20.1
0.522	14.5	20.8	35.3	56.0	-20.7
0.485	14.7	20.8	35.5	56.3	-20.7
0.153	22.7	21.9	44.6	65.8	-21.2
0.451	14.8	20.8	35.6	56.9	-21.2
0.225	20.4	21.0	41.4	62.6	-21.3
0.262	19.1	21.0	40.1	61.4	-21.3
0.243	19.7	21.0	40.7	62.0	-21.3
0.541	13.9	20.8	34.7	56.0	-21.3
0.476	14.2	20.8	35.0	56.4	-21.4
0.255	19.2	21.0	40.2	61.6	-21.4
0.250	19.0	21.0	40.0	61.7	-21.8
0.164	21.7	21.7	43.4	65.3	-21.9
0.308	17.2	20.9	38.1	60.0	-21.9
0.198	20.7	21.0	41.7	63.7	-22.0
0.468	13.7	20.8	34.5	56.6	-22.0
0.318	16.7	20.9	37.6	59.8	-22.1
0.193	20.6	21.2	41.8	63.9	-22.2
0.237	19.0	21.0	40.0	62.2	-22.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.509	15.3	20.8	36.1	46.0	-9.9
0.490	15.2	20.8	36.0	46.2	-10.1
0.522	14.5	20.8	35.3	46.0	-10.7
0.485	14.7	20.8	35.5	46.3	-10.7
0.153	22.7	21.9	44.6	55.8	-11.2
0.451	14.8	20.8	35.6	46.9	-11.2
0.225	20.4	21.0	41.4	52.6	-11.3
0.262	19.1	21.0	40.1	51.4	-11.3
0.243	19.7	21.0	40.7	52.0	-11.3
0.541	13.9	20.8	34.7	46.0	-11.3
0.476	14.2	20.8	35.0	46.4	-11.4
0.255	19.2	21.0	40.2	51.6	-11.4
0.250	19.0	21.0	40.0	51.7	-11.8
0.164	21.7	21.7	43.4	55.3	-11.9
0.308	17.2	20.9	38.1	50.0	-11.9
0.198	20.7	21.0	41.7	53.7	-12.0
0.468	13.7	20.8	34.5	46.6	-12.0
0.318	16.7	20.9	37.6	49.8	-12.1
0.193	20.6	21.2	41.8	53.9	-12.2
0.237	19.0	21.0	40.0	52.2	-12.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

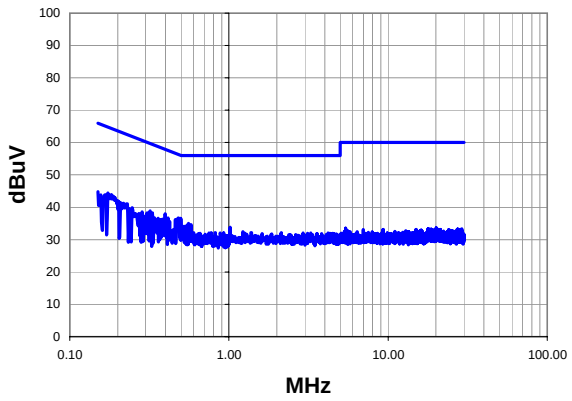
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:					

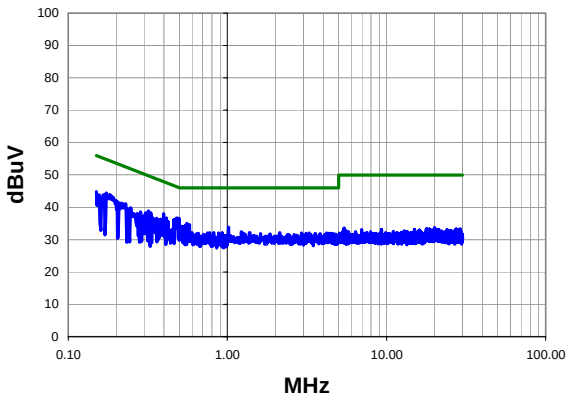
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

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

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit

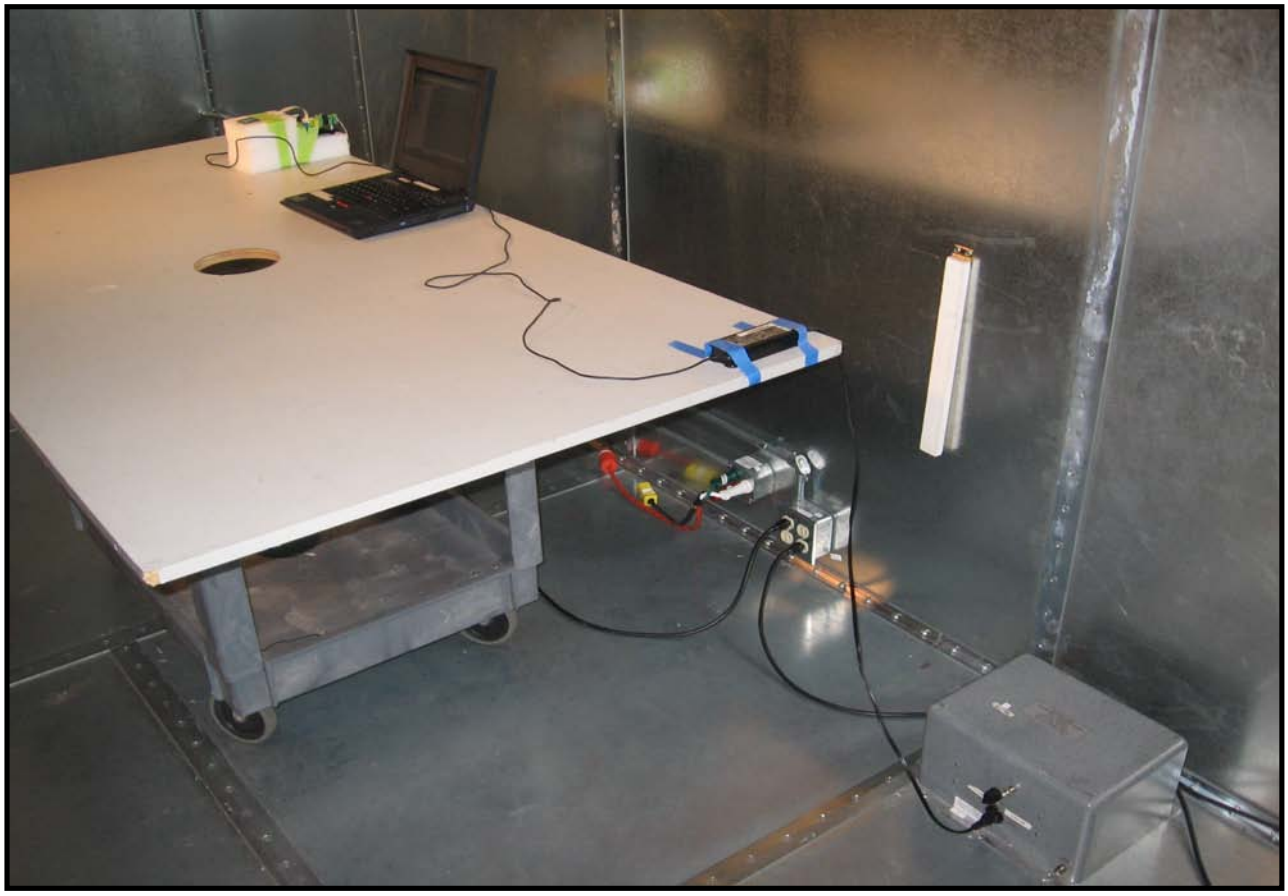


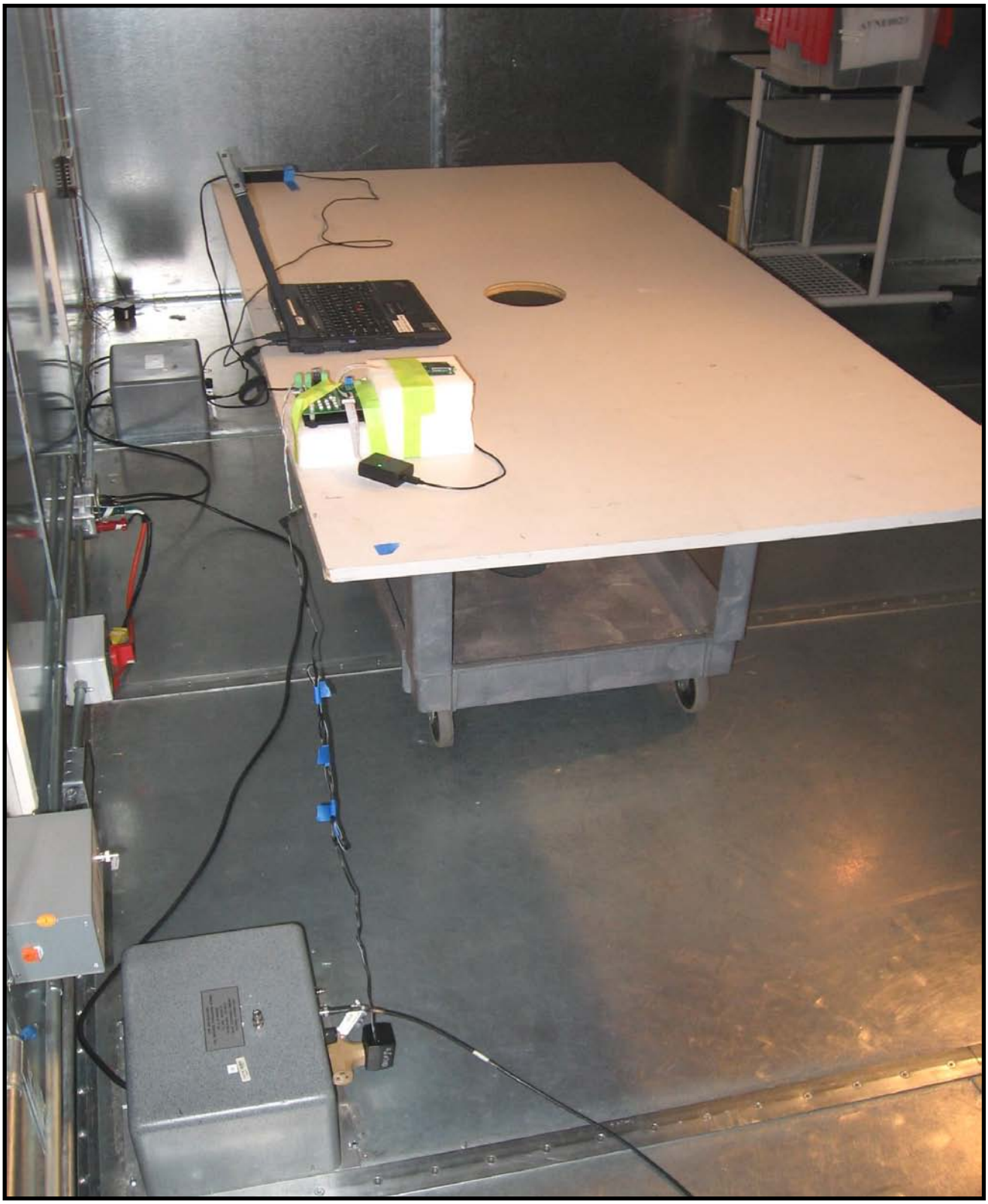
Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.495	15.8	20.8	36.6	56.1	-19.5
0.499	15.7	20.8	36.5	56.0	-19.5
0.480	15.9	20.8	36.7	56.3	-19.6
0.398	17.1	20.9	38.0	57.9	-19.9
0.174	22.9	21.5	44.4	64.8	-20.4
0.461	15.4	20.8	36.2	56.7	-20.4
0.320	17.9	20.9	38.8	59.7	-20.9
0.414	15.8	20.9	36.7	57.6	-20.9
0.558	14.2	20.8	35.0	56.0	-21.0
0.330	17.4	20.9	38.3	59.4	-21.1
0.169	22.2	21.6	43.8	65.0	-21.2
0.150	22.8	22.0	44.8	66.0	-21.2
0.578	13.9	20.8	34.7	56.0	-21.3
0.553	13.8	20.8	34.6	56.0	-21.4
0.544	13.6	20.8	34.4	56.0	-21.6
0.157	22.0	21.9	43.9	65.6	-21.8
0.424	14.7	20.9	35.6	57.4	-21.8
0.210	20.4	21.0	41.4	63.2	-21.8
0.306	17.3	20.9	38.2	60.1	-21.8
0.323	16.8	20.9	37.7	59.6	-21.9

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.495	15.8	20.8	36.6	46.1	-9.5
0.499	15.7	20.8	36.5	46.0	-9.5
0.480	15.9	20.8	36.7	46.3	-9.6
0.398	17.1	20.9	38.0	47.9	-9.9
0.174	22.9	21.5	44.4	54.8	-10.4
0.461	15.4	20.8	36.2	46.7	-10.4
0.320	17.9	20.9	38.8	49.7	-10.9
0.414	15.8	20.9	36.7	47.6	-10.9
0.558	14.2	20.8	35.0	46.0	-11.0
0.330	17.4	20.9	38.3	49.4	-11.1
0.169	22.2	21.6	43.8	55.0	-11.2
0.150	22.8	22.0	44.8	56.0	-11.2
0.578	13.9	20.8	34.7	46.0	-11.3
0.553	13.8	20.8	34.6	46.0	-11.4
0.544	13.6	20.8	34.4	46.0	-11.6
0.157	22.0	21.9	43.9	55.6	-11.8
0.424	14.7	20.9	35.6	47.4	-11.8
0.210	20.4	21.0	41.4	53.2	-11.8
0.306	17.3	20.9	38.2	50.1	-11.8
0.323	16.8	20.9	37.7	49.6	-11.9





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

AVNE0020 - 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
High Pass Filter	T.T.E.	7766	HFG	2/5/2008	13 mo
Attenuator	Coaxicom	66702 2910-20	RBR	5/25/2007	13 mo
EV07 Cables		Conducted Cables	EVG	4/17/2007	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	1/4/2008	13 mo

MEASUREMENT BANDWIDTHS

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

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

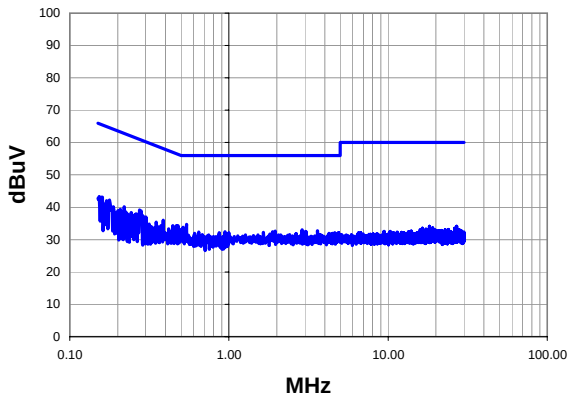
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:	None				

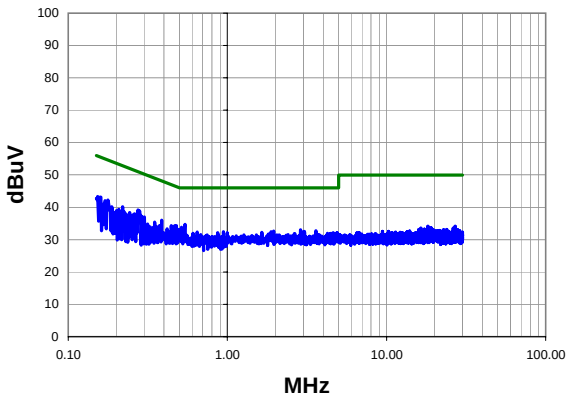
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

Run #	1	**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)
0.541	13.9	20.8	34.7	56.0	-21.3
0.274	18.2	21.0	39.2	61.0	-21.8
0.478	13.5	20.8	34.3	56.4	-22.0
0.386	15.1	20.9	36.0	58.1	-22.2
0.514	13.0	20.8	33.8	56.0	-22.2
0.468	13.5	20.8	34.3	56.6	-22.2
0.177	20.8	21.5	42.3	64.6	-22.4
0.159	21.3	21.8	43.1	65.5	-22.4
0.153	21.4	21.9	43.3	65.8	-22.5
0.444	13.5	20.8	34.3	57.0	-22.6
0.220	19.2	21.0	40.2	62.8	-22.6
0.170	20.4	21.6	42.0	64.9	-22.9
0.493	12.3	20.8	33.1	56.1	-23.0
0.458	12.9	20.8	33.7	56.7	-23.0
2.880	12.5	20.5	33.0	56.0	-23.0
0.533	12.2	20.8	33.0	56.0	-23.0
0.301	16.1	20.9	37.0	60.2	-23.2
0.269	16.9	21.0	37.9	61.1	-23.3
3.608	12.2	20.5	32.7	56.0	-23.3
0.289	16.2	20.9	37.1	60.5	-23.4

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.541	13.9	20.8	34.7	46.0	-11.3
0.274	18.2	21.0	39.2	51.0	-11.8
0.478	13.5	20.8	34.3	46.4	-12.0
0.386	15.1	20.9	36.0	48.1	-12.2
0.514	13.0	20.8	33.8	46.0	-12.2
0.468	13.5	20.8	34.3	46.6	-12.2
0.177	20.8	21.5	42.3	54.6	-12.4
0.159	21.3	21.8	43.1	55.5	-12.4
0.153	21.4	21.9	43.3	55.8	-12.5
0.444	13.5	20.8	34.3	47.0	-12.6
0.220	19.2	21.0	40.2	52.8	-12.6
0.170	20.4	21.6	42.0	54.9	-12.9
0.493	12.3	20.8	33.1	46.1	-13.0
0.458	12.9	20.8	33.7	46.7	-13.0
2.880	12.5	20.5	33.0	46.0	-13.0
0.533	12.2	20.8	33.0	46.0	-13.0
0.301	16.1	20.9	37.0	50.2	-13.2
0.269	16.9	21.0	37.9	51.1	-13.3
3.608	12.2	20.5	32.7	46.0	-13.3
0.289	16.2	20.9	37.1	50.5	-13.4

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

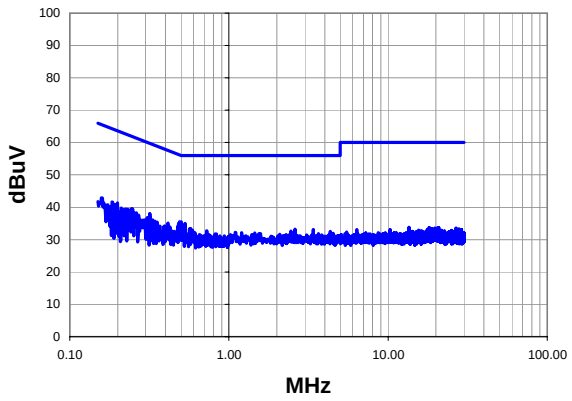
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:	None				

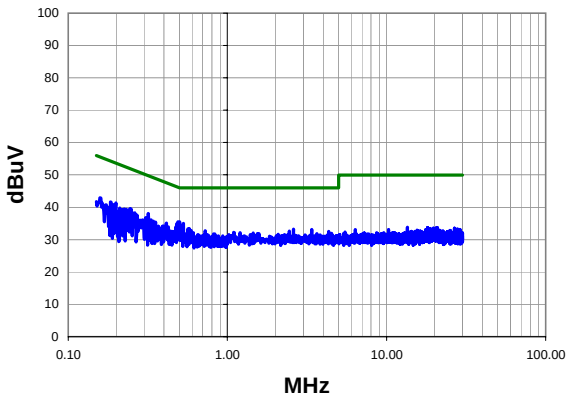
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

Run #	2	**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)
0.502	14.7	20.8	35.5	56.0	-20.5
0.488	14.7	20.8	35.5	56.2	-20.7
0.529	14.2	20.8	35.0	56.0	-21.0
0.483	14.2	20.8	35.0	56.3	-21.3
0.318	17.2	20.9	38.1	59.8	-21.6
0.512	13.3	20.8	34.1	56.0	-21.9
0.521	13.1	20.8	33.9	56.0	-22.1
0.247	18.6	21.0	39.6	61.9	-22.3
0.199	20.3	21.0	41.3	63.6	-22.3
0.476	13.2	20.8	34.0	56.4	-22.4
0.414	14.2	20.9	35.1	57.6	-22.5
0.575	12.7	20.8	33.5	56.0	-22.5
0.159	21.1	21.8	42.9	65.5	-22.6
0.565	12.6	20.8	33.4	56.0	-22.6
0.184	20.3	21.3	41.6	64.3	-22.7
2.600	12.7	20.5	33.2	56.0	-22.8
3.384	12.6	20.5	33.1	56.0	-22.9
0.232	18.4	21.0	39.4	62.4	-23.0
0.313	15.9	20.9	36.8	59.9	-23.1
0.262	17.3	21.0	38.3	61.4	-23.1

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.502	14.7	20.8	35.5	46.0	-10.5
0.488	14.7	20.8	35.5	46.2	-10.7
0.529	14.2	20.8	35.0	46.0	-11.0
0.483	14.2	20.8	35.0	46.3	-11.3
0.318	17.2	20.9	38.1	49.8	-11.6
0.512	13.3	20.8	34.1	46.0	-11.9
0.521	13.1	20.8	33.9	46.0	-12.1
0.247	18.6	21.0	39.6	51.9	-12.3
0.199	20.3	21.0	41.3	53.6	-12.3
0.476	13.2	20.8	34.0	46.4	-12.4
0.414	14.2	20.9	35.1	47.6	-12.5
0.575	12.7	20.8	33.5	46.0	-12.5
0.159	21.1	21.8	42.9	55.5	-12.6
0.565	12.6	20.8	33.4	46.0	-12.6
0.184	20.3	21.3	41.6	54.3	-12.7
2.600	12.7	20.5	33.2	46.0	-12.8
3.384	12.6	20.5	33.1	46.0	-12.9
0.232	18.4	21.0	39.4	52.4	-13.0
0.313	15.9	20.9	36.8	49.9	-13.1
0.262	17.3	21.0	38.3	51.4	-13.1

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

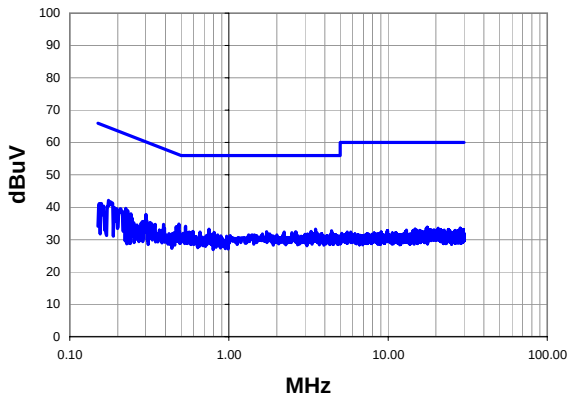
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:	None				

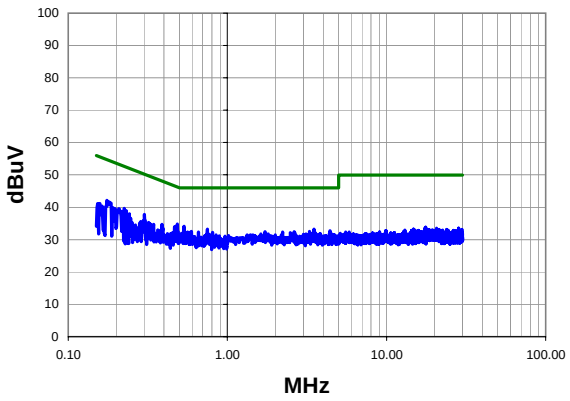
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.485	14.0	20.8	34.8	56.3	-21.4
0.534	13.3	20.8	34.1	56.0	-21.9
0.478	13.3	20.8	34.1	56.4	-22.2
0.301	16.8	20.9	37.7	60.2	-22.5
0.466	13.2	20.8	34.0	56.6	-22.5
0.176	20.6	21.5	42.1	64.7	-22.6
0.748	12.6	20.7	33.3	56.0	-22.7
3.504	12.7	20.5	33.2	56.0	-22.8
0.225	18.7	21.0	39.7	62.6	-23.0
4.416	12.2	20.5	32.7	56.0	-23.3
0.232	18.0	21.0	39.0	62.4	-23.4
0.388	13.8	20.9	34.7	58.1	-23.4
0.595	11.8	20.8	32.6	56.0	-23.4
3.288	12.0	20.5	32.5	56.0	-23.5
1.728	11.9	20.5	32.4	56.0	-23.6
2.632	11.9	20.5	32.4	56.0	-23.6
0.563	11.6	20.8	32.4	56.0	-23.6
0.658	11.6	20.7	32.3	56.0	-23.7
0.208	18.6	21.0	39.6	63.3	-23.7
2.224	11.8	20.5	32.3	56.0	-23.7

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.485	14.0	20.8	34.8	46.3	-11.4
0.534	13.3	20.8	34.1	46.0	-11.9
0.478	13.3	20.8	34.1	46.4	-12.2
0.301	16.8	20.9	37.7	50.2	-12.5
0.466	13.2	20.8	34.0	46.6	-12.5
0.176	20.6	21.5	42.1	54.7	-12.6
0.748	12.6	20.7	33.3	46.0	-12.7
3.504	12.7	20.5	33.2	46.0	-12.8
0.225	18.7	21.0	39.7	52.6	-13.0
4.416	12.2	20.5	32.7	46.0	-13.3
0.232	18.0	21.0	39.0	52.4	-13.4
0.388	13.8	20.9	34.7	48.1	-13.4
0.595	11.8	20.8	32.6	46.0	-13.4
3.288	12.0	20.5	32.5	46.0	-13.5
1.728	11.9	20.5	32.4	46.0	-13.6
2.632	11.9	20.5	32.4	46.0	-13.6
0.563	11.6	20.8	32.4	46.0	-13.6
0.658	11.6	20.7	32.3	46.0	-13.7
0.208	18.6	21.0	39.6	53.3	-13.7
2.224	11.8	20.5	32.3	46.0	-13.7

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

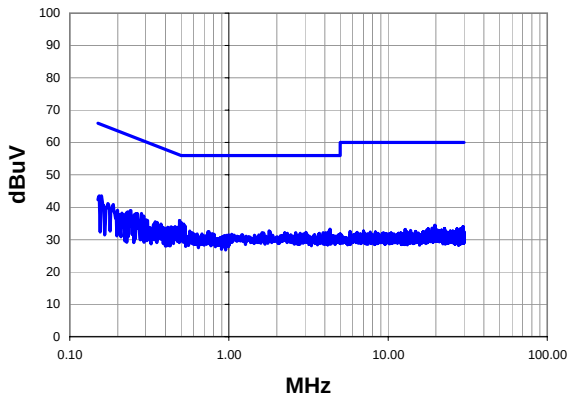
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:	None				

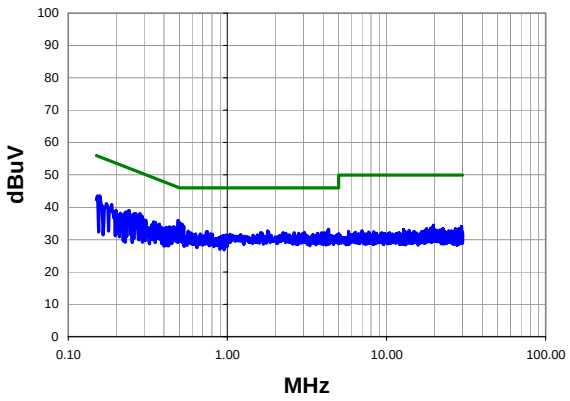
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.488	15.1	20.8	35.9	56.2	-20.3
0.500	14.5	20.8	35.3	56.0	-20.7
0.521	14.0	20.8	34.8	56.0	-21.2
0.507	13.5	20.8	34.3	56.0	-21.7
0.516	13.5	20.8	34.3	56.0	-21.7
0.531	13.3	20.8	34.1	56.0	-21.9
0.159	21.7	21.8	43.5	65.5	-22.0
0.153	21.6	21.9	43.5	65.8	-22.3
0.478	13.0	20.8	33.8	56.4	-22.5
0.283	17.1	20.9	38.0	60.7	-22.7
0.458	13.2	20.8	34.0	56.7	-22.7
4.320	12.7	20.5	33.2	56.0	-22.8
0.461	12.8	20.8	33.6	56.7	-23.0
0.240	18.0	21.0	39.0	62.1	-23.1
0.266	17.1	21.0	38.1	61.3	-23.2
0.291	16.3	20.9	37.2	60.5	-23.2
0.432	13.1	20.9	34.0	57.2	-23.3
0.437	13.0	20.9	33.9	57.1	-23.3
0.187	19.6	21.3	40.9	64.2	-23.3
0.567	11.9	20.8	32.7	56.0	-23.3

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.488	15.1	20.8	35.9	46.2	-10.3
0.500	14.5	20.8	35.3	46.0	-10.7
0.521	14.0	20.8	34.8	46.0	-11.2
0.507	13.5	20.8	34.3	46.0	-11.7
0.516	13.5	20.8	34.3	46.0	-11.7
0.531	13.3	20.8	34.1	46.0	-11.9
0.159	21.7	21.8	43.5	55.5	-12.0
0.153	21.6	21.9	43.5	55.8	-12.3
0.478	13.0	20.8	33.8	46.4	-12.5
0.283	17.1	20.9	38.0	50.7	-12.7
0.458	13.2	20.8	34.0	46.7	-12.7
4.320	12.7	20.5	33.2	46.0	-12.8
0.461	12.8	20.8	33.6	46.7	-13.0
0.240	18.0	21.0	39.0	52.1	-13.1
0.266	17.1	21.0	38.1	51.3	-13.2
0.291	16.3	20.9	37.2	50.5	-13.2
0.432	13.1	20.9	34.0	47.2	-13.3
0.437	13.0	20.9	33.9	47.1	-13.3
0.187	19.6	21.3	40.9	54.2	-13.3
0.567	11.9	20.8	32.7	46.0	-13.3

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

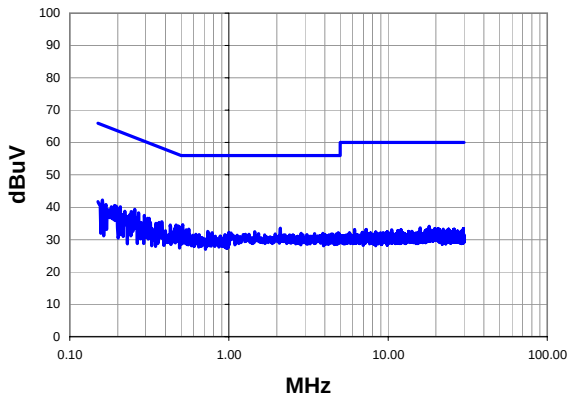
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:	None				

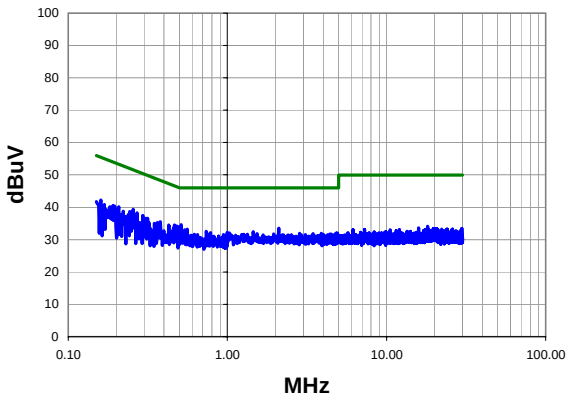
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.512	13.8	20.8	34.6	56.0	-21.4
0.465	13.7	20.8	34.5	56.6	-22.1
0.480	13.4	20.8	34.2	56.3	-22.1
0.255	18.4	21.0	39.4	61.6	-22.2
0.499	12.9	20.8	33.7	56.0	-22.3
2.104	13.0	20.5	33.5	56.0	-22.5
0.560	12.5	20.8	33.3	56.0	-22.7
0.427	13.7	20.9	34.6	57.3	-22.8
0.378	14.6	20.9	35.5	58.3	-22.8
0.271	17.3	21.0	38.3	61.1	-22.8
0.295	16.5	20.9	37.4	60.4	-23.0
0.539	12.2	20.8	33.0	56.0	-23.0
0.458	12.8	20.8	33.6	56.7	-23.1
0.208	19.2	21.0	40.2	63.3	-23.1
0.315	15.7	20.9	36.6	59.8	-23.2
0.160	20.4	21.8	42.2	65.5	-23.3
0.243	17.7	21.0	38.7	62.0	-23.3
0.364	14.4	20.9	35.3	58.6	-23.3
0.308	15.7	20.9	36.6	60.0	-23.4
0.196	19.3	21.1	40.4	63.8	-23.4

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.512	13.8	20.8	34.6	46.0	-11.4
0.465	13.7	20.8	34.5	46.6	-12.1
0.480	13.4	20.8	34.2	46.3	-12.1
0.255	18.4	21.0	39.4	51.6	-12.2
0.499	12.9	20.8	33.7	46.0	-12.3
2.104	13.0	20.5	33.5	46.0	-12.5
0.560	12.5	20.8	33.3	46.0	-12.7
0.427	13.7	20.9	34.6	47.3	-12.8
0.378	14.6	20.9	35.5	48.3	-12.8
0.271	17.3	21.0	38.3	51.1	-12.8
0.295	16.5	20.9	37.4	50.4	-13.0
0.539	12.2	20.8	33.0	46.0	-13.0
0.458	12.8	20.8	33.6	46.7	-13.1
0.208	19.2	21.0	40.2	53.3	-13.1
0.315	15.7	20.9	36.6	49.8	-13.2
0.160	20.4	21.8	42.2	55.5	-13.3
0.243	17.7	21.0	38.7	52.0	-13.3
0.364	14.4	20.9	35.3	48.6	-13.3
0.308	15.7	20.9	36.6	50.0	-13.4
0.196	19.3	21.1	40.4	53.8	-13.4

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

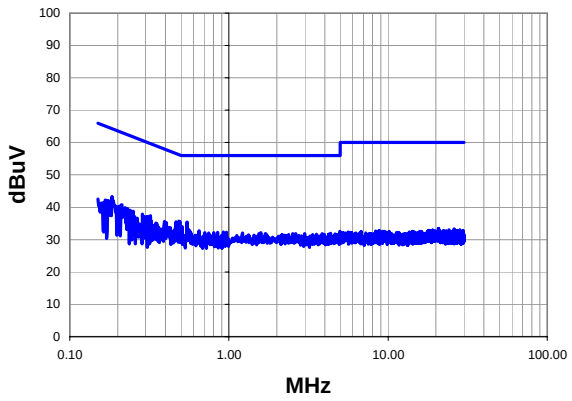
Version 2007.8.27
PSA-ESCI 2008.01.03

Work Order:	AVNE0020	**Date:**	02/28/08		
Project:	None	**Temperature:**	22		
Job Site:	EV07	**Humidity:**	32		
Serial Number:	1	**Barometric Pres.:**	30.32	**Tested by:**	Rod Peloquin
EUT:	AVMD7212				
Configuration:	AVNE0020 - 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:	None				

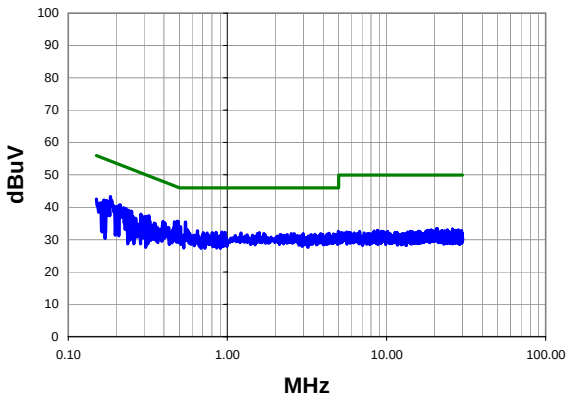
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

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)
0.492	14.8	20.8	35.6	56.1	-20.5
0.485	14.9	20.8	35.7	56.3	-20.5
0.544	14.6	20.8	35.4	56.0	-20.6
0.184	22.0	21.3	43.3	64.3	-21.0
0.476	14.5	20.8	35.3	56.4	-21.1
0.465	14.7	20.8	35.5	56.6	-21.1
0.509	13.2	20.8	34.0	56.0	-22.0
0.322	16.5	20.9	37.4	59.7	-22.2
0.211	19.8	21.0	40.8	63.2	-22.4
0.393	14.7	20.9	35.6	58.0	-22.4
0.405	14.3	20.9	35.2	57.8	-22.6
0.312	16.3	20.9	37.2	59.9	-22.7
0.174	20.5	21.5	42.0	64.8	-22.8
0.286	16.9	20.9	37.8	60.6	-22.8
0.558	12.4	20.8	33.2	56.0	-22.8
0.167	20.6	21.7	42.3	65.1	-22.8
0.230	18.6	21.0	39.6	62.5	-22.9
0.206	19.4	21.0	40.4	63.4	-23.0
0.250	17.8	21.0	38.8	61.7	-23.0
0.240	18.1	21.0	39.1	62.1	-23.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.492	14.8	20.8	35.6	46.1	-10.5
0.485	14.9	20.8	35.7	46.3	-10.5
0.544	14.6	20.8	35.4	46.0	-10.6
0.184	22.0	21.3	43.3	54.3	-11.0
0.476	14.5	20.8	35.3	46.4	-11.1
0.465	14.7	20.8	35.5	46.6	-11.1
0.509	13.2	20.8	34.0	46.0	-12.0
0.322	16.5	20.9	37.4	49.7	-12.2
0.211	19.8	21.0	40.8	53.2	-12.4
0.393	14.7	20.9	35.6	48.0	-12.4
0.405	14.3	20.9	35.2	47.8	-12.6
0.312	16.3	20.9	37.2	49.9	-12.7
0.174	20.5	21.5	42.0	54.8	-12.8
0.286	16.9	20.9	37.8	50.6	-12.8
0.558	12.4	20.8	33.2	46.0	-12.8
0.167	20.6	21.7	42.3	55.1	-12.8
0.230	18.6	21.0	39.6	52.5	-12.9
0.206	19.4	21.0	40.4	53.4	-13.0
0.250	17.8	21.0	38.8	51.7	-13.0
0.240	18.1	21.0	39.1	52.1	-13.0