Honeywell

51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY

July 11, 2007

Report No. HONE0010.1 Rev. 02

Report Prepared By

NORTHWEST EMC

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: July 11, 2007

Honeywell

Model: 51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY

Emissions				
Test Description	**Specification**	**Test Method**	**Pass**	**Fail**
AC Powerline Conducted Emissions	FCC 15.207:2006	ANSI C63.4:2003	☒	☐
Occupied Bandwidth	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Output Power	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Band Edge Compliance	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Channel Spacing	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Number of Hopping Frequencies	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Dwell Time	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Spurious Conducted Emissions	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐
Spurious Radiated Emissions	FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000	☒	☐

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.
41 Tesla Avenue
Irvine, CA 92618

Phone: (949) 861-8918 Fax: 861-8923

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

Approved By:

Donald Facteau, IS Manager

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

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

Revision Number	Description	Date	Page Number
01	Changed model name to "51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY w/ 51153884-100, REVISION B, MULTINODE ASSEMBLY" throughout report per client's request.	7/26/07	1, 2, 7, 11-16, 19, 24, 32, 37, 45, 53, 59-68, and 72.
02	Changed model name to "51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY" throughout report.	8/1/07	1, 2, 7, 11-16, 19, 24, 32, 37, 45, 53, 59-68, and 72.

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).

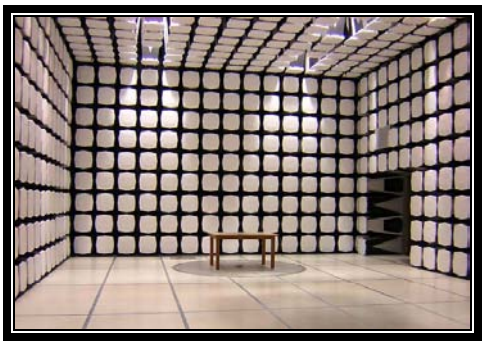
VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943,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

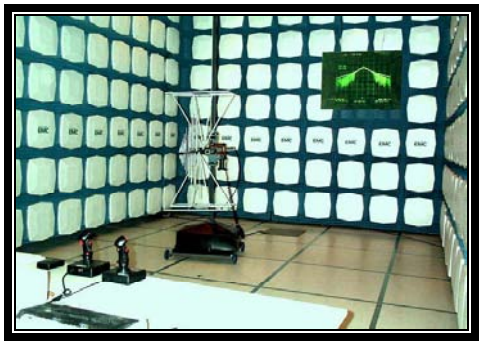
SCOPE

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:	Honeywell
Address:	2500 W. Union Hills Road
City, State, Zip:	Phoenix, AZ 85027
Test Requested By:	David Shipley
Model:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY
First Date of Test:	April 9, 2007
Last Date of Test:	May 11, 2007
Receipt Date of Samples:	April 6, 2007
Equipment Design Stage:	Production
Equipment Condition:	No Damage

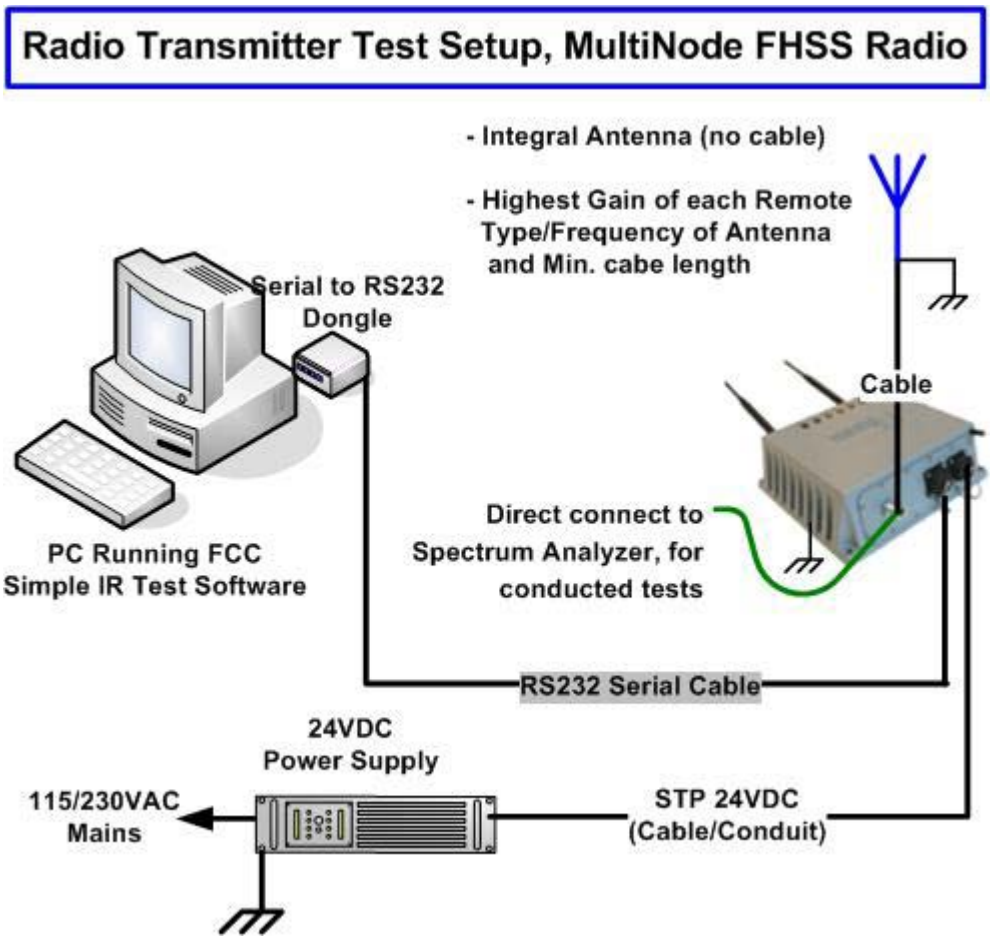
Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
2.4 GHz FHSS radio with variable output power.

Testing Objective:
2.4 GHz FHSS Radio that is professionally installed. Adjustable power levels by the professional installers. Seeking to demonstrate compliance to FCC 15.247

CONFIGURATION 1 HONE0010

EUT
Description
Refer to the configuration document provided by the client below.



Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	4/9/2007	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.
2	5/9/2007	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	5/9/2007	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.
4	5/9/2007	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.
5	5/10/2007	Channel Spacing	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	5/10/2007	Number of Hopping Frequencies	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	5/10/2007	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.
8	5/10/2007	Dwell Time	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.
9	5/11/2007	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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

Transmit Mode. High Channel (2482).
Transmit Mode. Mid Channel (2442).
Transmit Mode. Low Channel (2402).

POWER SETTINGS INVESTIGATED

120VAC/60Hz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-24-BNC	LIA	6/26/2007	13
LISN	Solar	9252-50-24-BNC	LIB	5/8/2006	16
OC11 cables a-b-e-f			OCM	1/8/2007	13
Receiver	Rohde & Schwartz	ESCI	ARF	12/14/2006	13

MEASUREMENT BANDWIDTHS

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

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

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AC POWERLINE CONDUCTED EMISSIONS DATA SHEET

Version 2006.11.12
PSA-ESCI 2007.05.07

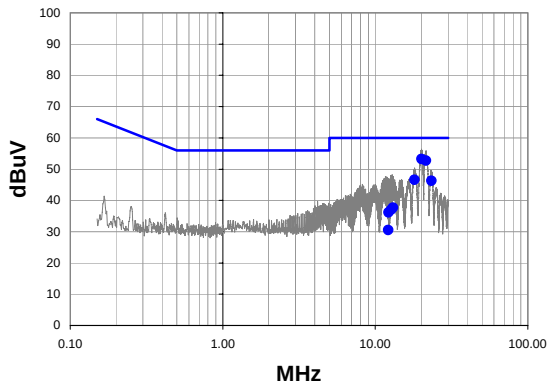
Work Order:	HONE0010	**Date:**	05/11/07		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	33		
Serial Number:	None	**Barometric Pres.:**	30.02	**Tested by:**	Jaemi Suh

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120VAC/60Hz
Operating Mode:	Transmit Mode. Low Channel (2402).
Deviations:	No deviations.
Comments:	Sector Antenna (14 dBi Gain). Max Output Power = (6 dBm).

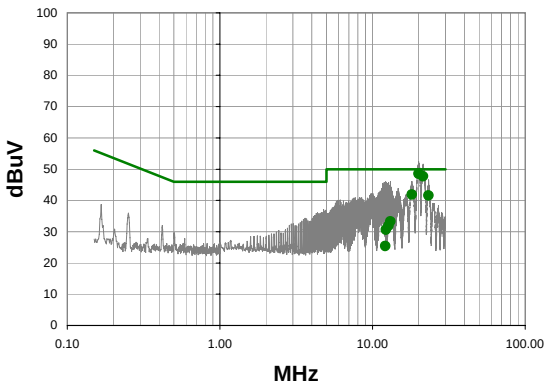
Test Specifications	**Test Method**
FCC 15.207:2006	ANSI C63.4:2003

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

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
20.068	32.1	1.2	53.3	60.0	-6.7
21.470	31.5	1.2	52.7	60.0	-7.3
18.088	25.5	1.1	46.6	60.0	-13.4
23.318	25.0	1.3	46.3	60.0	-13.7
13.096	16.7	1.0	37.7	60.0	-22.3
12.748	16.1	1.0	37.1	60.0	-22.9
12.248	15.2	0.9	36.1	60.0	-23.9
12.158	9.6	0.9	30.5	60.0	-29.5

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
20.068	27.4	1.2	48.6	50.0	-1.4
21.470	26.5	1.2	47.7	50.0	-2.3
18.088	20.8	1.1	41.9	50.0	-8.1
23.318	20.3	1.3	41.6	50.0	-8.4
13.096	12.3	1.0	33.3	50.0	-16.7
12.748	10.9	1.0	31.9	50.0	-18.1
12.248	9.7	0.9	30.6	50.0	-19.4
12.158	4.4	0.9	25.3	50.0	-24.7

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AC POWERLINE CONDUCTED EMISSIONS DATA SHEET

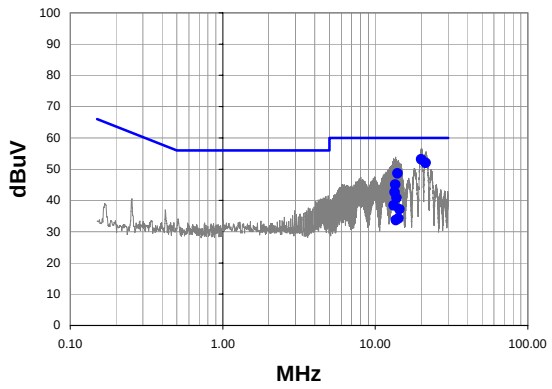
Version 2006.11.12
PSA-ESCI 2007.05.07

Work Order:	HONE0010	**Date:**	05/11/07		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	33		
Serial Number:	None	**Barometric Pres.:**	30.02	**Tested by:**	Jaemi Suh
EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY				
Configuration:	1				
Customer:	Honeywell				
Attendees:	David Shipley				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmit Mode. Low Channel (2402).				
Deviations:	No deviations.				
Comments:	Sector Antenna (14 dBi Gain). Max Output Power = (6 dBm).				

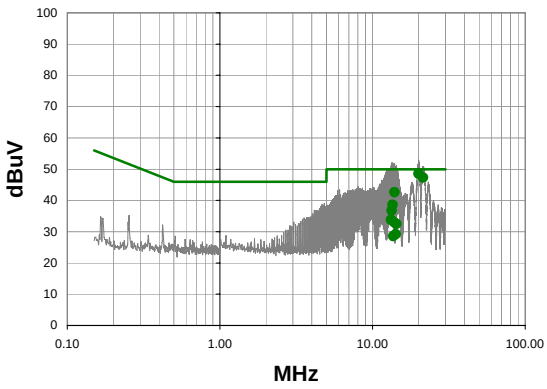
Test Specifications	**Test Method**
FCC 15.207:2006	ANSI C63.4:2003

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

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
20.006	32.0	1.2	53.2	60.0	-6.8
21.398	30.8	1.2	52.0	60.0	-8.0
13.982	27.6	1.0	48.6	60.0	-11.4
13.552	24.1	1.0	45.1	60.0	-14.9
13.382	21.6	1.0	42.6	60.0	-17.4
13.812	19.7	1.0	40.7	60.0	-19.3
13.212	17.4	1.0	38.4	60.0	-21.6
14.390	16.1	1.0	37.1	60.0	-22.9
14.220	13.2	1.0	34.2	60.0	-25.8
13.698	12.7	1.0	33.7	60.0	-26.3

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
20.006	27.4	1.2	48.6	50.0	-1.4
21.398	26.1	1.2	47.3	50.0	-2.7
13.982	21.6	1.0	42.6	50.0	-7.4
13.552	17.6	1.0	38.6	50.0	-11.4
13.382	15.8	1.0	36.8	50.0	-13.2
13.212	12.8	1.0	33.8	50.0	-16.2
13.812	12.1	1.0	33.1	50.0	-16.9
14.390	11.4	1.0	32.4	50.0	-17.6
14.220	8.2	1.0	29.2	50.0	-20.8
13.698	7.6	1.0	28.6	50.0	-21.4

NORTHWEST
EMC

AC POWERLINE CONDUCTED EMISSIONS DATA SHEET

Version 2006.11.12
PSA-ESCI 2007.05.07

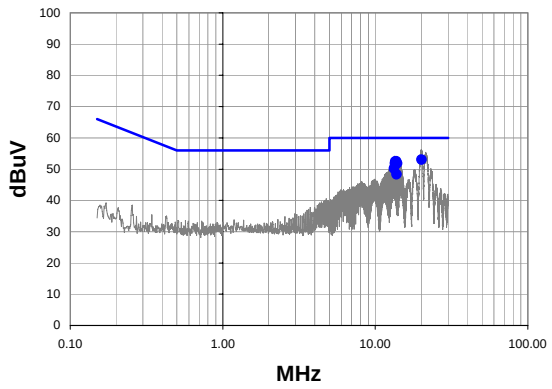
Work Order:	HONE0010	**Date:**	05/11/07		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	33		
Serial Number:	None	**Barometric Pres.:**	30.02	**Tested by:**	Jaemi Suh

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120VAC/60Hz
Operating Mode:	Transmit Mode. Mid Channel (2442).
Deviations:	No deviations.
Comments:	Sector Antenna (14 dBi Gain). Max Output Power = (6 dBm).

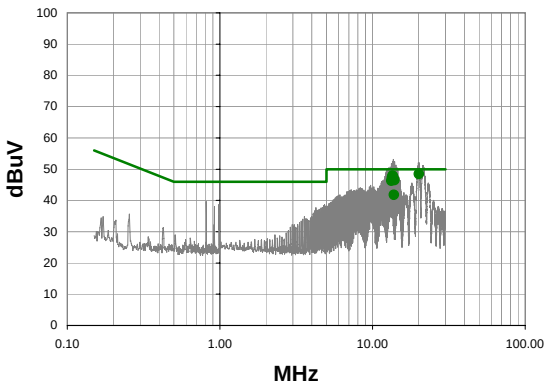
Test Specifications	**Test Method**
FCC 15.207:2006	ANSI C63.4:2003

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

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
20.112	31.9	1.2	53.1	60.0	-6.9
13.700	31.5	1.0	52.5	60.0	-7.5
13.530	31.4	1.0	52.4	60.0	-7.6
13.958	30.8	1.0	51.8	60.0	-8.2
13.452	30.8	1.0	51.8	60.0	-8.2
13.282	29.2	1.0	50.2	60.0	-9.8
13.792	27.3	1.0	48.3	60.0	-11.7

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
20.112	27.2	1.2	48.4	50.0	-1.6
13.530	26.9	1.0	47.9	50.0	-2.1
13.700	26.5	1.0	47.5	50.0	-2.5
13.452	26.3	1.0	47.3	50.0	-2.7
13.958	25.5	1.0	46.5	50.0	-3.5
13.282	25.3	1.0	46.3	50.0	-3.7
13.792	20.8	1.0	41.8	50.0	-8.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS DATA SHEET

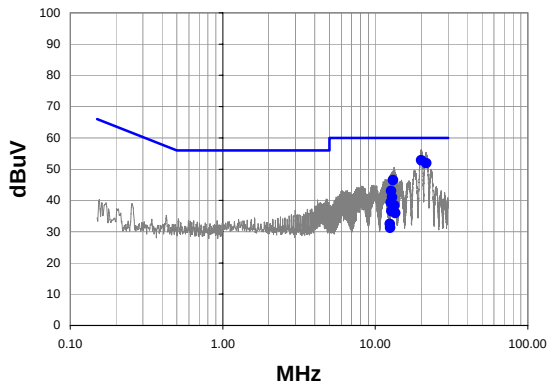
Version 2006.11.12
PSA-ESCI 2007.05.07

Work Order:	HONE0010	**Date:**	05/11/07		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	33		
Serial Number:	None	**Barometric Pres.:**	30.02	**Tested by:**	Jaemi Suh
EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY				
Configuration:	1				
Customer:	Honeywell				
Attendees:	David Shipley				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmit Mode. Mid Channel (2442).				
Deviations:	No deviations.				
Comments:	Sector Antenna (14 dBi Gain). Max Output Power = (6 dBm).				

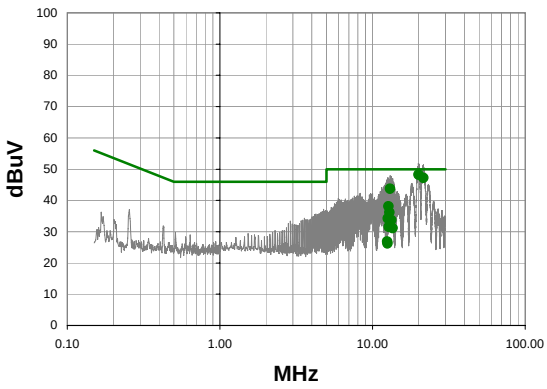
Test Specifications	**Test Method**
FCC 15.207:2006	ANSI C63.4:2003

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

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
19.994	31.7	1.2	52.9	60.0	-7.1
21.582	30.7	1.2	51.9	60.0	-8.1
13.062	25.5	1.0	46.5	60.0	-13.5
12.722	22.0	1.0	43.0	60.0	-17.0
12.892	20.0	1.0	41.0	60.0	-19.0
12.632	18.3	1.0	39.3	60.0	-20.7
13.312	17.4	1.0	38.4	60.0	-21.6
12.802	15.6	1.0	36.6	60.0	-23.4
13.548	14.9	1.0	35.9	60.0	-24.1
12.462	11.5	1.0	32.5	60.0	-27.5
12.542	10.3	1.0	31.3	60.0	-28.7

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
19.994	27.0	1.2	48.2	50.0	-1.8
21.582	26.0	1.2	47.2	50.0	-2.8
13.062	22.7	1.0	43.7	50.0	-6.3
12.722	17.1	1.0	38.1	50.0	-11.9
12.892	15.2	1.0	36.2	50.0	-13.8
12.632	13.2	1.0	34.2	50.0	-15.8
13.312	12.7	1.0	33.7	50.0	-16.3
12.802	10.6	1.0	31.6	50.0	-18.4
13.548	10.1	1.0	31.1	50.0	-18.9
12.462	5.9	1.0	26.9	50.0	-23.1
12.542	5.2	1.0	26.2	50.0	-23.8

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS DATA SHEET

Version 2006.11.12
PSA-ESCI 2007.05.07

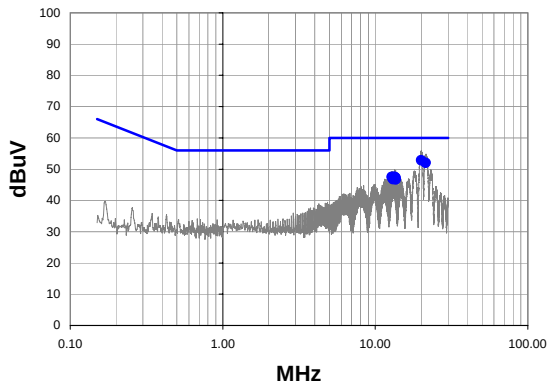
Work Order:	HONE0010	**Date:**	05/11/07		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	33		
Serial Number:	None	**Barometric Pres.:**	30.02	**Tested by:**	Jaemi Suh

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120VAC/60Hz
Operating Mode:	Transmit Mode. High Channel (2482).
Deviations:	No deviations.
Comments:	Sector Antenna (14 dBi Gain). Max Output Power = (6 dBm).

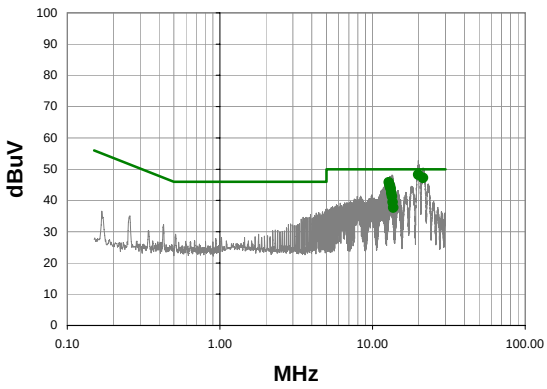
Test Specifications	**Test Method**
FCC 15.207:2006	ANSI C63.4:2003

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

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
19.984	31.7	1.2	52.9	60.0	-7.1
21.406	30.8	1.2	52.0	60.0	-8.0
13.402	26.5	1.0	47.5	60.0	-12.5
13.316	26.5	1.0	47.5	60.0	-12.5
12.806	26.5	1.0	47.5	60.0	-12.5
13.572	26.3	1.0	47.3	60.0	-12.7
12.894	26.3	1.0	47.3	60.0	-12.7
13.146	25.9	1.0	46.9	60.0	-13.1
13.064	25.8	1.0	46.8	60.0	-13.2
13.660	25.7	1.0	46.7	60.0	-13.3

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
19.984	27.0	1.2	48.2	50.0	-1.8
21.406	26.0	1.2	47.2	50.0	-2.8
12.806	24.8	1.0	45.8	50.0	-4.2
12.894	24.1	1.0	45.1	50.0	-4.9
13.064	23.3	1.0	44.3	50.0	-5.7
13.146	22.7	1.0	43.7	50.0	-6.3
13.316	21.3	1.0	42.3	50.0	-7.7
13.402	20.3	1.0	41.3	50.0	-8.7
13.572	18.4	1.0	39.4	50.0	-10.6
13.660	16.7	1.0	37.7	50.0	-12.3

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS DATA SHEET

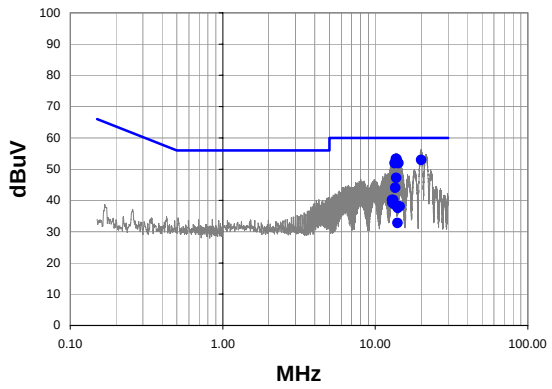
Version 2006.11.12
PSA-ESCI 2007.05.07

Work Order:	HONE0010	**Date:**	05/11/07		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	33		
Serial Number:	None	**Barometric Pres.:**	30.02	**Tested by:**	Jaemi Suh
EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY				
Configuration:	1				
Customer:	Honeywell				
Attendees:	David Shipley				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmit Mode. High Channel (2482).				
Deviations:	No deviations.				
Comments:	Sector Antenna (14 dBi Gain). Max Output Power = (6 dBm).				

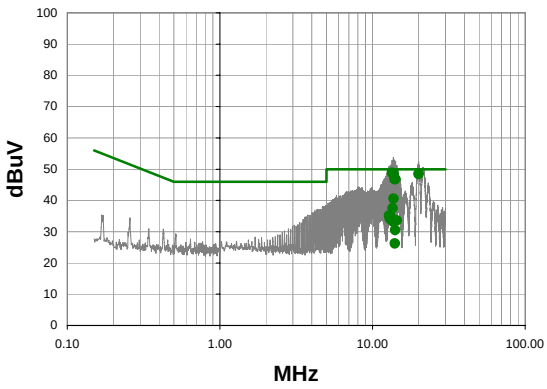
Test Specifications	**Test Method**
FCC 15.207:2006	ANSI C63.4:2003

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

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit

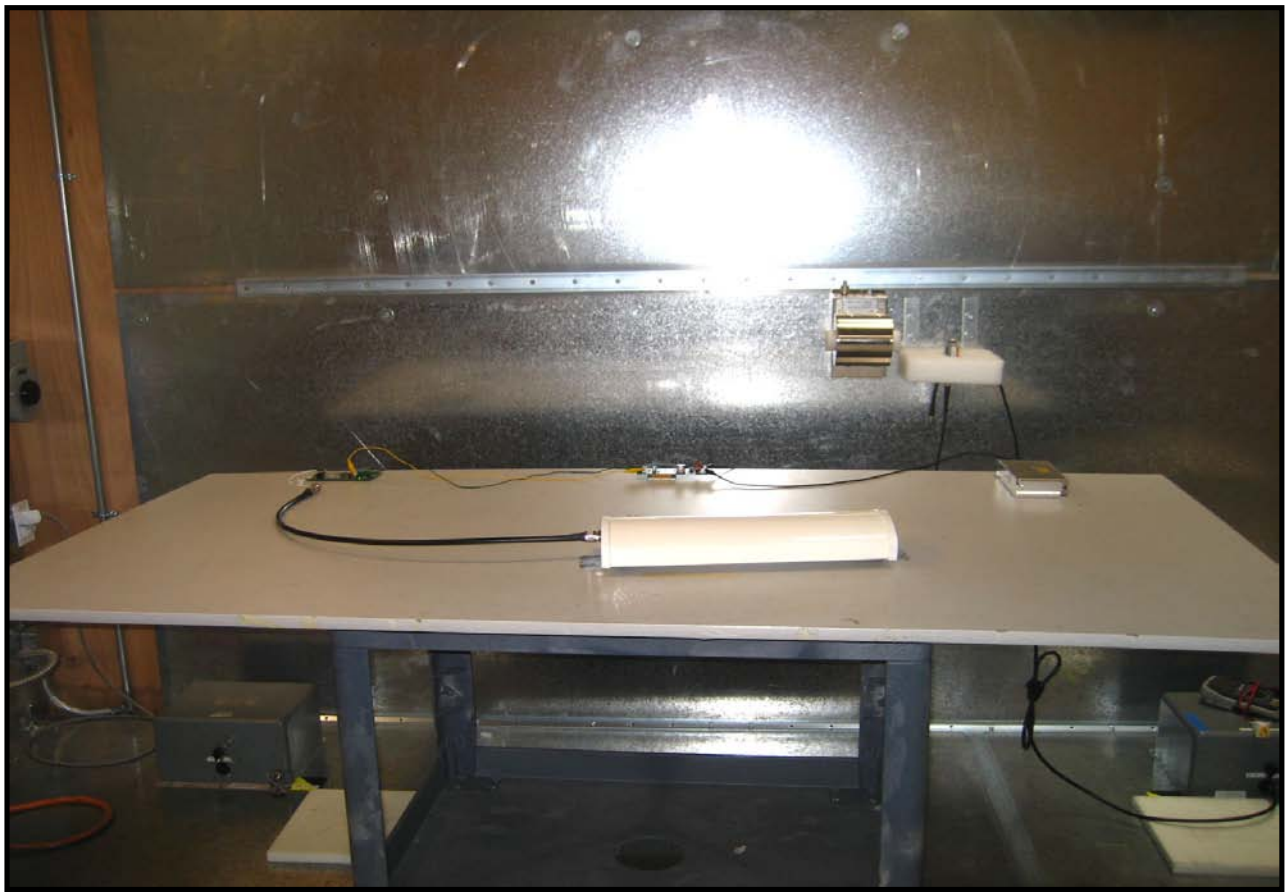


Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
13.826	32.2	1.0	53.2	60.0	-6.8
13.666	32.2	1.0	53.2	60.0	-6.8
20.004	31.8	1.2	53.0	60.0	-7.0
13.920	31.4	1.0	52.4	60.0	-7.6
14.172	30.9	1.0	51.9	60.0	-8.1
13.406	30.9	1.0	51.9	60.0	-8.1
13.738	26.2	1.0	47.2	60.0	-12.8
13.568	23.0	1.0	44.0	60.0	-16.0
12.878	19.2	1.0	40.2	60.0	-19.8
13.138	19.1	1.0	40.1	60.0	-19.9
12.968	18.2	1.0	39.2	60.0	-20.8
13.488	17.6	1.0	38.6	60.0	-21.4
14.448	17.1	1.0	38.1	60.0	-21.9
14.078	16.6	1.0	37.6	60.0	-22.4
13.998	11.8	1.0	32.8	60.0	-27.2

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
13.406	27.8	1.0	48.8	50.0	-1.2
13.666	27.5	1.0	48.5	50.0	-1.5
20.004	27.2	1.2	48.4	50.0	-1.6
13.826	27.1	1.0	48.1	50.0	-1.9
14.172	25.8	1.0	46.8	50.0	-3.2
13.920	25.8	1.0	46.8	50.0	-3.2
13.738	19.5	1.0	40.5	50.0	-9.5
13.568	16.5	1.0	37.5	50.0	-12.5
12.878	14.1	1.0	35.1	50.0	-14.9
13.138	13.8	1.0	34.8	50.0	-15.2
12.968	13.2	1.0	34.2	50.0	-15.8
14.448	12.6	1.0	33.6	50.0	-16.4
13.488	12.4	1.0	33.4	50.0	-16.6
14.078	9.5	1.0	30.5	50.0	-19.5
13.998	5.2	1.0	26.2	50.0	-23.8



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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/14/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

Per 47 CFR 15.247(a)(1), the hopping channel carrier frequencies must be separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel. The measurement is made with the spectrum analyzer's resolution bandwidth set to greater than or equal to 1% of the span, and the video bandwidth set to greater than or equal to the resolution bandwidth

The carrier frequency separation was measured between each of 15 hopping channels in the middle of the authorized band. The measurements were made using a spectrum analyzer. The hopping function of the EUT was enabled.

NORTHWEST EMC

CHANNEL SPACING

XMit 2007.03.30

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY			Work Order:	HONE0010
Serial Number:	None			Date:	05/10/07
Customer:	Honeywell			Temperature:	23°C
Attendees:	David Shipley			Humidity:	35%
Project:	None			Barometric Pres.:	30.02
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC03

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

Hopping Carrier.

DEVIATIONS FROM TEST STANDARD

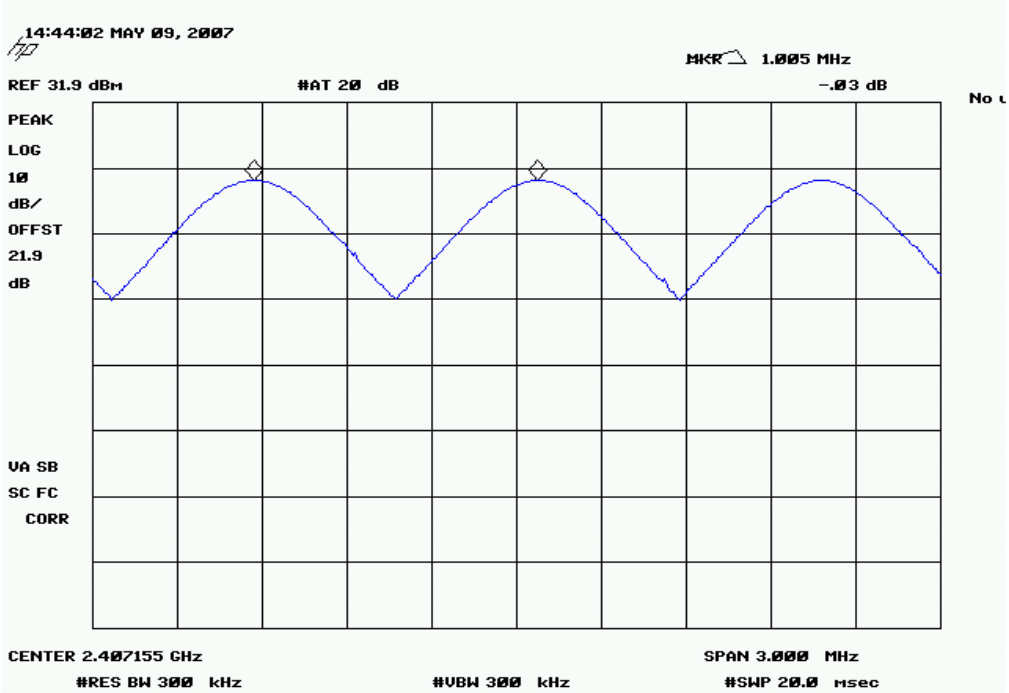
None

Configuration #	1	Signature

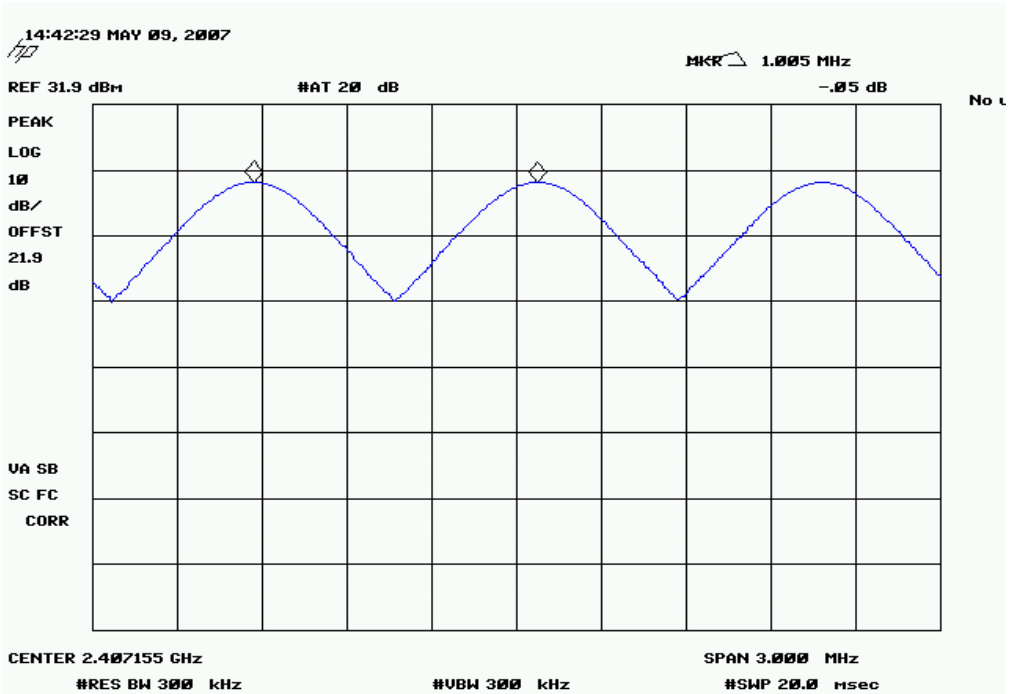
	Value	Limit	Results
Highest Conducted Ouput			
Low Channel	1.005 MHz	≥ 25 kHz	Pass
Mid Channel	1.005 MHz	≥ 25 kHz	Pass
High Channel	990 kHz	≥ 25 kHz	Pass

CHANNEL SPACING

Highest Conducted Ouput , Low Channel					
Result:	Pass	**Value:**	1.005 MHz	**Limit:**	≥ 25 kHz

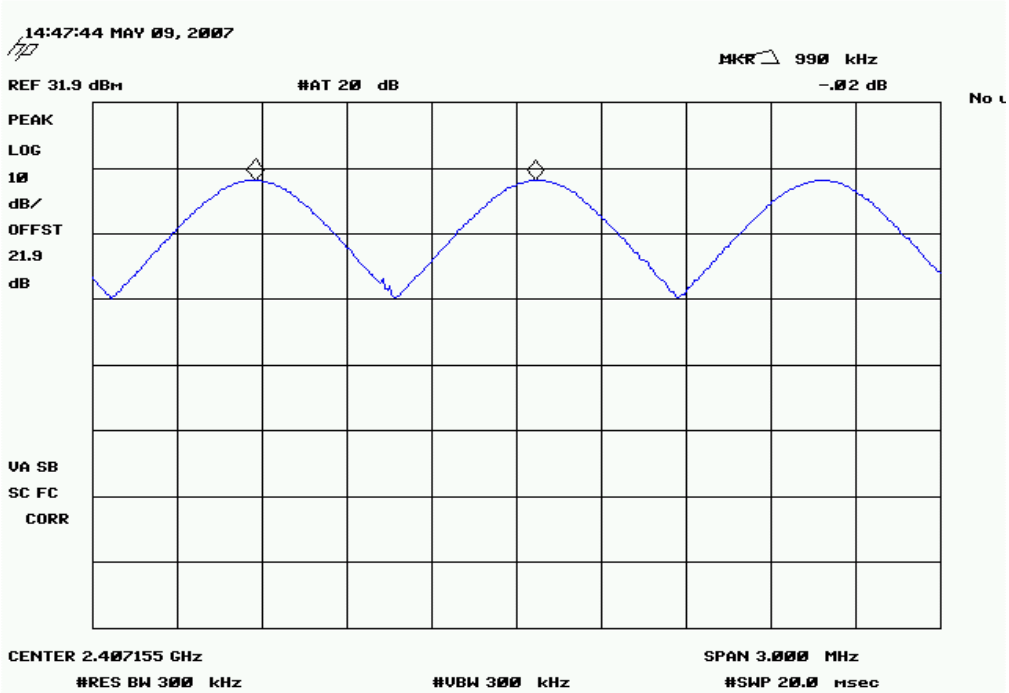


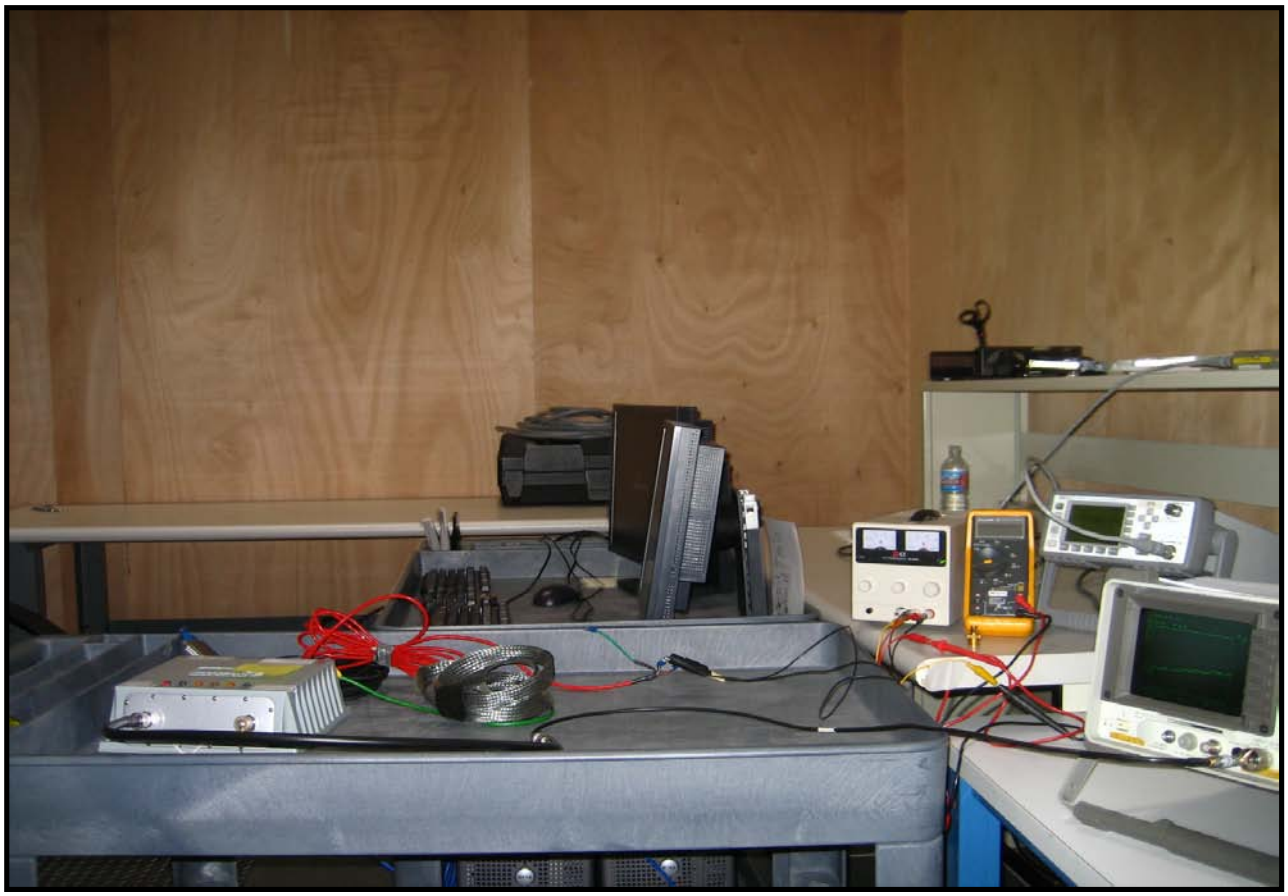
Highest Conducted Ouput , Mid Channel					
Result:	Pass	**Value:**	1.005 MHz	**Limit:**	≥ 25 kHz

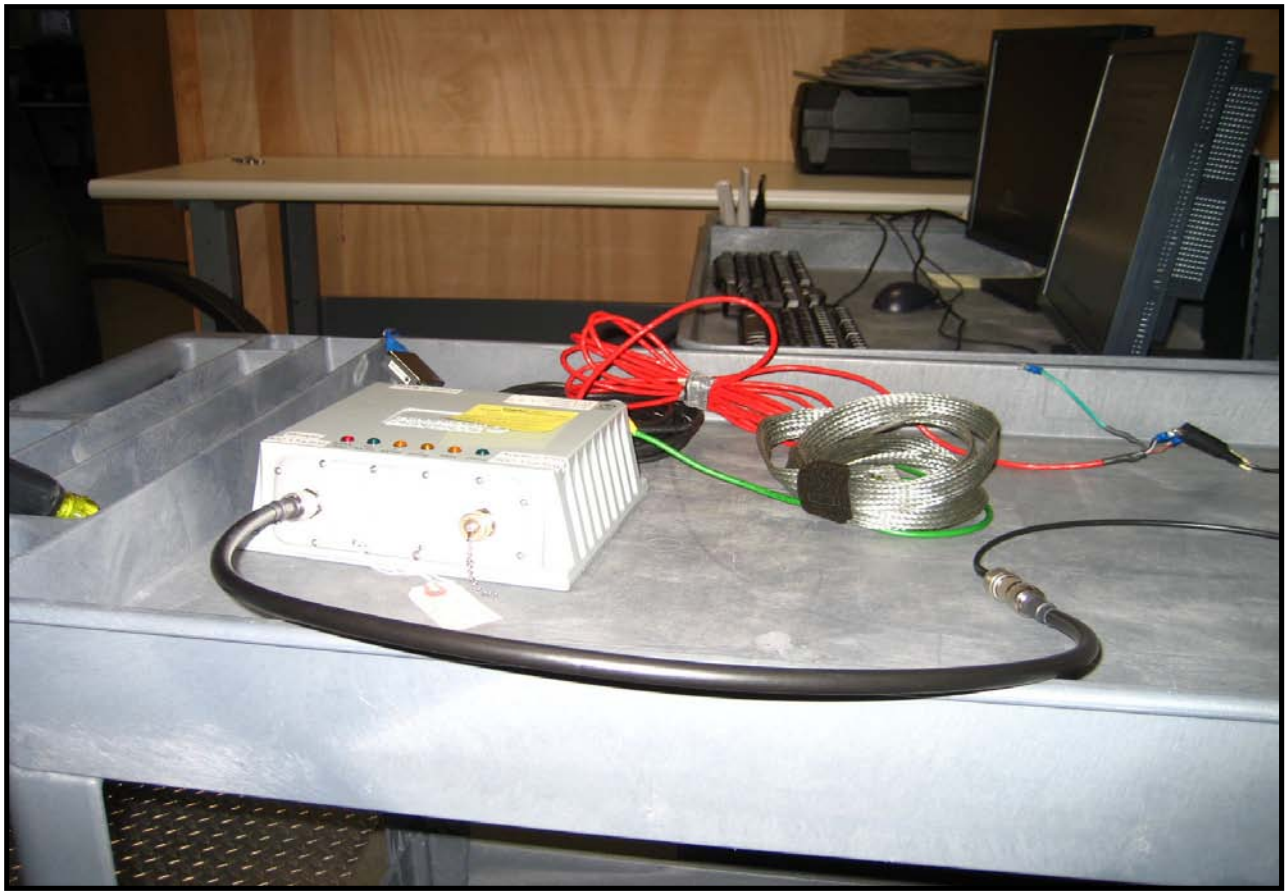


CHANNEL SPACING

Highest Conducted Ouput , High Channel					
Result:	Pass	**Value:**	990 kHz	**Limit:**	≥ 25 kHz







DWELL TIME

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/14/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled.

NORTHWEST EMC

DWELL TIME

XMit 2007.03.30

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY			Work Order:	HONE0010
Serial Number:	None			Date:	05/10/07
Customer:	Honeywell			Temperature:	22°C
Attendees:	David Shipley			Humidity:	32%
Project:	None			Barometric Pres.:	30.02
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC03

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

Hopping Carrier, Total Dwell time = (Dwell Time during a single transmission) x (Number of transmissions during a 6 second period)
Average time of occupancy on any frequency shall not be greater than .4 seconds within a period in seconds equal to the number of hopping channels employed multiplied by .4 Total Dwell time = 10 mS x 6 = 60mS

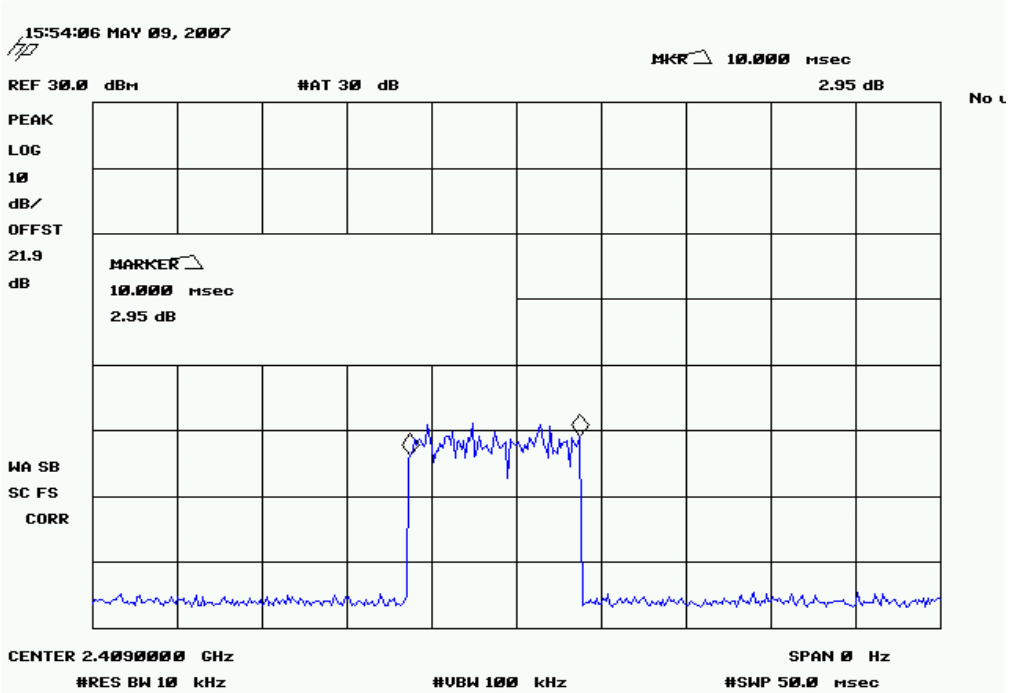
DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

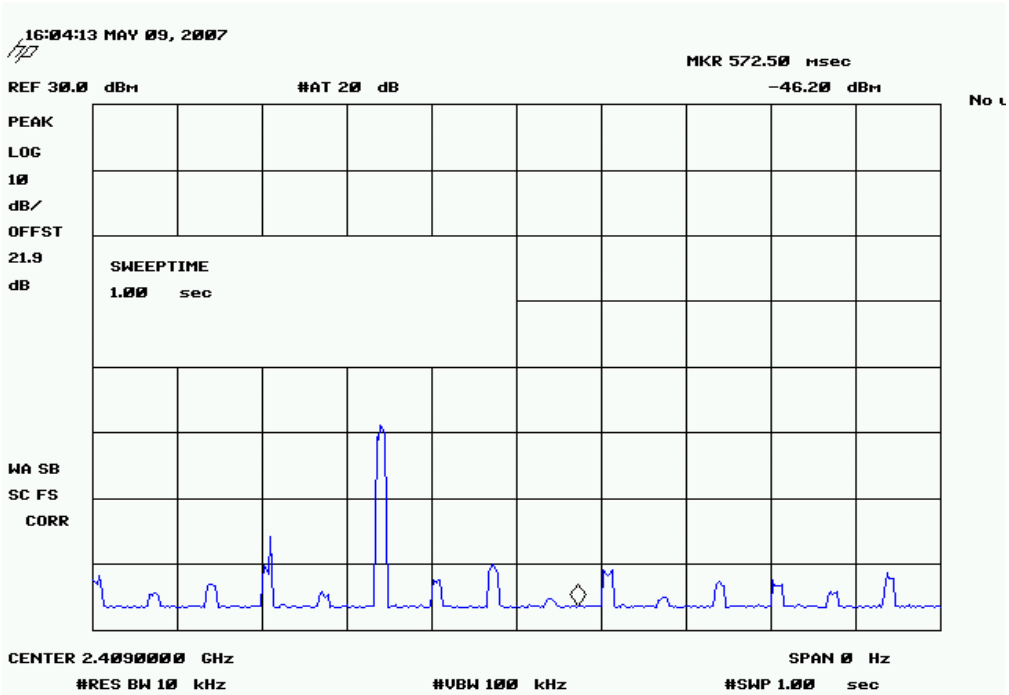
		Value	Limit	Results
High Output Power				
	Low Channel			
	50 ms	10 msec	See Comment	Pass
	1 sec	1 transmission for 1 sec	See Comment	Pass
	6 sec	6 transmission in 6 sec	See Comment	Pass
	Mid Channel			
	50 ms	10 msec	See Comment	Pass
	1 sec	1 transmission in 1 sec	See Comment	Pass
	6 sec	6 transmission in 6 sec	See Comment	Pass
	High Channel			
	50 ms	10 msec	See Comment	Pass
	1 sec	1 transmission in 1 sec	See Comment	Pass
	6 sec	6 transmission in 6 sec	See Comment	Pass

DWELL TIME

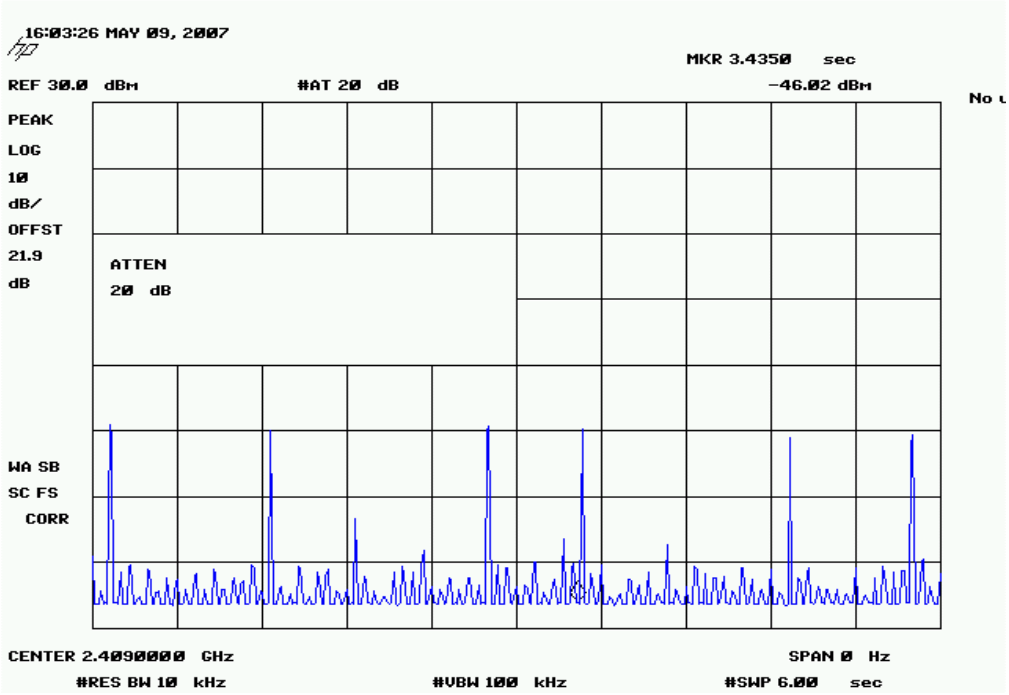
High Output Power, Low Channel, 50 ms					
Result:	Pass	**Value:**	10 msec	**Limit:**	See Comments



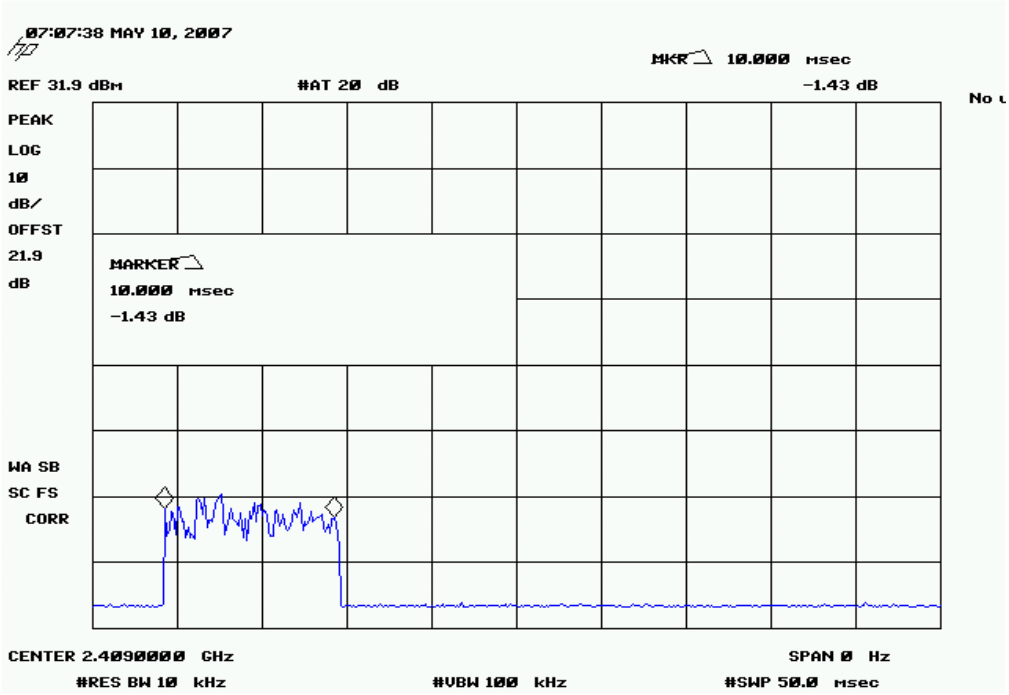
High Output Power, Low Channel, 1 sec					
Result:	Pass	**Value:**	1 transmission for 1 sec	**Limit:**	See Comments



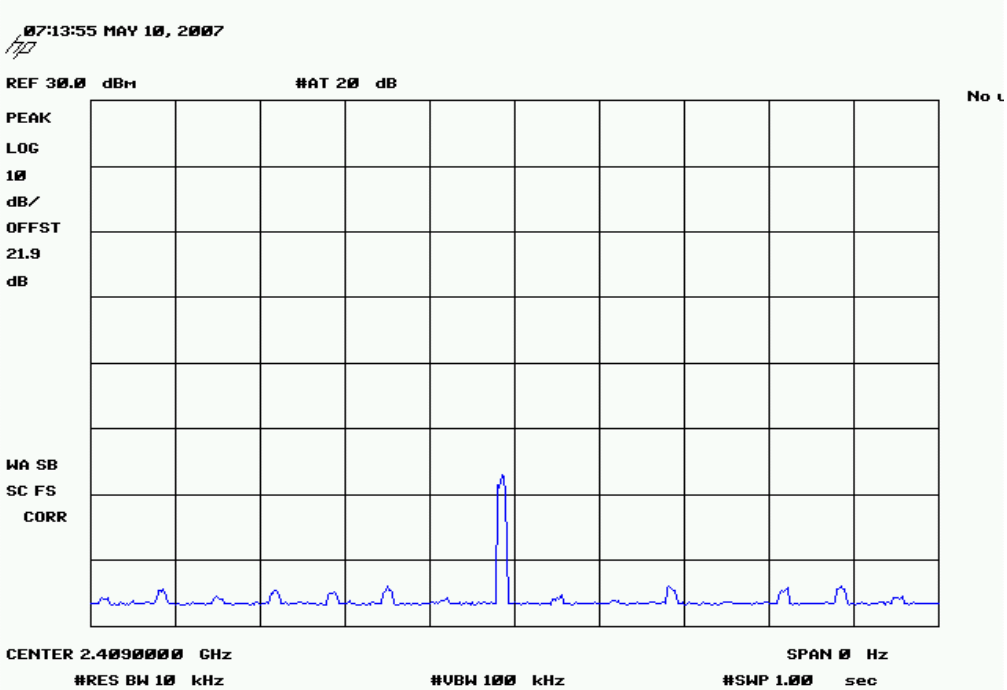
High Output Power, Low Channel, 6 sec					
Result:	Pass	**Value:**	6 transmission in 6 sec	**Limit:**	See Comments



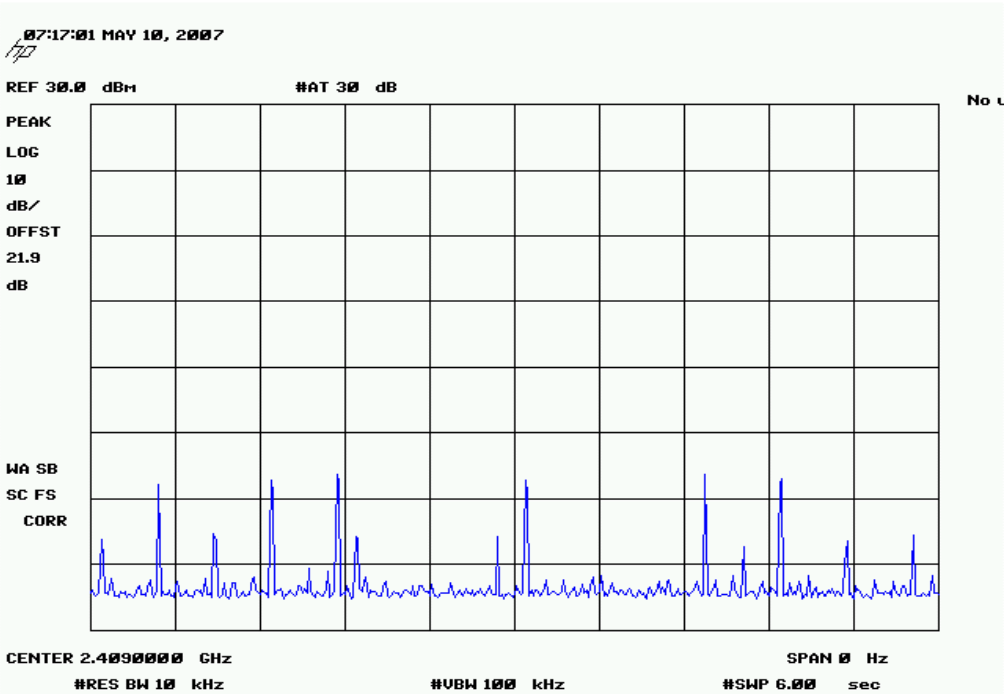
High Output Power, Mid Channel, 50 ms					
Result:	Pass	**Value:**	10 msec	**Limit:**	See Comments



High Output Power, Mid Channel, 1 sec					
Result:	Pass	**Value:**	1 transmission in 1 sec	**Limit:**	See Comments

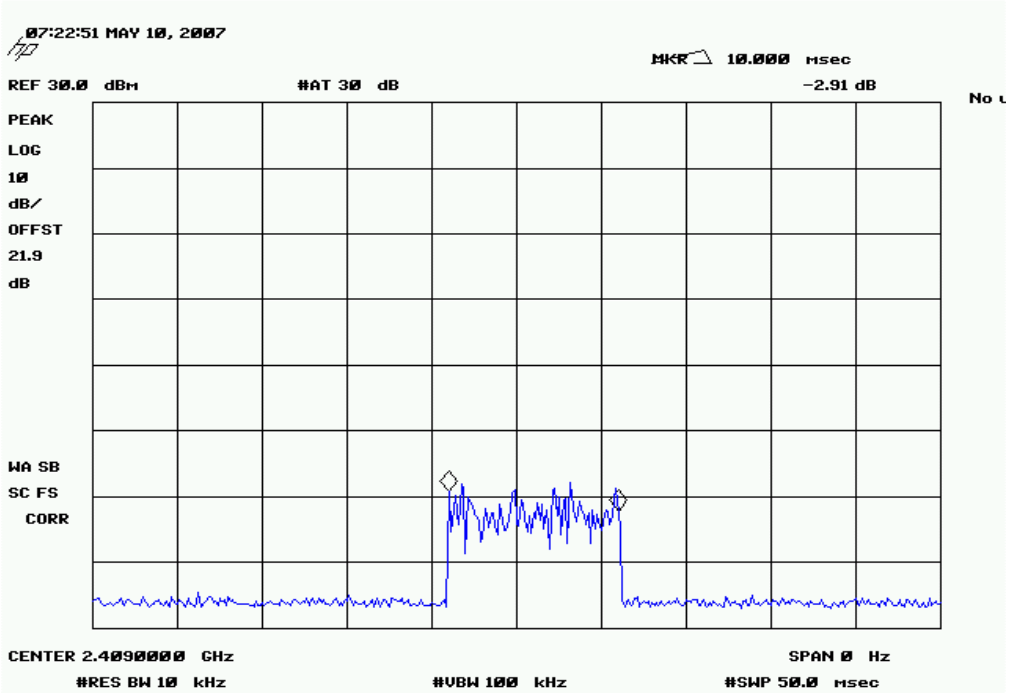


High Output Power, Mid Channel, 6 sec					
Result:	Pass	**Value:**	6 transmission in 6 sec	**Limit:**	See Comments

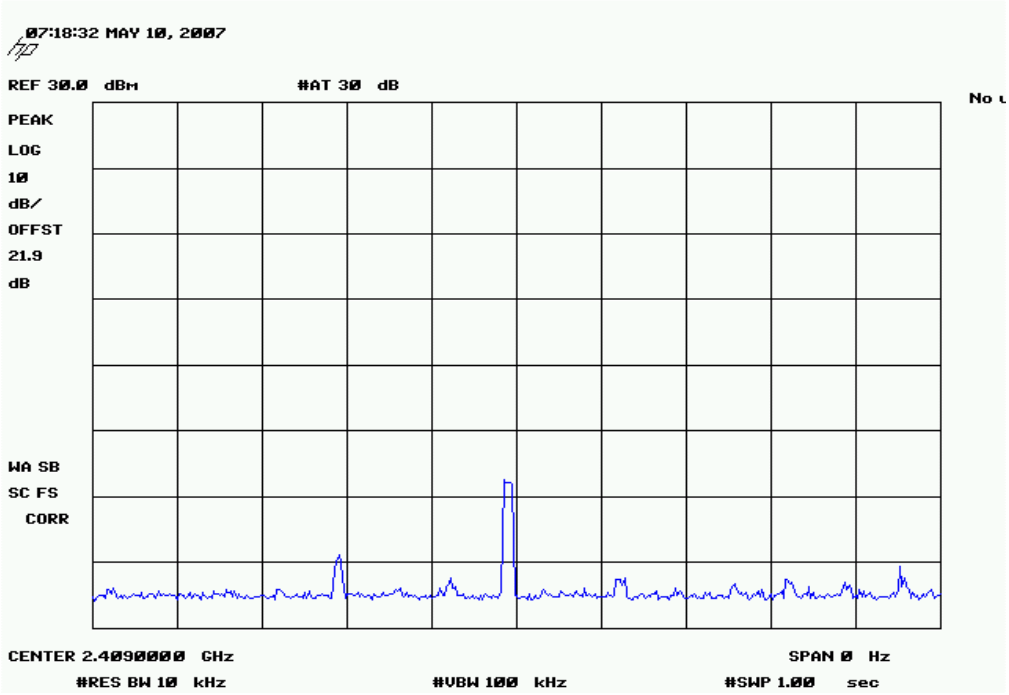


DWELL TIME

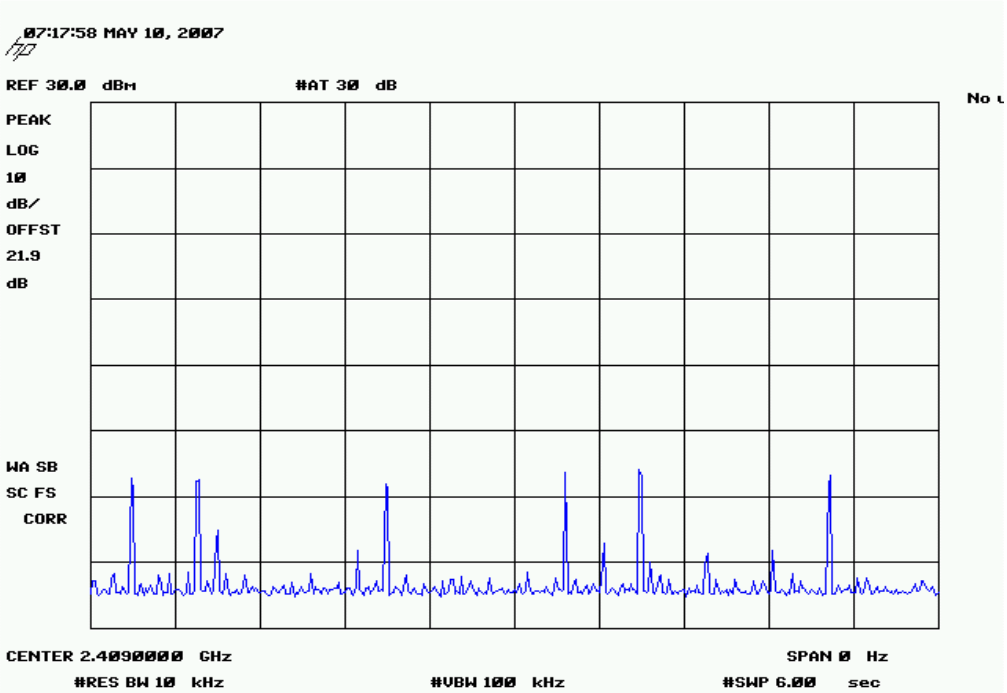
High Output Power, High Channel, 50 ms					
Result:	Pass	**Value:**	10 msec	**Limit:**	See Comments

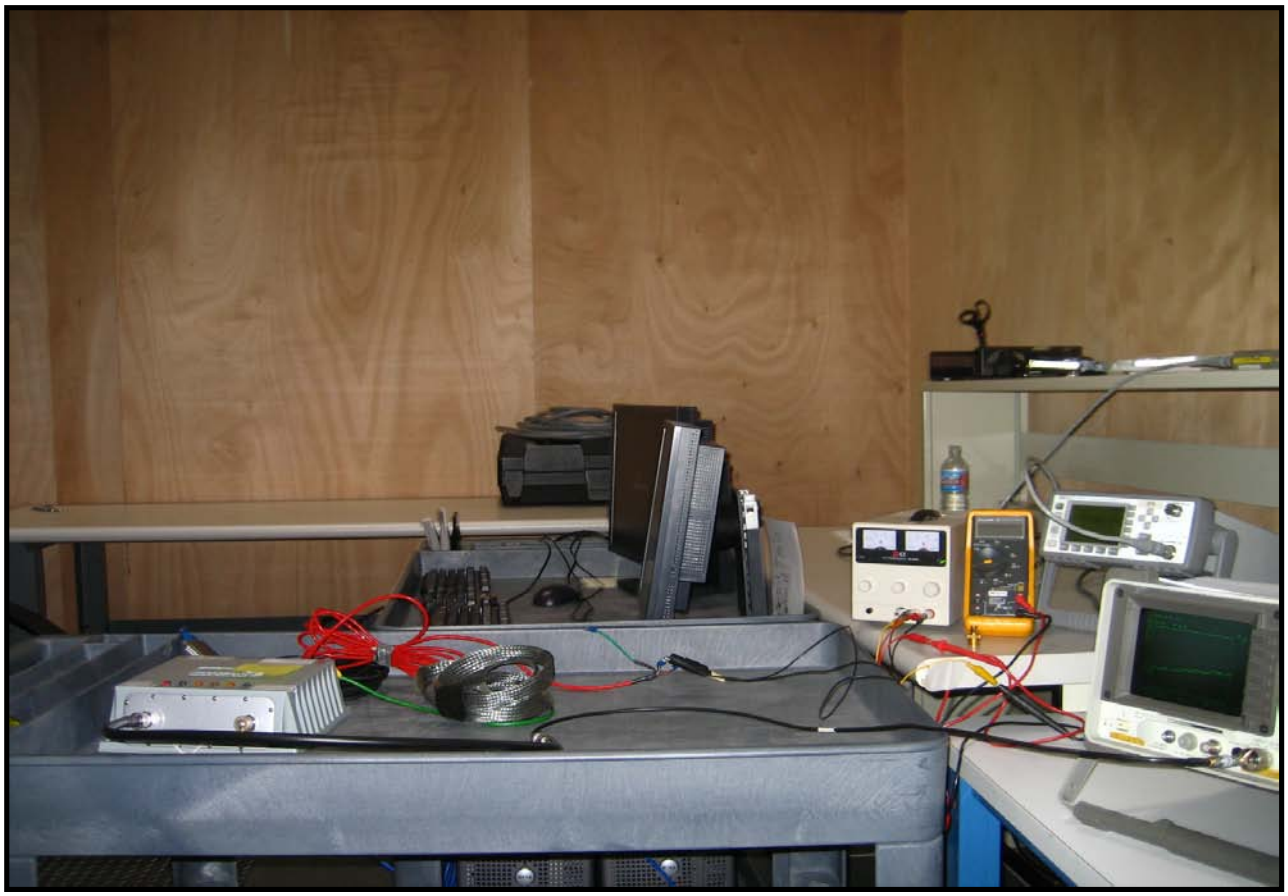


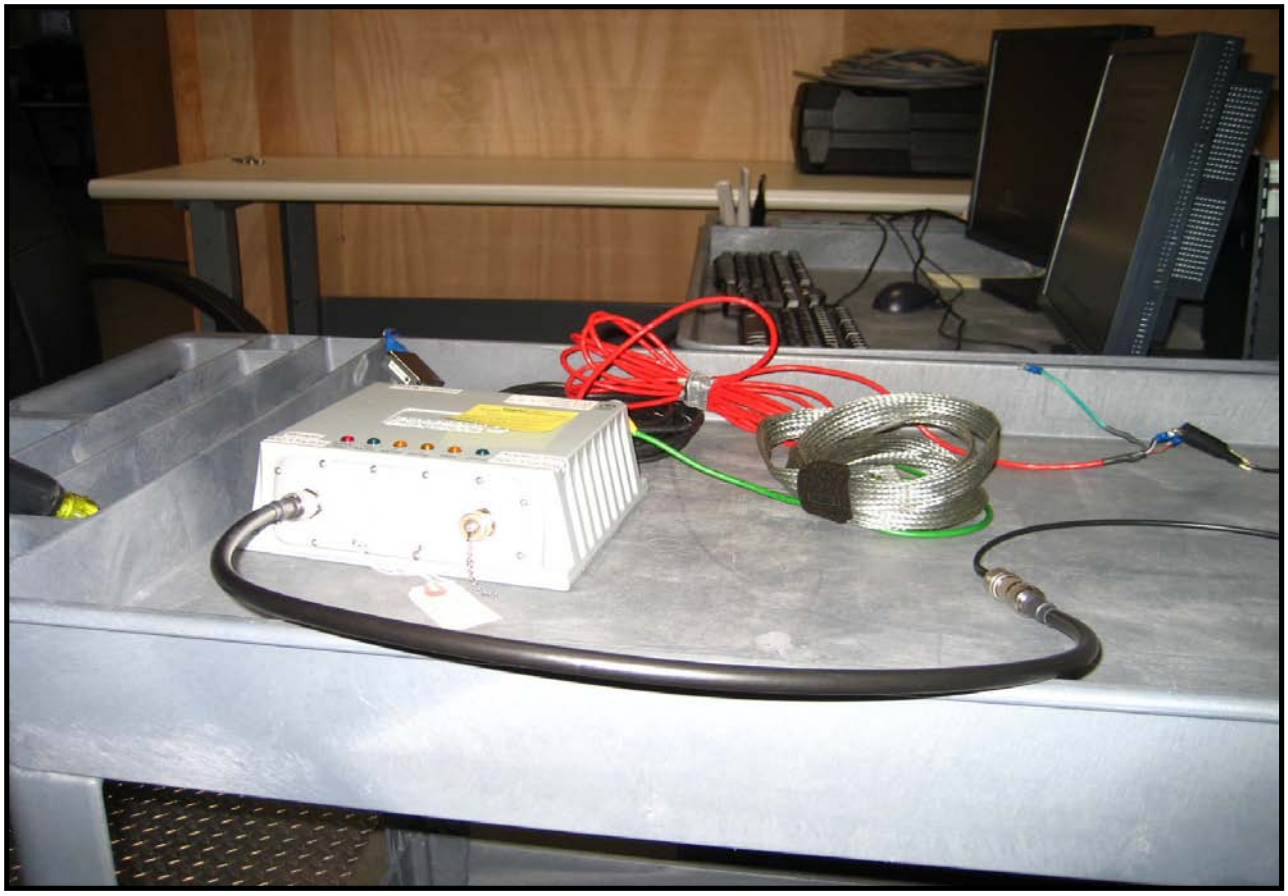
High Output Power, High Channel, 1 sec					
Result:	Pass	**Value:**	1 transmission in 1 sec	**Limit:**	See Comments



High Output Power, High Channel, 6 sec					
Result:	Pass	**Value:**	6 transmission in 6 sec	**Limit:**	See Comments







NUMBER OF HOPPING FREQUENCIES

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/14/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The number of hopping frequencies was measured across the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled.

NORTHWEST EMC

NUMBER OF HOPPING FREQUENCIES

XMit 2007.03.30

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY			Work Order:	HONE0010
Serial Number:	None			Date:	05/10/07
Customer:	Honeywell			Temperature:	23°C
Attendees:	David Shipley			Humidity:	35%
Project:	None			Barometric Pres.:	30.02
Tested by:	Jaemi Suh	Power:	24V	Job Site:	OC03

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

Hopping Carrier

DEVIATIONS FROM TEST STANDARD

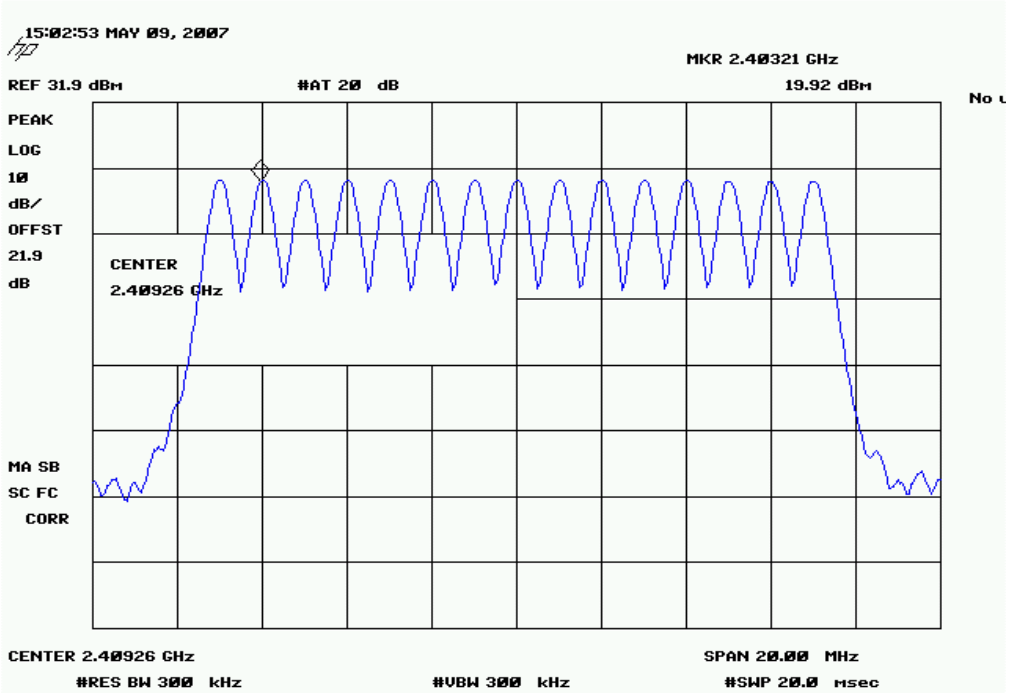
None

Configuration #	1	Signature

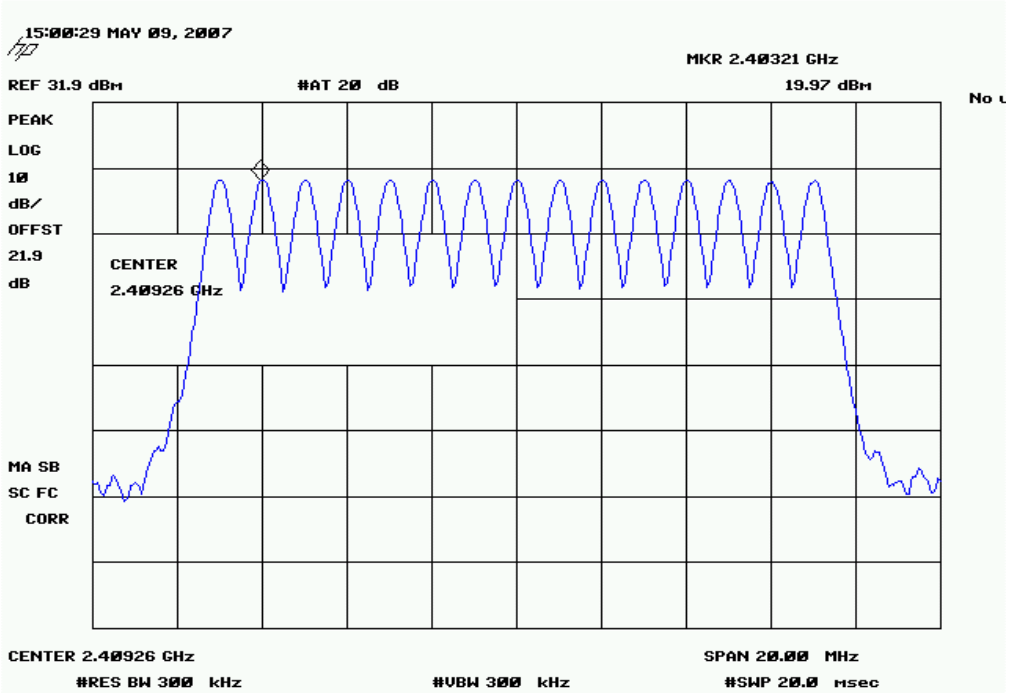
	Value	Limit	Results
Highest Conducted Ouput			
Low Channel	15		Pass
Mid Channel	15		Pass
High Channel	15		Pass

NUMBER OF HOPPING FREQUENCIES

Highest Conducted Ouput , Low Channel					
Result:	Pass	**Value:**	15	**Limit:**	

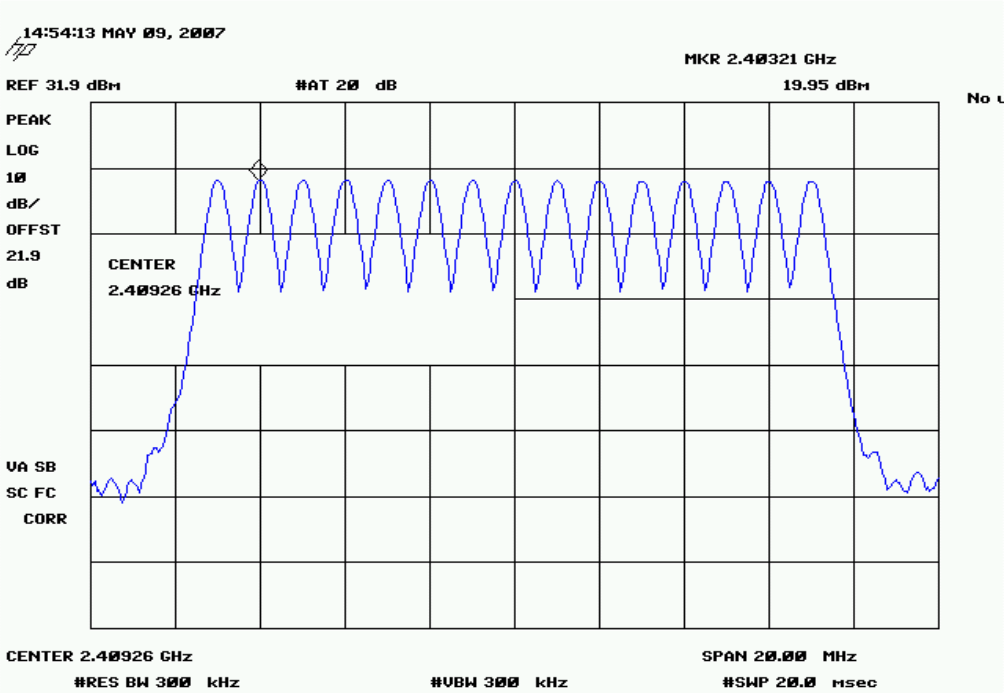


Highest Conducted Ouput , Mid Channel					
Result:	Pass	**Value:**	15	**Limit:**	



NUMBER OF HOPPING FREQUENCIES

Highest Conducted Ouput , High Channel					
Result:	Pass	**Value:**	15	**Limit:**	



NUMBER OF HOPPING FREQUENCIES

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Hewlett-Packard	8593E	AAP	12/14/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

OCCUPIED BANDWIDTH

XMit 2007.03.30

EUT:	**51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY**			**Work Order:**	**HONE0010**
Serial Number:	**None**			**Date:**	**05/09/07**
Customer:	**Honeywell**			**Temperature:**	**22°C**
Attendees:	**David Shipley**			**Humidity:**	**33%**
Project:	**None**			**Barometric Pres.:**	**29.91**
Tested by:	**Jaemi Suh**	**Power:**	**120VAC/60Hz**	**Job Site:**	**OC03**

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

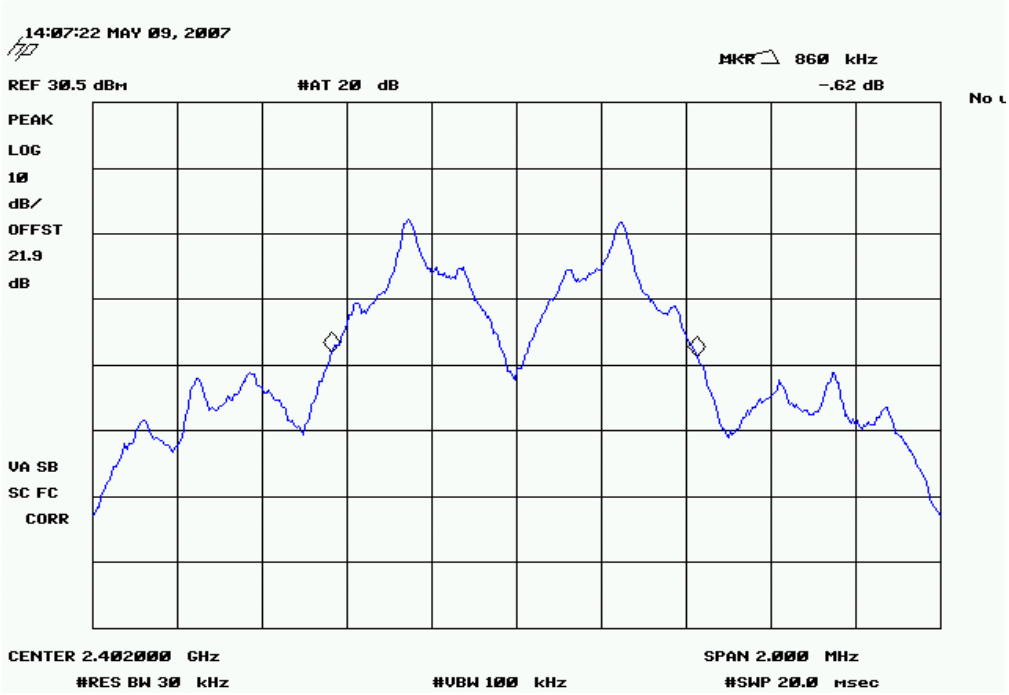
No Hop, Modulated Random Data. Limit derived from 2/3 of channel spacing+20dB bandwidth

DEVIATIONS FROM TEST STANDARD

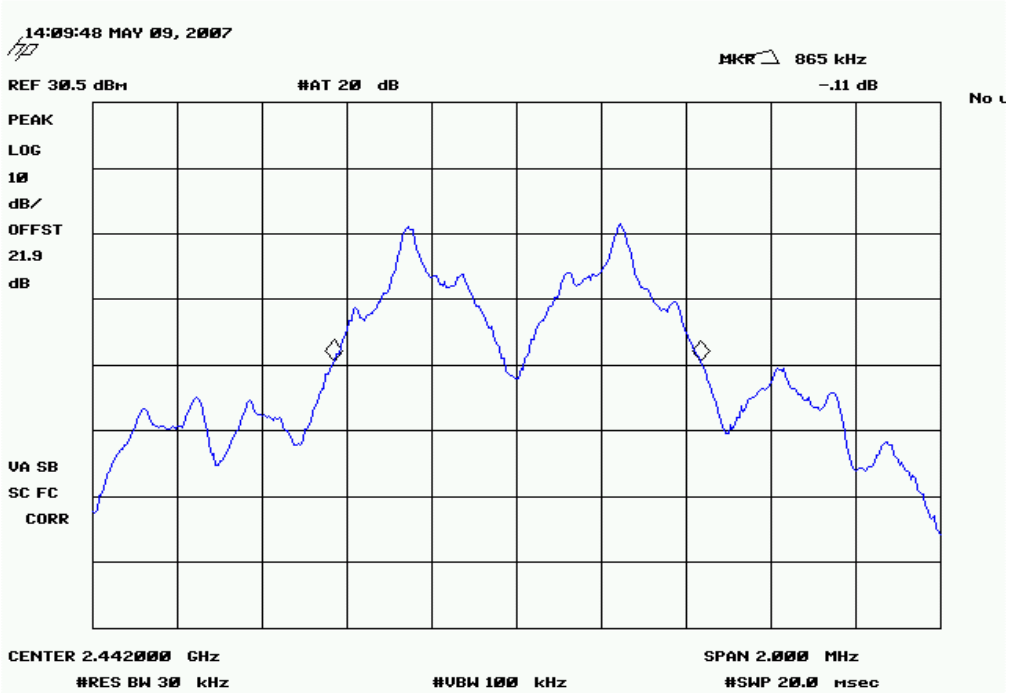
Configuration #	**1**	*Signature*

		Value	Limit	Results
Low Output Power				
	Low Channel	860 kHz	≤ 1.5 MHz	Pass
	Mid Channel	865 kHz	≤ 1.5 MHz	Pass
	High Channel	870 kHz	≤ 1.5 MHz	Pass
Mid Output Power				
	Low Channel	870 kHz	≤ 1.5 MHz	Pass
	Mid Channel	855 kHz	≤ 1.5 MHz	Pass
	High Channel	875 kHz	≤ 1.5 MHz	Pass
High Output Power				
	Low Channel	860 kHz	≤ 1.5 MHz	Pass
	Mid Channel	850 kHz	≤ 1.5 MHz	Pass
	High Channel	860 kHz	≤ 1.5 MHz	Pass

Low Output Power, Low Channel					
Result:	Pass	**Value:**	860 kHz	**Limit:**	≤ 1.5 MHz

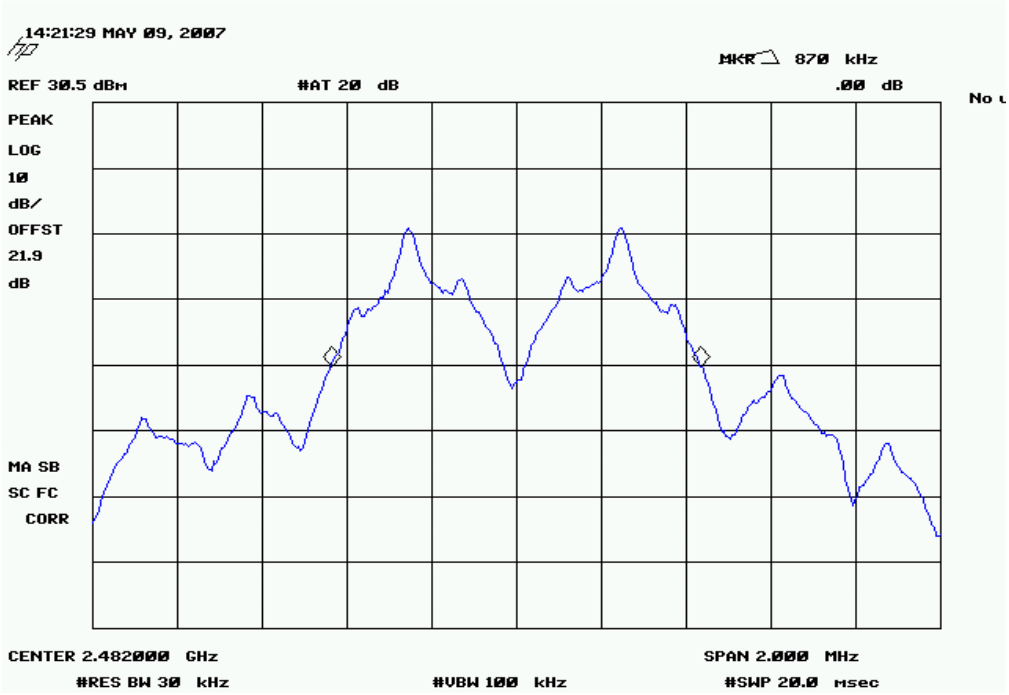


Low Output Power, Mid Channel					
Result:	Pass	**Value:**	865 kHz	**Limit:**	≤ 1.5 MHz

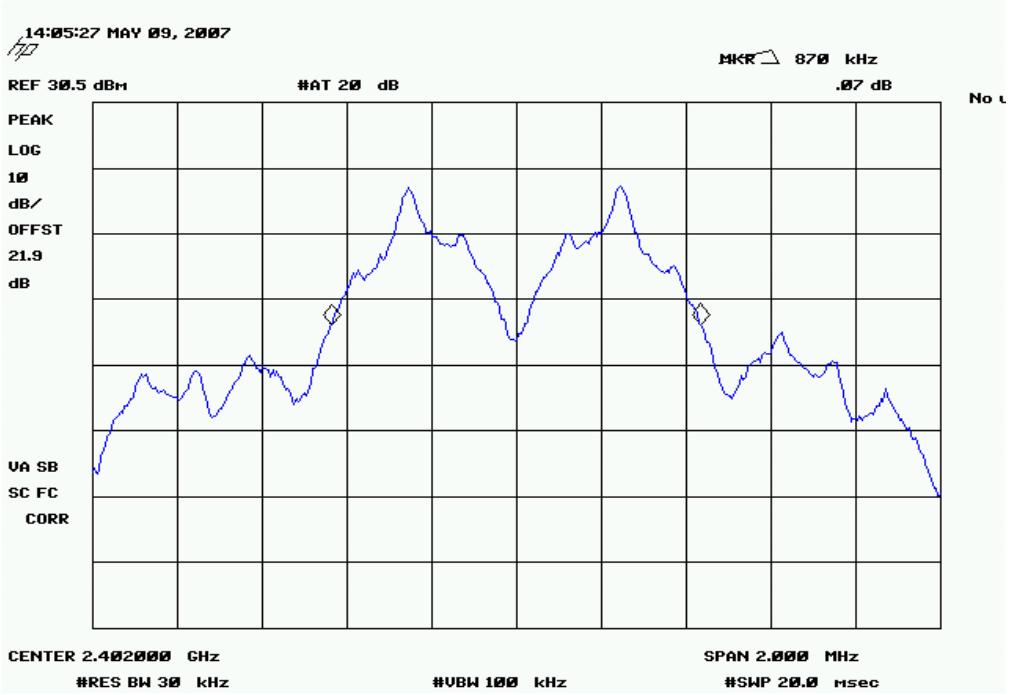


OCCUPIED BANDWIDTH

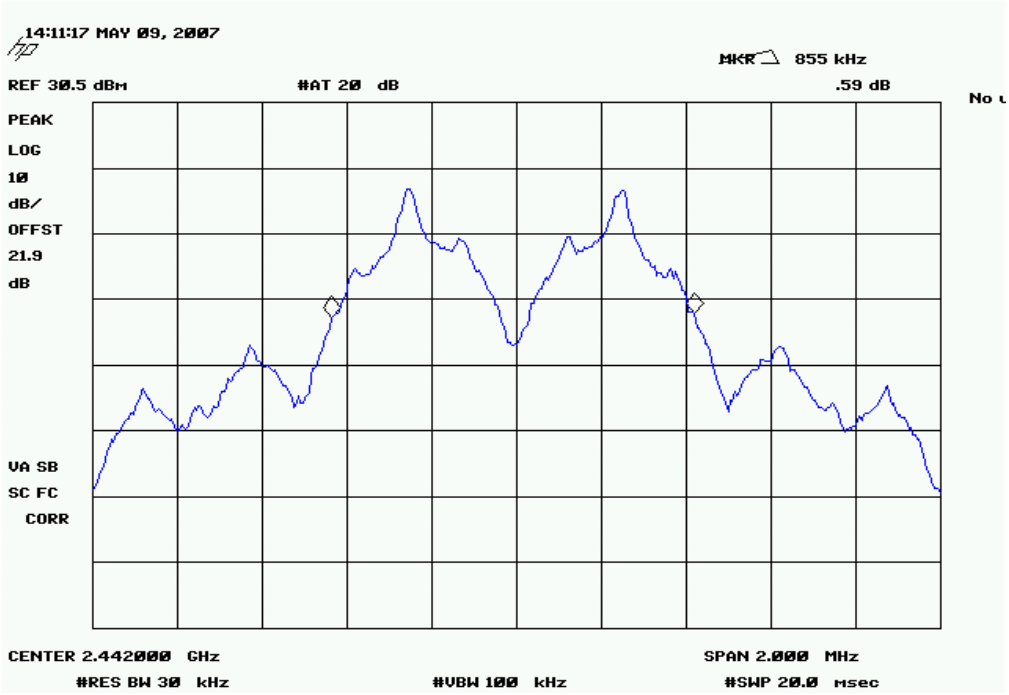
Low Output Power, High Channel					
Result:	Pass	**Value:**	870 kHz	**Limit:**	≤ 1.5 MHz



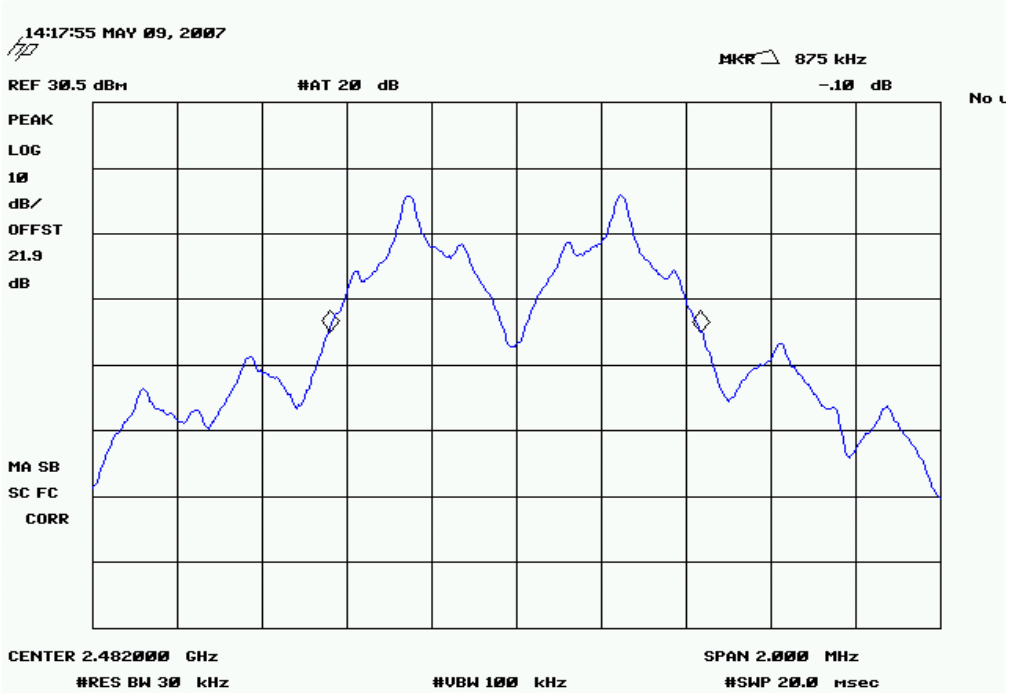
Mid Output Power, Low Channel					
Result:	Pass	**Value:**	870 kHz	**Limit:**	≤ 1.5 MHz



Mid Output Power, Mid Channel					
Result:	Pass	**Value:**	855 kHz	**Limit:**	≤ 1.5 MHz

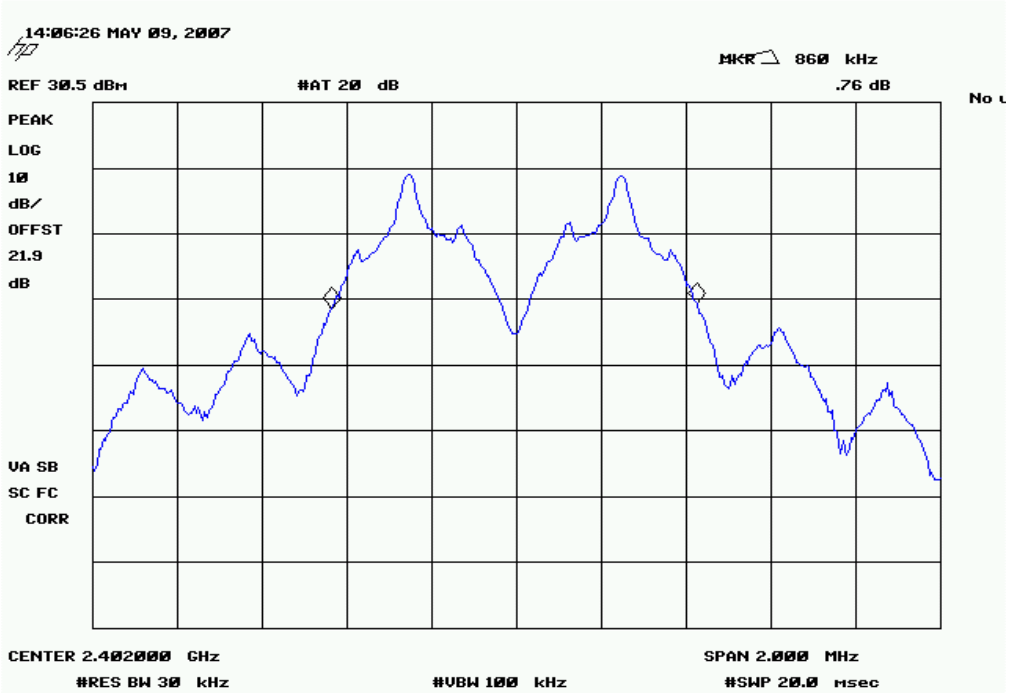


Mid Output Power, High Channel					
Result:	Pass	**Value:**	875 kHz	**Limit:**	≤ 1.5 MHz

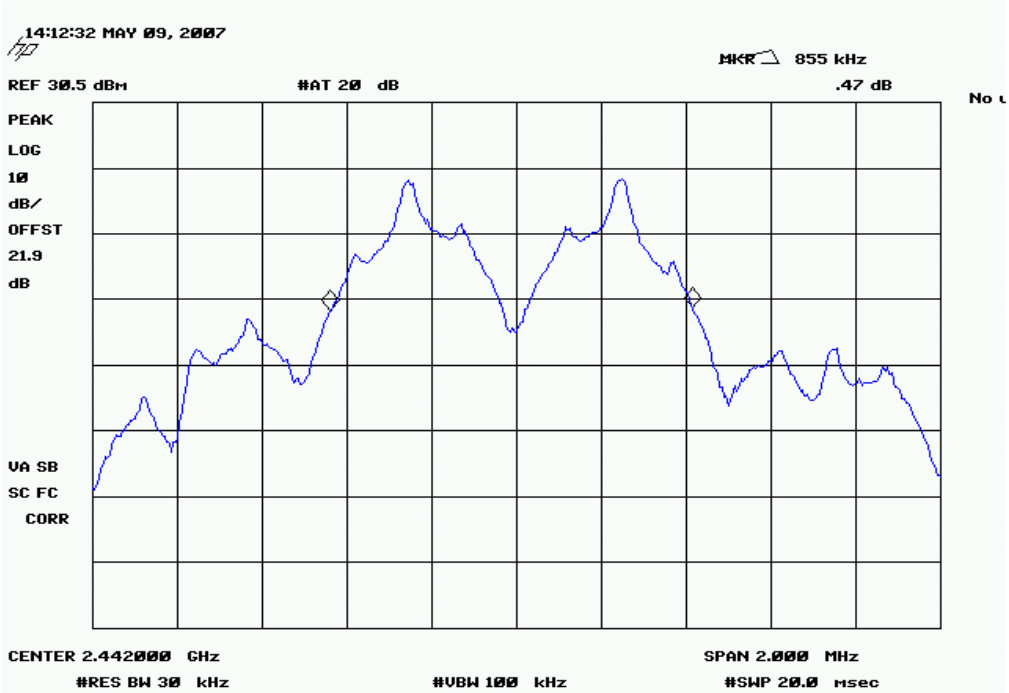


OCCUPIED BANDWIDTH

High Output Power, Low Channel					
Result:	Pass	**Value:**	860 kHz	**Limit:**	≤ 1.5 MHz

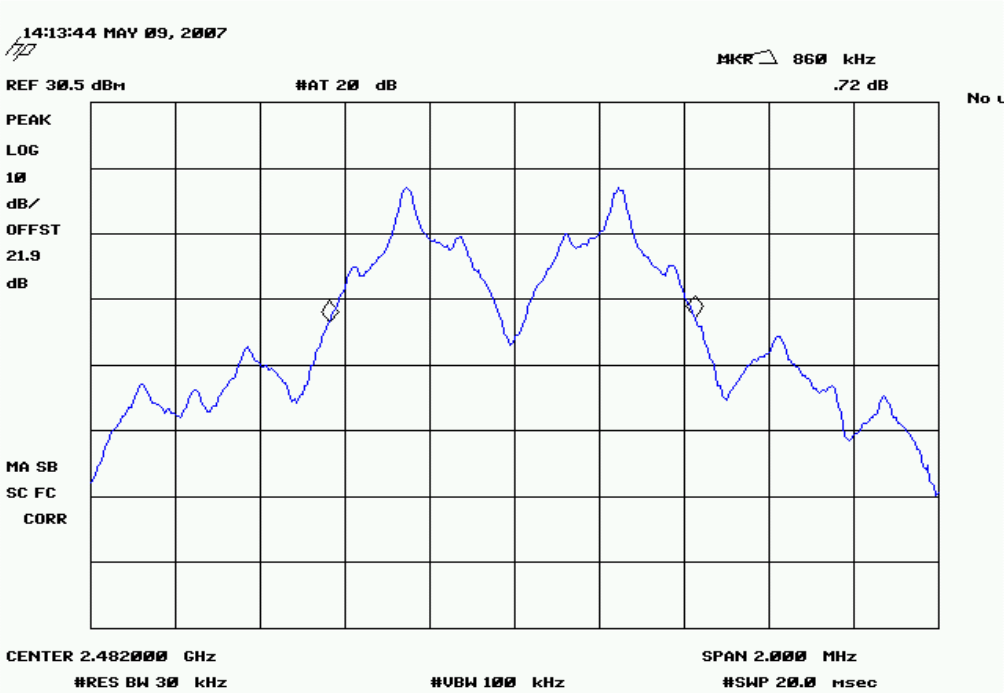


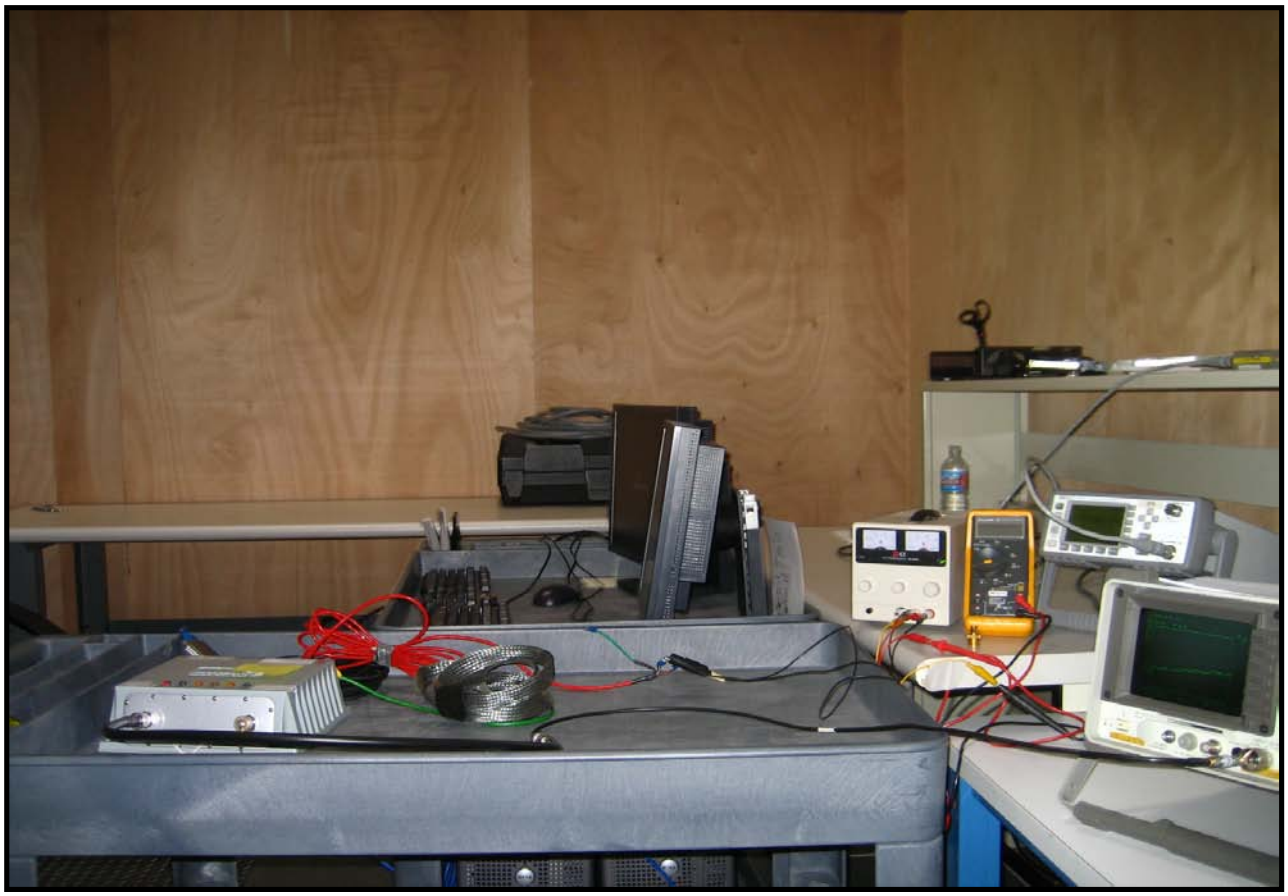
High Output Power, Mid Channel					
Result:	Pass	**Value:**	850 kHz	**Limit:**	≤ 1.5 MHz

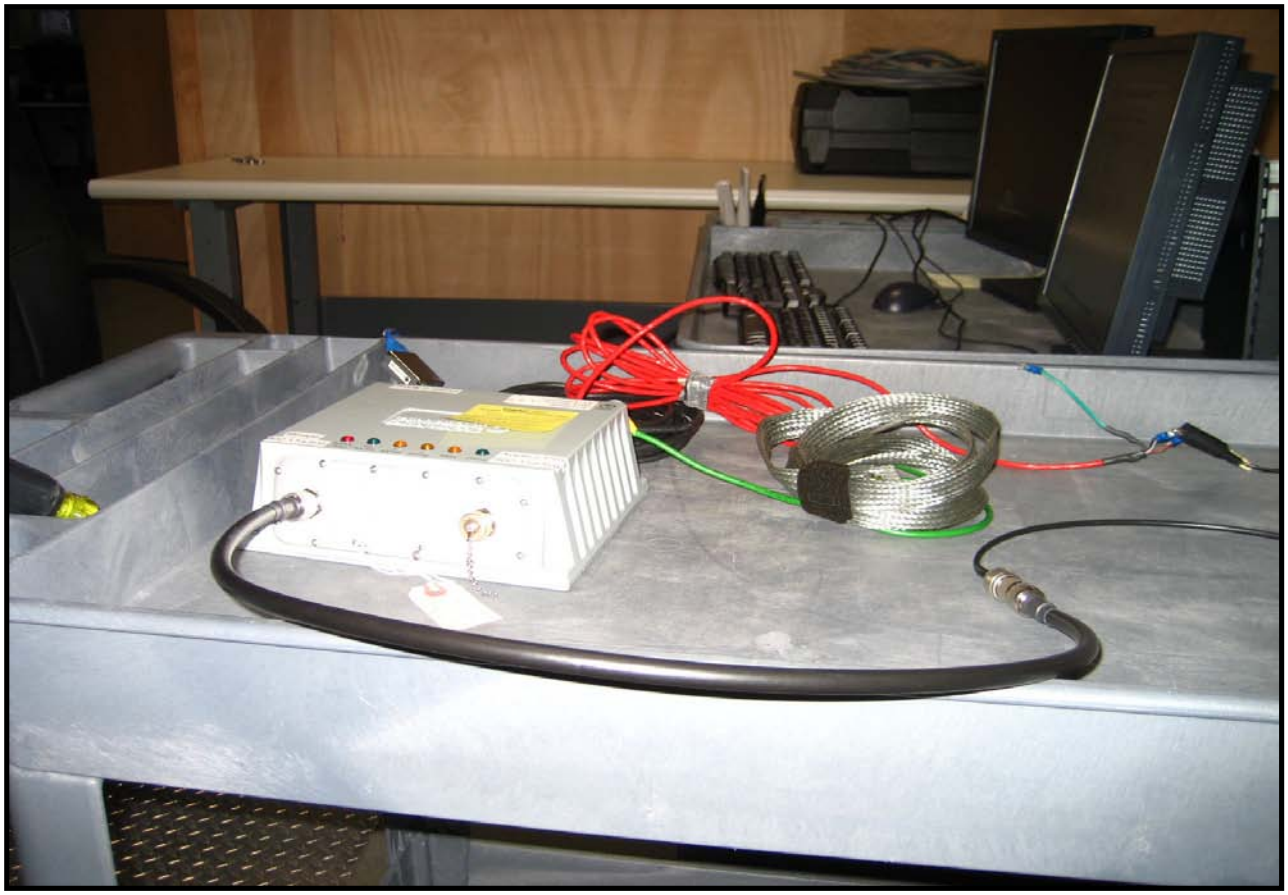


OCCUPIED BANDWIDTH

High Output Power, High Channel					
Result:	Pass	**Value:**	860 kHz	**Limit:**	≤ 1.5 MHz







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
Power Sensor	Hewlett-Packard	8481H	SPB	11/1/2006	13
Power Meter	Hewlett Packard	E4418A	SPA	11/1/2006	13
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/14/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

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

NORTHWEST EMC

OUTPUT POWER

XMit 2007.03.30

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY			Work Order:	HONE0011
Serial Number:	None			Date:	05/09/07
Customer:	Honeywell			Temperature:	23c°C
Attendees:	David Shipley			Humidity:	43%
Project:	None			Barometric Pres.:	30.08
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC03

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

LowChannel. 5dBi Omni Antenna

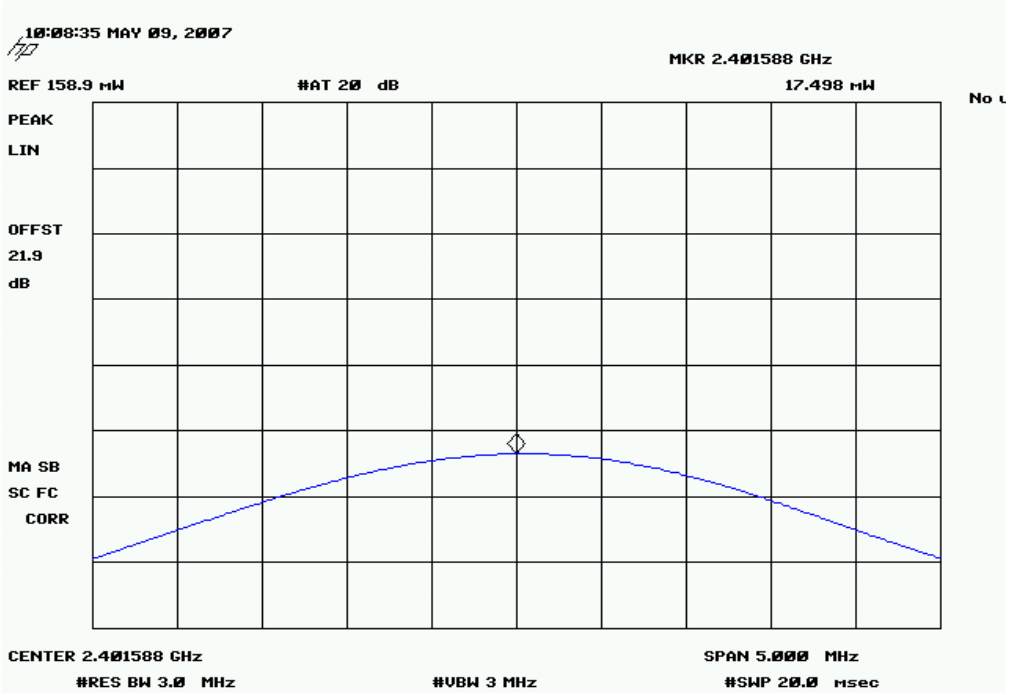
DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

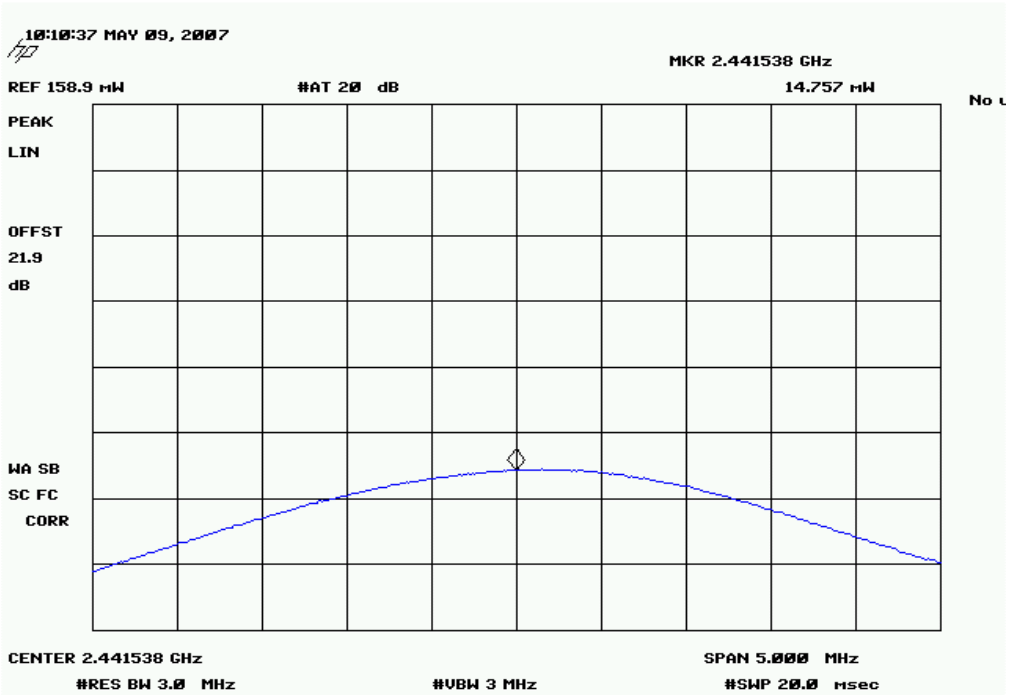
		Value	Limit	Results
Lowest Output Power				
	Low Channel	17.498 mW	≤ 125 mW	Pass
	Mid Channel	14.758 mW	≤ 125 mW	Pass
	High Channel	12.706 mW	≤ 125 mW	Pass
Mid Output Power				
	Low Channel	64.269 mW	≤ 125 mW	Pass
	Mid Channel	56.105 mW	≤ 125 mW	Pass
	High Channel	45.499 mW	≤ 125 mW	Pass
Highest Output Power				
	Low Channel	96.161 mW	≤ 125 mW	Pass
	Mid Channel	87.096 mW	≤ 125 mW	Pass
	High Channel	64.714 mW	≤ 125 mW	Pass

OUTPUT POWER

Lowest Output Power, Low Channel					
Result:	Pass	**Value:**	17.498 mW	**Limit:**	≤ 125 mW

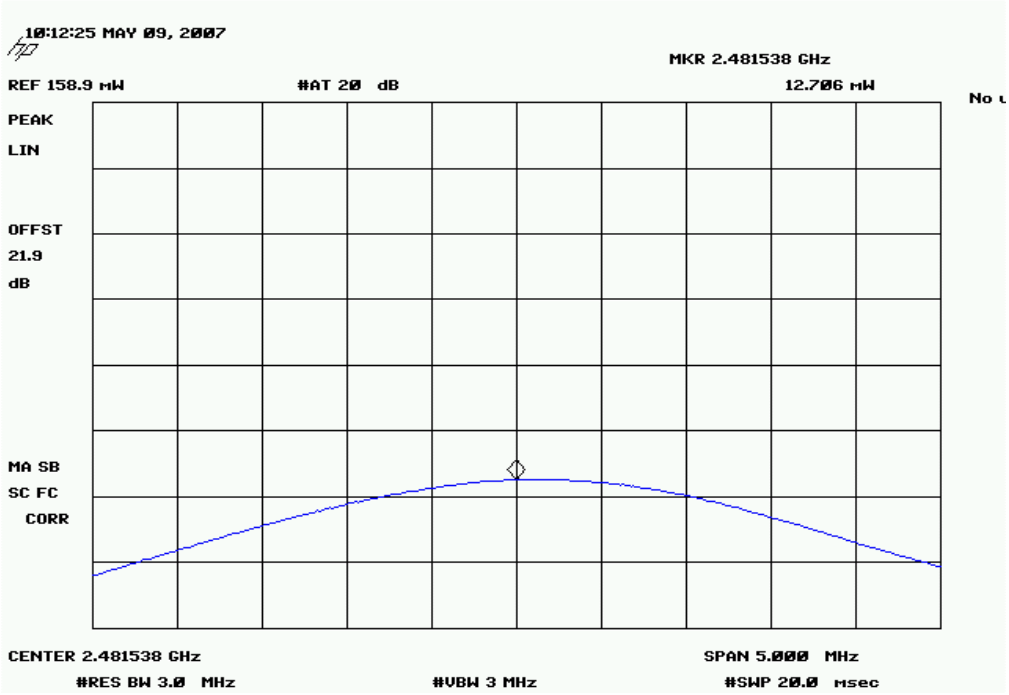


Lowest Output Power, Mid Channel					
Result:	Pass	**Value:**	14.758 mW	**Limit:**	≤ 125 mW

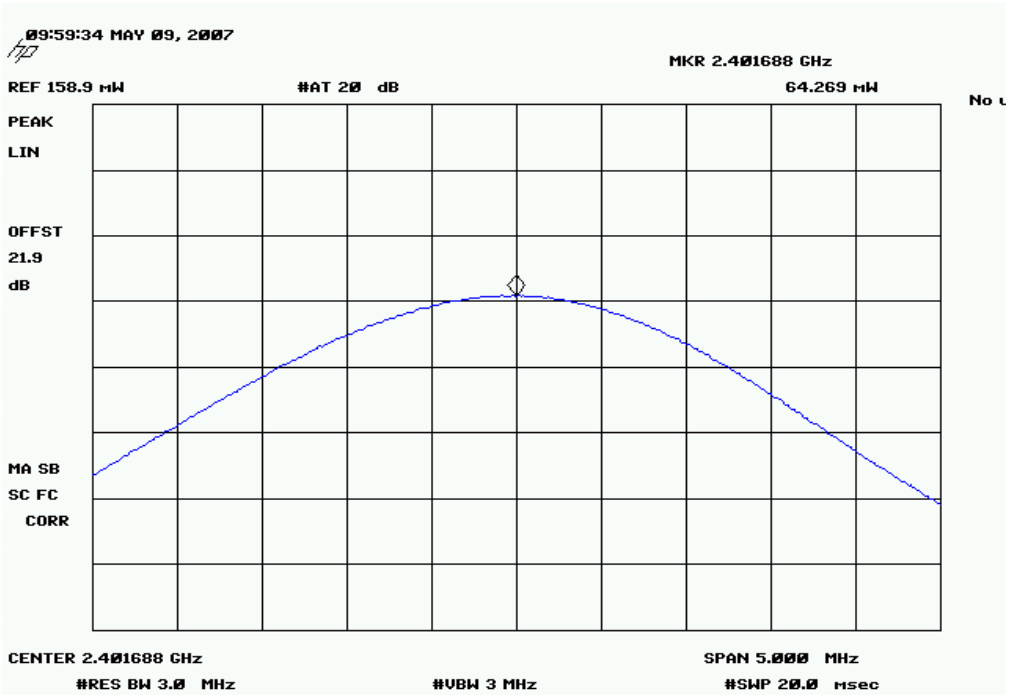


OUTPUT POWER

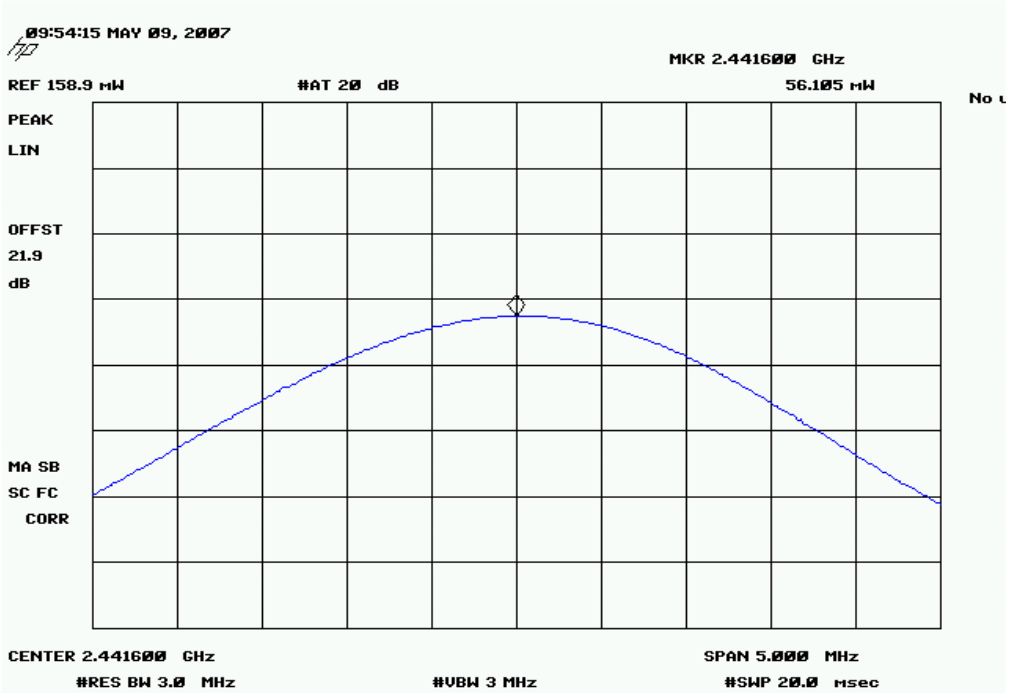
Lowest Output Power, High Channel					
Result:	Pass	**Value:**	12.706 mW	**Limit:**	≤ 125 mW



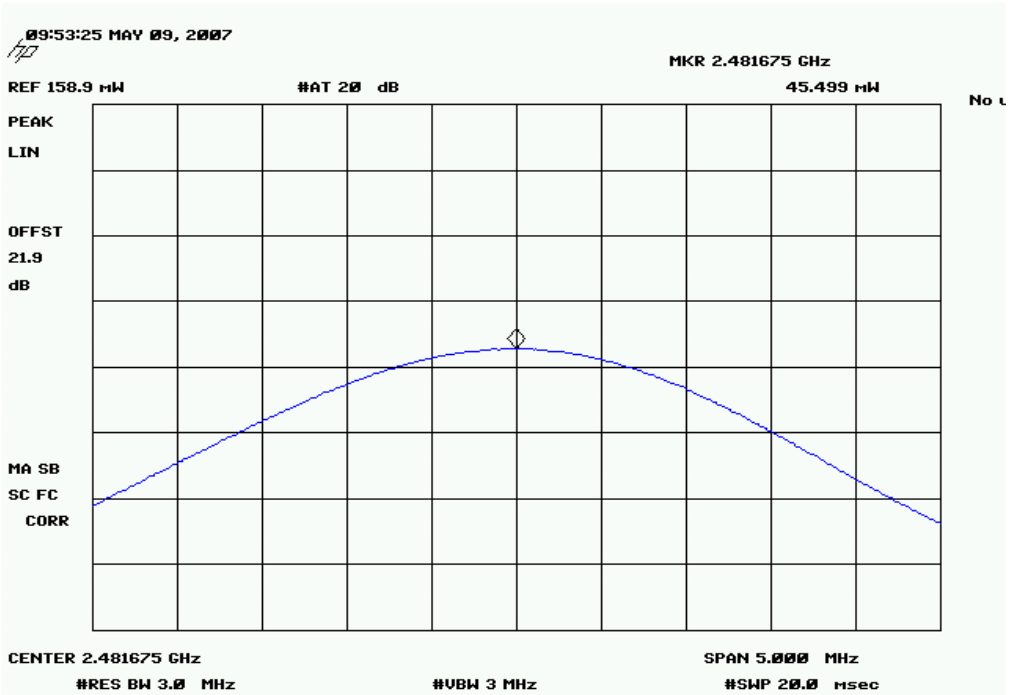
Mid Output Power, Low Channel					
Result:	Pass	**Value:**	64.269 mW	**Limit:**	≤ 125 mW



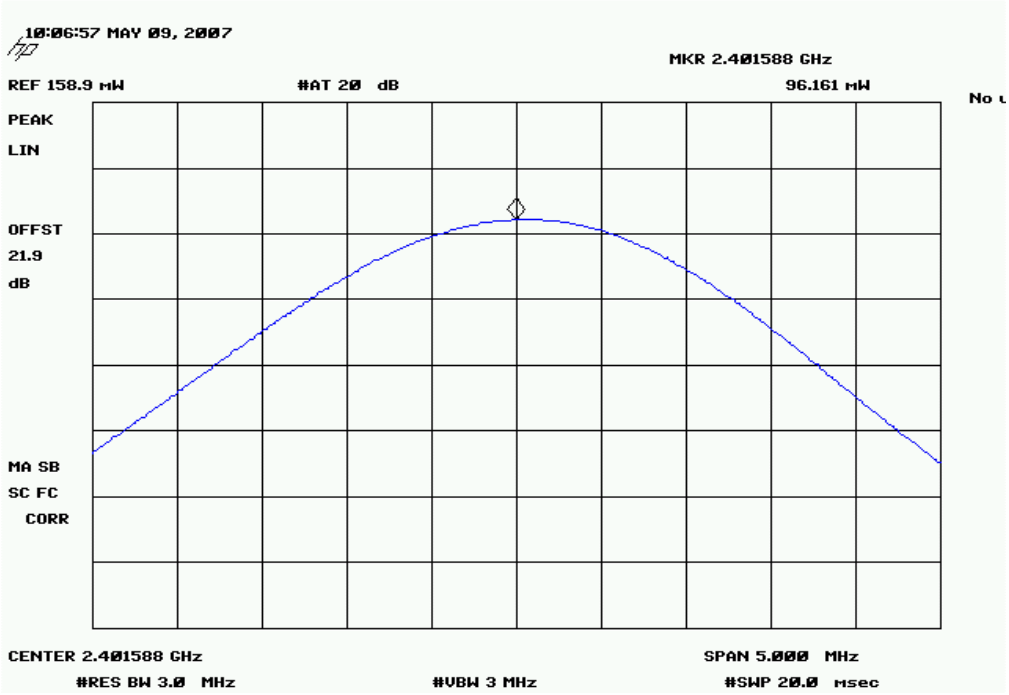
Mid Output Power, Mid Channel					
Result:	Pass	**Value:**	56.105 mW	**Limit:**	≤ 125 mW



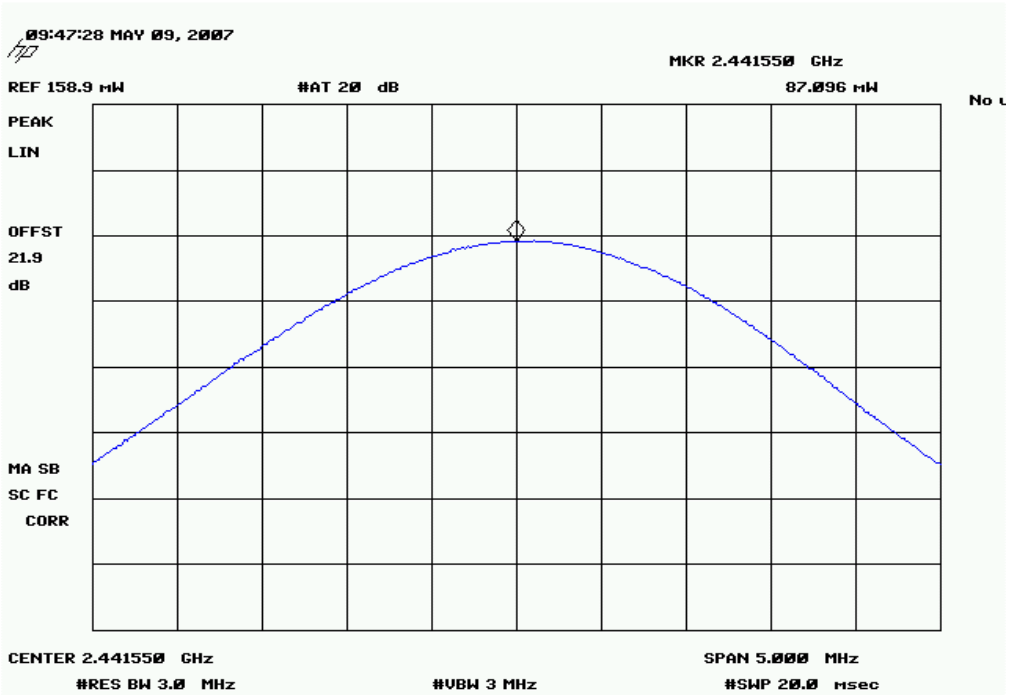
Mid Output Power, High Channel					
Result:	Pass	**Value:**	45.499 mW	**Limit:**	≤ 125 mW



Highest Output Power, Low Channel					
Result:	Pass	**Value:**	96.161 mW	**Limit:**	≤ 125 mW

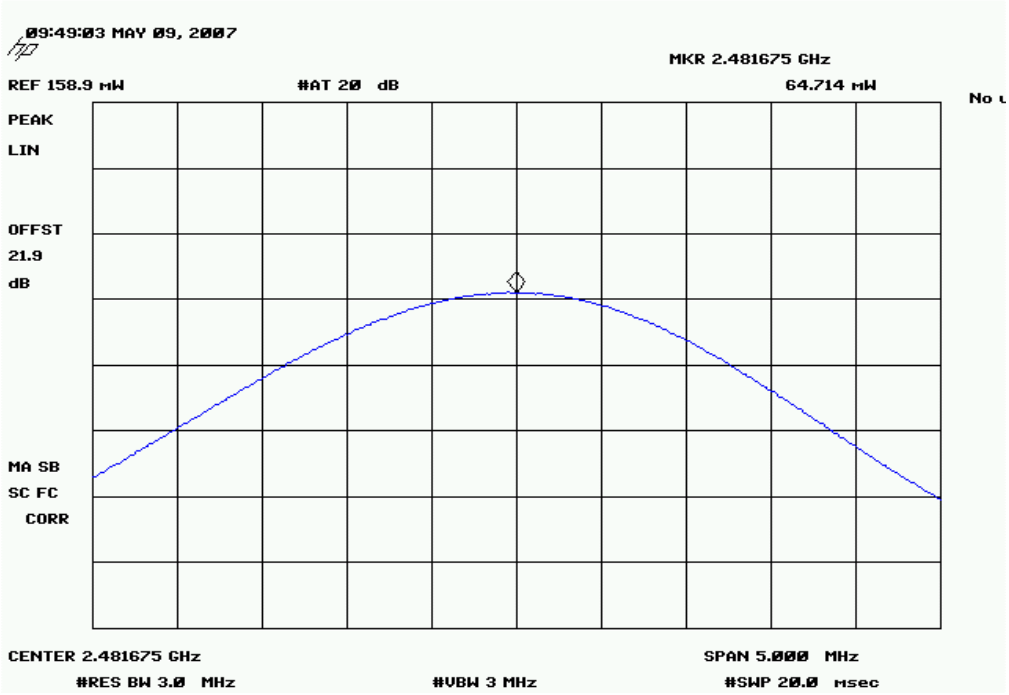


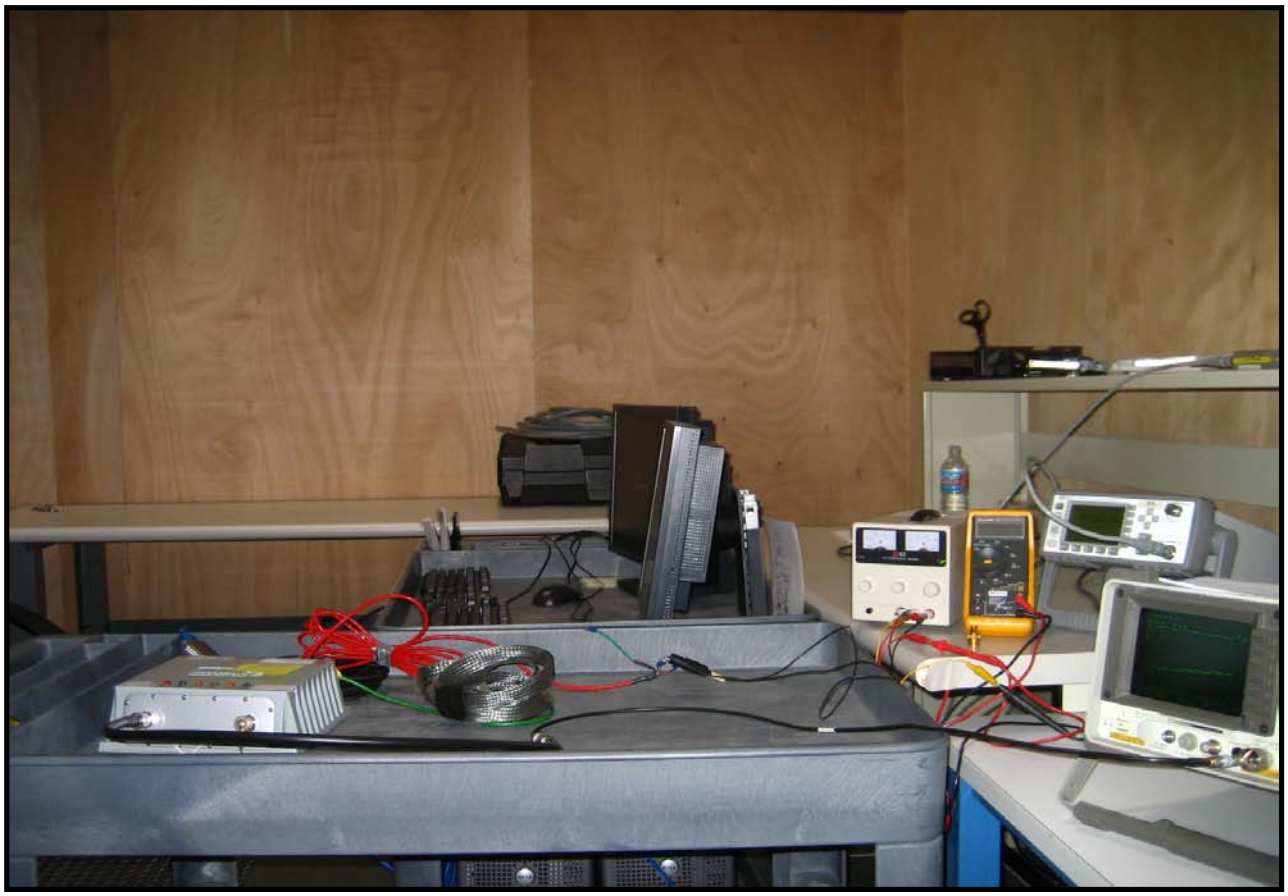
Highest Output Power, Mid Channel					
Result:	Pass	**Value:**	87.096 mW	**Limit:**	≤ 125 mW

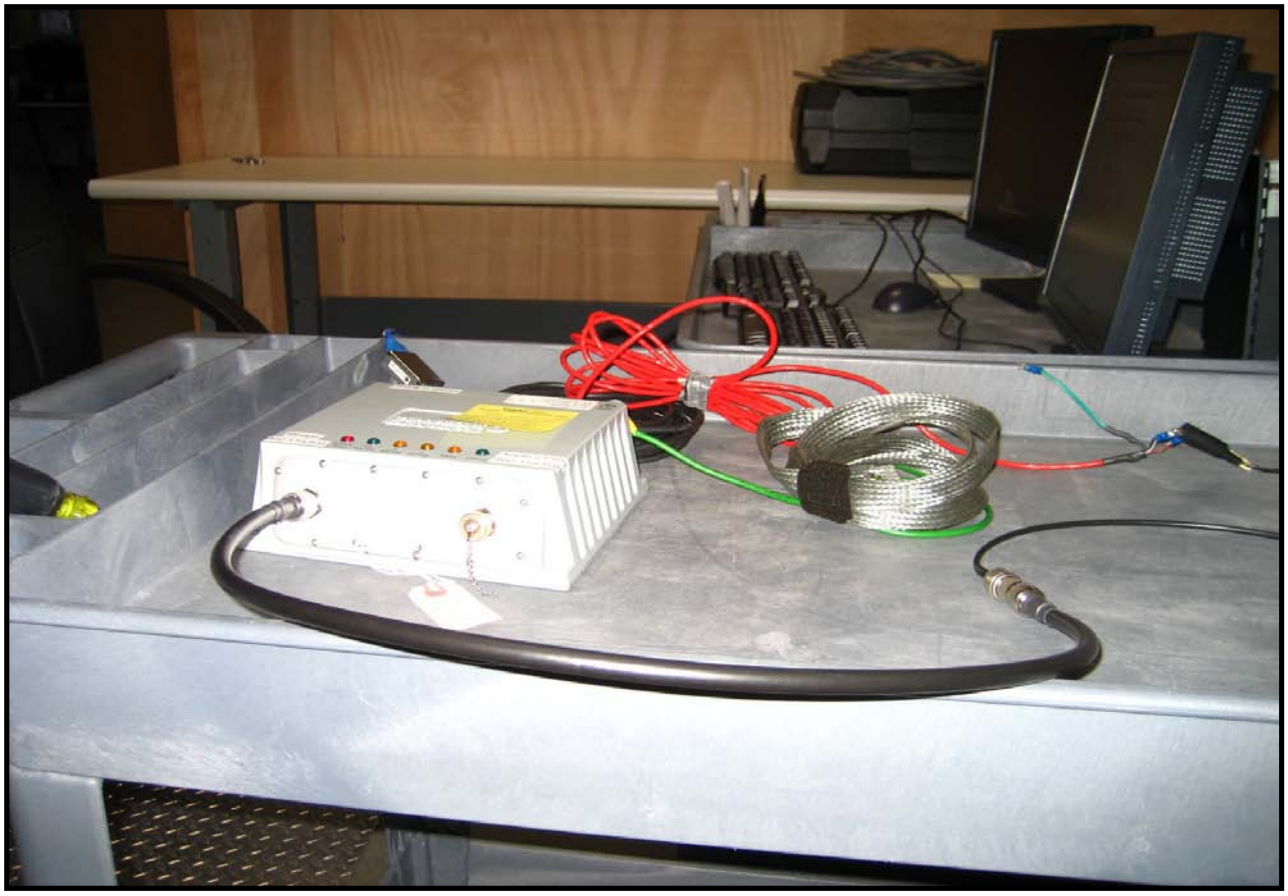


OUTPUT POWER

Highest Output Power, High Channel					
Result:	Pass	**Value:**	64.714 mW	**Limit:**	≤ 125 mW







BAND EDGE 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
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/14/2006	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high tra frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analy The EUT was transmitting at its maximum data rate in a no hop mode. The channels closest to the band edges were selected. spectrum was scanned across each band edge from 5 MHz below the band edge to 5 MHz above the band edge.

NORTHWEST EMC

BAND EDGE COMPLIANCE

XMit 2007.03.30

EUT:	551153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	05/09/07
Customer:	Honeywell	Temperature:	22°C
Attendees:	David Shipley	Humidity:	33%
Project:	None	Barometric Pres.:	29.91
Tested by:	Jaemi Suh	Power: 120VAC/60Hz	Job Site: OC03

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

Computer Power Setting: Lowest = 123, Mid = 161, High = 193.

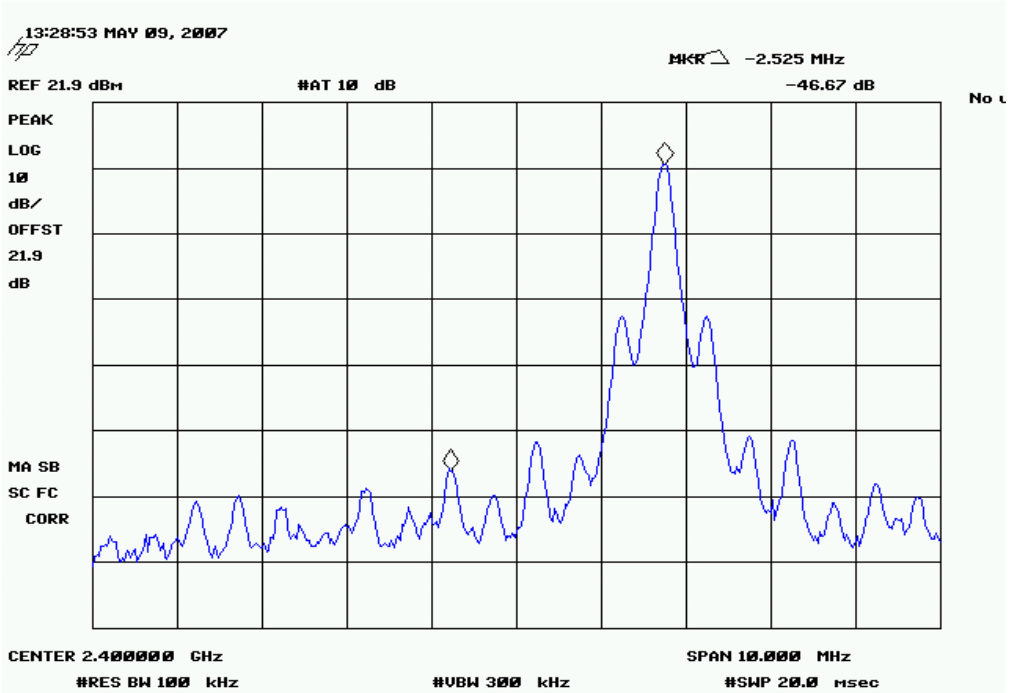
DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

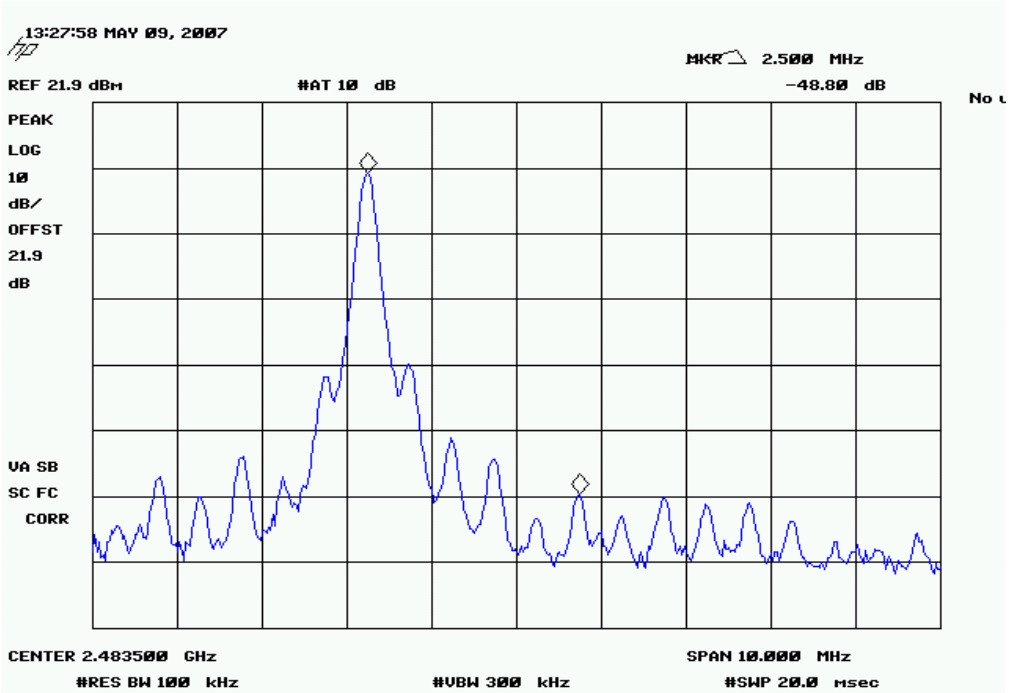
		Value	Limit	Results
Low Output Power				
	Low Channel	- 46.67 dBc	≤ -20 dBc	Pass
	High Channel	- 48.80 dBc	≤ -20 dBc	Pass
Mid Output Power				
	Low Channel	- 47.01 dBc	≤ -20 dBc	Pass
	High Channel	- 47.45 dBc	≤ -20 dBc	Pass
High Output Power				
	Low Channel	- 47.10 dBc	≤ -20 dBc	Pass
	High Channel	- 48.87 dBc	≤ -20 dBc	Pass

BAND EDGE COMPLIANCE

Low Output Power, Low Channel					
Result:	Pass	**Value:**	- 46.67 dBc	**Limit:**	≤ -20 dBc

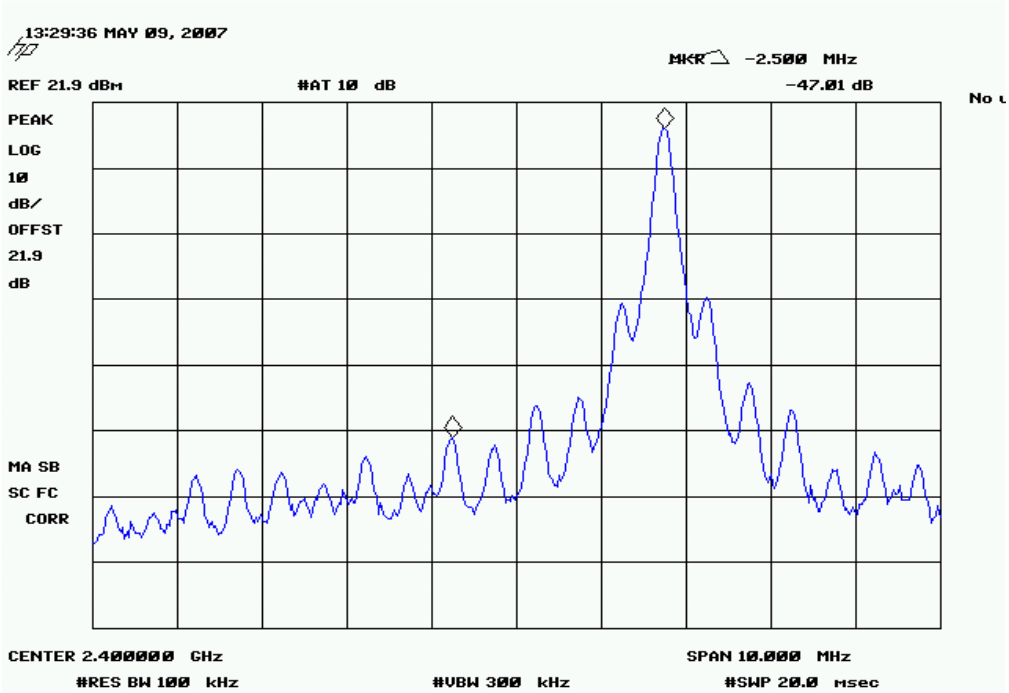


Low Output Power, High Channel					
Result:	Pass	**Value:**	- 48.80 dBc	**Limit:**	≤ -20 dBc

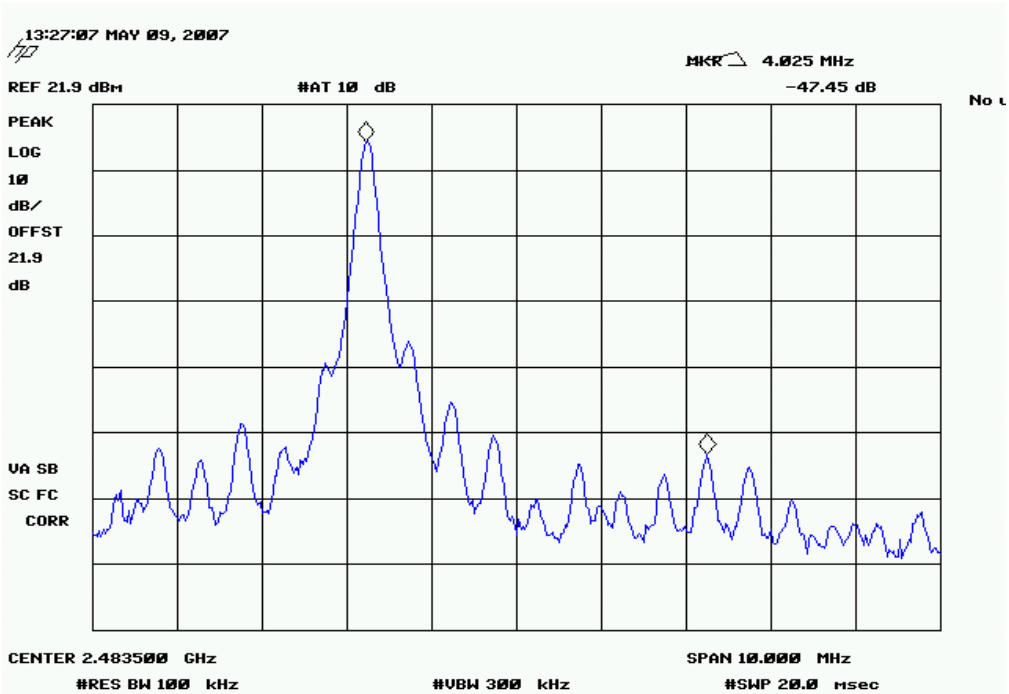


BAND EDGE COMPLIANCE

Mid Output Power, Low Channel					
Result:	Pass	**Value:**	- 47.01 dBc	**Limit:**	≤ -20 dBc

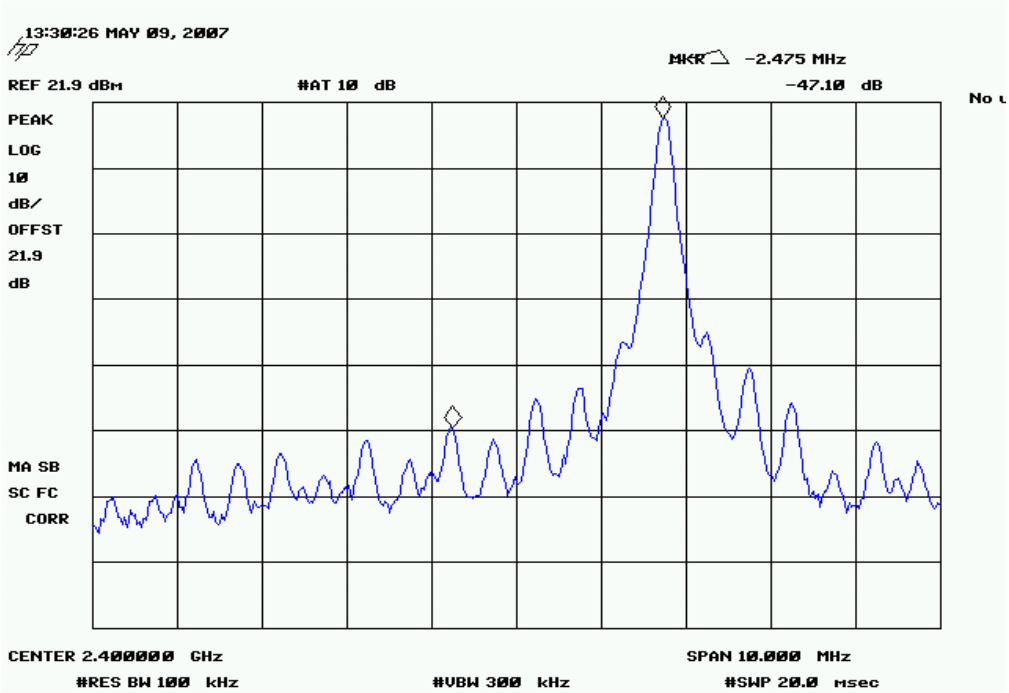


Mid Output Power, High Channel					
Result:	Pass	**Value:**	- 47.45 dBc	**Limit:**	≤ -20 dBc

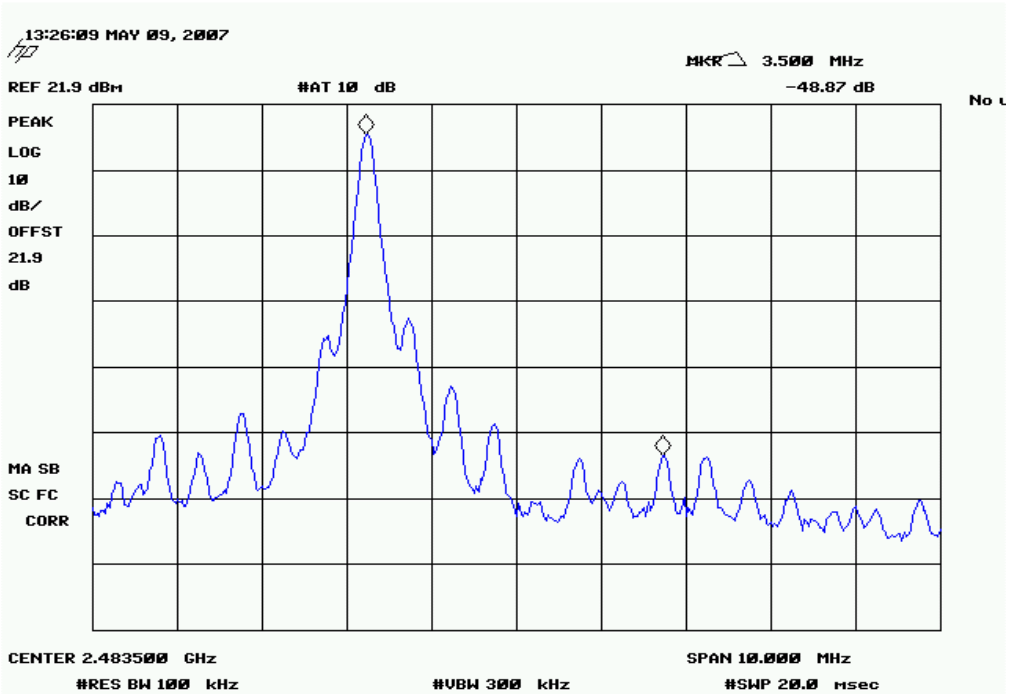


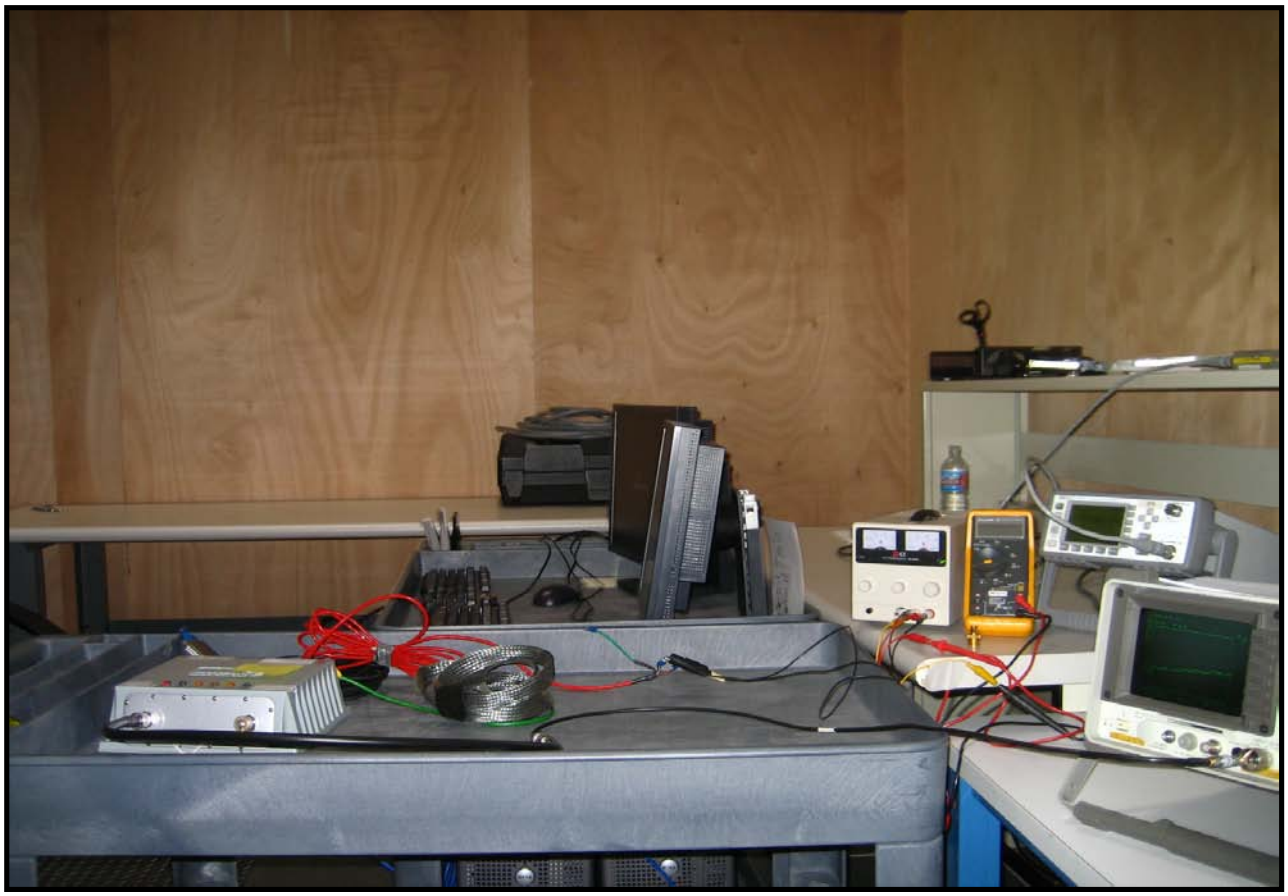
BAND EDGE COMPLIANCE

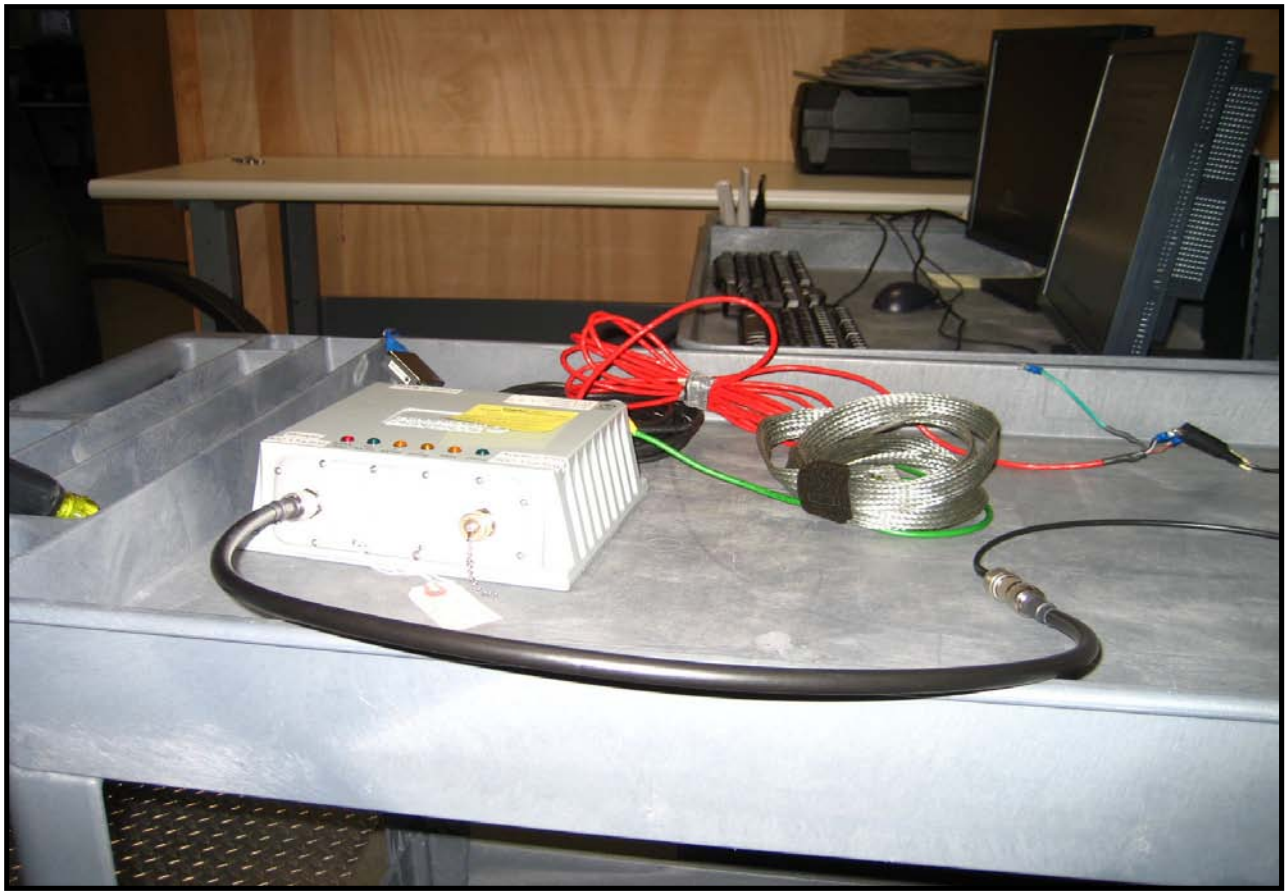
High Output Power, Low Channel					
Result:	Pass	**Value:**	- 47.10 dBc	**Limit:**	≤ -20 dBc



High Output Power, High Channel					
Result:	Pass	**Value:**	- 48.87 dBc	**Limit:**	≤ -20 dBc







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.

TRANSMIT CHANNELS INVESTIGATED
High Channel
Mid Channel
Low Channel

MODES INVESTIGATED
Transmit - No Hop

POWER SETTING INVESTIGATED
Maximum for each specified antenna

POWER SETTINGS INVESTIGATED
120VAC/60Hz

ANTENNAS INVESTIGATED
Hyperlink HG2414P-120 - 14 dBi Sector
Hyperlink HGV-2409U - 8 dBi Omni
SMARTANT TELECOM HON04-052160 - 5 dBi Omni

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30MHz	Stop Frequency	26GHz

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
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	7/11/2006	13
Antenna, Horn	EMCO	3160-09	AHN	NCR	0
OC10 SMA cable for 18-26 GHz			OCK	7/11/2006	13
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	10/13/2006	12
Antenna, Horn	ETS	3160-08	AHT	NCR	0
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	10/13/2006	12
Antenna, Horn	ETS	3160-07	AHR	NCR	24
OC10 cables a,b,c,e,f Horn Cables			OCJ	1/14/2007	13
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	1/14/2007	13
Antenna, Horn	EMCO	3115	AHB	8/1/2005	24
OC 10 Cables a, b, c, I Cables			OCO	1/14/2007	13
Antenna, Biconilog	EMCO	3142	AXJ	3/14/2006	24
OC10 cables a,b,c,d Bilog			OCH	3/30/2006	13
Pre-Amplifier	Miteq	AM-1616-1000	AOM	12/17/2006	13
Spectrum Analyzer	Agilent	E4446A	AAQ	1/18/2007	13

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

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

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/09/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	43%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jaemi Suh	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

Low Channel. 14dBi Sector Antenna.

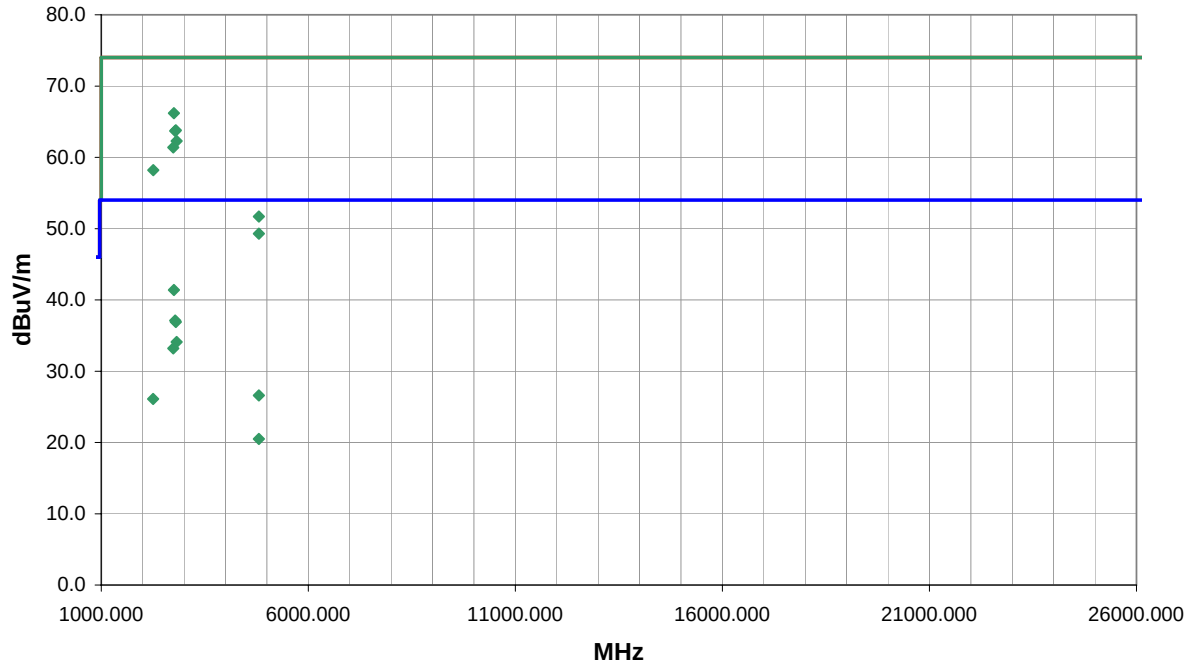
EUT OPERATING MODES

Transmitting at 2402 MHz.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5		
Configuration #	1		
Results	Pass	NVLAP Lab Code 200629-0	*Signature*



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2754.284	43.6	2.6	319.0	1.3	0.0	20.0	V-Horn	PK	0.0	66.2	74.0	-7.8
2802.314	41.1	2.7	1.0	1.3	0.0	20.0	V-Horn	PK	0.0	63.8	74.0	-10.2
2786.273	41.0	2.7	17.0	1.3	0.0	20.0	V-Horn	PK	0.0	63.7	74.0	-10.3
2818.232	39.5	2.8	17.0	1.3	0.0	20.0	V-Horn	PK	0.0	62.3	74.0	-11.7
2754.273	38.8	2.6	319.0	1.3	20.0	20.0	V-Horn	AV	0.0	41.4	54.0	-12.6
2738.268	39.0	2.4	359.0	1.6	0.0	20.0	V-Horn	PK	0.0	61.4	74.0	-12.6
2254.444	37.1	1.1	245.0	1.3	0.0	20.0	V-Horn	PK	0.0	58.2	74.0	-15.8
2786.272	34.4	2.7	17.0	1.3	20.0	20.0	V-Horn	AV	0.0	37.1	54.0	-16.9
2802.273	34.2	2.7	1.0	1.3	20.0	20.0	V-Horn	AV	0.0	36.9	54.0	-17.1
2818.266	31.3	2.8	17.0	1.3	20.0	20.0	V-Horn	AV	0.0	34.1	54.0	-19.9
2738.276	30.8	2.4	359.0	1.6	20.0	20.0	V-Horn	AV	0.0	33.2	54.0	-20.8
4804.519	41.4	10.3	1.0	1.2	0.0	0.0	V-Horn	PK	0.0	51.7	74.0	-22.3
4804.522	39.0	10.3	18.0	1.6	0.0	0.0	H-Horn	PK	0.0	49.3	74.0	-24.7
4804.518	36.3	10.3	1.0	1.2	20.0	0.0	V-Horn	AV	0.0	26.6	54.0	-27.4
2253.829	25.0	1.1	245.0	1.3	20.0	20.0	V-Horn	AV	0.0	26.1	54.0	-27.9
4804.526	30.2	10.3	18.0	1.6	20.0	0.0	H-Horn	AV	0.0	20.5	54.0	-33.5

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/09/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	43%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jaemi Suh	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

TEST PARAMETERS

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

COMMENTS

Mid Channel. 14dBi Sector Antenna.

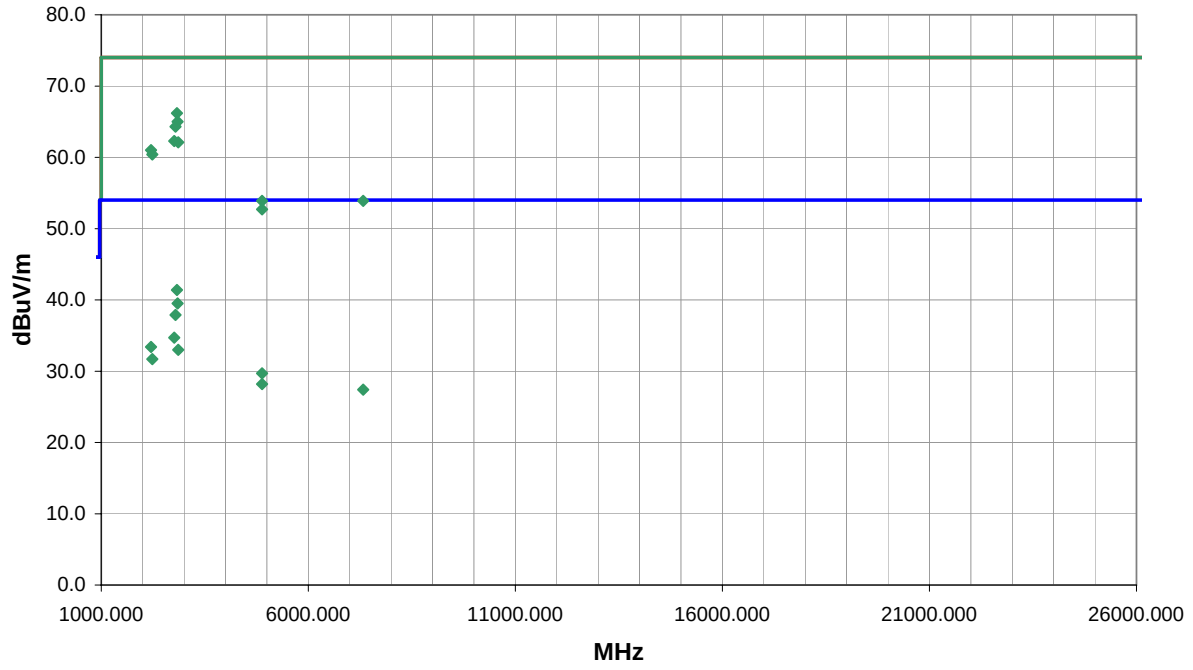
EUT OPERATING MODES

Transmitting at 2442 MHz.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6		
Configuration #	1		
Results	Pass	NVLAP Lab Code 200629-0	Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2826.309	43.3	2.9	36.0	1.2	0.0	20.0	V-Horn	PK	0.0	66.2	74.0	-7.8
2842.174	42.0	3.0	312.0	1.2	0.0	20.0	V-Horn	PK	0.0	65.0	74.0	-9.0
2794.220	41.6	2.7	1.0	1.2	0.0	20.0	V-Horn	PK	0.0	64.3	74.0	-9.7
2762.254	39.7	2.6	321.0	1.2	0.0	20.0	V-Horn	PK	0.0	62.3	74.0	-11.7
2858.276	39.1	3.0	1.0	1.5	0.0	20.0	V-Horn	PK	0.0	62.1	74.0	-11.9
2826.270	38.5	2.9	36.0	1.2	20.0	20.0	V-Horn	AV	0.0	41.4	54.0	-12.6
2202.192	40.1	0.9	359.0	1.2	0.0	20.0	V-Horn	PK	0.0	61.0	74.0	-13.0
2234.257	39.5	0.9	1.0	1.6	0.0	20.0	V-Horn	PK	0.0	60.4	74.0	-13.6
2842.292	36.5	3.0	312.0	1.2	20.0	20.0	V-Horn	AV	0.0	39.5	54.0	-14.5
2794.295	35.2	2.7	1.0	1.2	20.0	20.0	V-Horn	AV	0.0	37.9	54.0	-16.1
2762.220	32.1	2.6	321.0	1.2	20.0	20.0	V-Horn	AV	0.0	34.7	54.0	-19.3
4884.552	43.3	10.6	1.0	1.2	0.0	0.0	V-Horn	PK	0.0	53.9	74.0	-20.1
7326.500	38.7	15.2	200.0	1.7	0.0	0.0	V-Horn	PK	0.0	53.9	74.0	-20.1
2202.259	32.5	0.9	359.0	1.2	20.0	20.0	V-Horn	AV	0.0	33.4	54.0	-20.6
2858.258	30.0	3.0	1.0	1.5	20.0	20.0	V-Horn	AV	0.0	33.0	54.0	-21.0
4884.514	42.1	10.6	64.0	1.3	0.0	0.0	H-Horn	PK	0.0	52.7	74.0	-21.3
2234.269	30.8	0.9	1.0	1.6	20.0	20.0	V-Horn	AV	0.0	31.7	54.0	-22.3
4884.520	39.1	10.6	1.0	1.2	20.0	0.0	V-Horn	AV	0.0	29.7	54.0	-24.3
4884.520	37.6	10.6	64.0	1.3	20.0	0.0	H-Horn	AV	0.0	28.2	54.0	-25.8
7326.755	32.2	15.2	200.0	1.7	20.0	0.0	V-Horn	AV	0.0	27.4	54.0	-26.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/09/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	43%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jaemi Suh	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

HighChannel. 14dBi Sector Antenna.

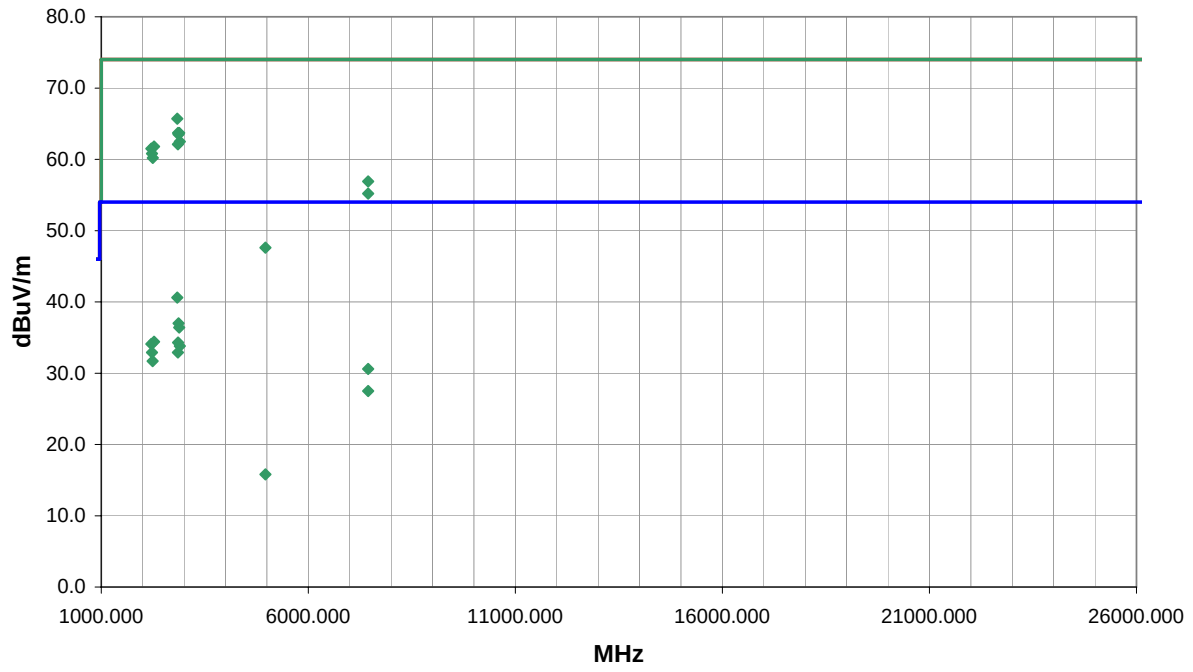
EUT OPERATING MODES

Transmitting at 2482 MHz.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7		
Configuration #	1		
Results	Pass	NVLAP Lab Code 200629-0	Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2834.248	42.8	2.9	307.0	1.2	0.0	20.0	V-Horn	PK	0.0	65.7	74.0	-8.3
2856.302	40.7	3.0	350.0	1.2	0.0	20.0	V-Horn	PK	0.0	63.7	74.0	-10.3
2882.279	40.6	3.1	354.0	1.2	0.0	20.0	V-Horn	PK	0.0	63.7	74.0	-10.3
2866.306	40.5	3.0	331.0	1.2	0.0	20.0	V-Horn	PK	0.0	63.5	74.0	-10.5
2898.211	39.2	3.3	360.0	1.2	0.0	20.0	V-Horn	PK	0.0	62.5	74.0	-11.5
2850.253	39.1	3.0	316.0	1.2	0.0	20.0	V-Horn	PK	0.0	62.1	74.0	-11.9
2274.145	40.7	1.1	345.0	1.2	0.0	20.0	V-Horn	PK	0.0	61.8	74.0	-12.2
2210.287	40.6	0.9	5.0	1.2	0.0	20.0	V-Horn	PK	0.0	61.5	74.0	-12.5
2226.200	39.9	0.9	1.0	1.2	0.0	20.0	V-Horn	PK	0.0	60.8	74.0	-13.2
2834.274	37.7	2.9	307.0	1.2	20.0	20.0	V-Horn	AV	0.0	40.6	54.0	-13.4
2242.329	39.3	0.9	359.0	1.5	0.0	20.0	V-Horn	PK	0.0	60.2	74.0	-13.8
2866.244	34.0	3.0	331.0	1.2	20.0	20.0	V-Horn	AV	0.0	37.0	54.0	-17.0
7446.710	41.2	15.7	169.0	1.0	0.0	0.0	H-Horn	PK	0.0	56.9	74.0	-17.1
2882.278	33.3	3.1	354.0	1.2	20.0	20.0	V-Horn	AV	0.0	36.4	54.0	-17.6
7446.890	39.5	15.7	160.0	1.0	0.0	0.0	V-Horn	PK	0.0	55.2	74.0	-18.8
2274.281	33.3	1.1	345.0	1.2	20.0	20.0	V-Horn	AV	0.0	34.4	54.0	-19.6
2856.297	31.3	3.0	350.0	1.2	20.0	20.0	V-Horn	AV	0.0	34.3	54.0	-19.7
2210.291	33.2	0.9	5.0	1.2	20.0	20.0	V-Horn	AV	0.0	34.1	54.0	-19.9
2898.239	30.5	3.3	360.0	1.2	20.0	20.0	V-Horn	AV	0.0	33.8	54.0	-20.2
2850.227	29.9	3.0	316.0	1.2	20.0	20.0	V-Horn	AV	0.0	32.9	54.0	-21.1

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2226.257	32.0	0.9	1.0	1.2	20.0	20.0	V-Horn	AV	0.0	32.9	54.0	-21.1
2242.267	30.8	0.9	359.0	1.5	20.0	20.0	V-Horn	AV	0.0	31.7	54.0	-22.3
7446.768	34.9	15.7	169.0	1.0	20.0	0.0	H-Horn	AV	0.0	30.6	54.0	-23.4
4964.183	36.6	11.0	359.0	1.4	0.0	0.0	V-Horn	PK	0.0	47.6	74.0	-26.4
7446.747	31.8	15.7	160.0	1.0	20.0	0.0	V-Horn	AV	0.0	27.5	54.0	-26.5
4964.314	24.8	11.0	359.0	1.4	20.0	0.0	V-Horn	AV	0.0	15.8	54.0	-38.2

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/10/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	43%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jeremiah Darden	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

LowChannel. 8dBi Omni Antenna.

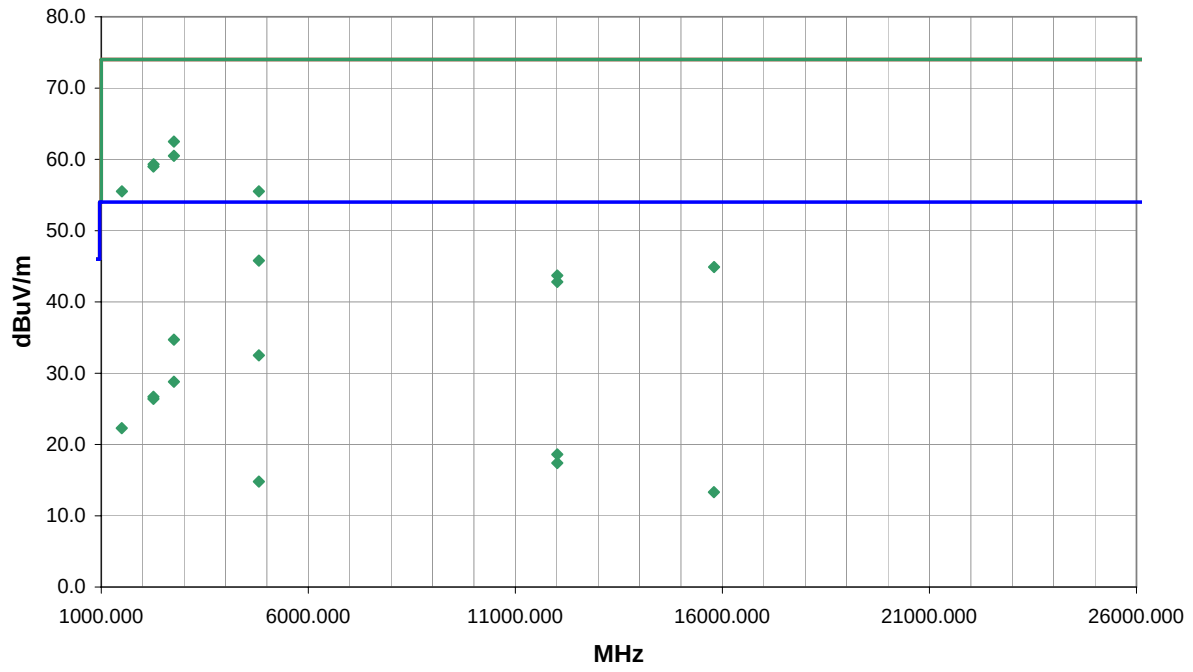
EUT OPERATING MODES

Transmitting at 2402 MHz.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	11		
Configuration #	1		
Results	Pass	NVLAP Lab Code 200629-0	Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2754.328	39.9	2.6	159.0	1.2	0.0	20.0	H-Horn	PK	0.0	62.5	74.0	-11.5
2754.173	37.9	2.6	143.0	1.2	0.0	20.0	V-Horn	PK	0.0	60.5	74.0	-13.5
2262.928	38.2	1.1	275.0	1.2	0.0	20.0	H-Horn	PK	0.0	59.3	74.0	-14.7
2258.017	37.9	1.1	142.0	1.0	0.0	20.0	V-Horn	PK	0.0	59.0	74.0	-15.0
4804.493	45.2	10.3	251.0	1.2	0.0	0.0	H-Horn	PK	0.0	55.5	74.0	-18.5
1498.202	38.5	-3.0	90.0	3.2	0.0	20.0	V-Horn	PK	0.0	55.5	74.0	-18.5
2754.246	32.1	2.6	159.0	1.2	20.0	20.0	H-Horn	AV	0.0	34.7	54.0	-19.3
4804.524	42.2	10.3	251.0	1.2	20.0	0.0	H-Horn	AV	0.0	32.5	54.0	-21.5
2754.240	26.2	2.6	143.0	1.2	20.0	20.0	V-Horn	AV	0.0	28.8	54.0	-25.2
2257.781	25.6	1.1	142.0	1.0	20.0	20.0	V-Horn	AV	0.0	26.7	54.0	-27.3
2257.861	25.3	1.1	275.0	1.2	20.0	20.0	H-Horn	AV	0.0	26.4	54.0	-27.6
4804.621	35.5	10.3	252.0	1.2	0.0	0.0	V-Horn	PK	0.0	45.8	74.0	-28.2
15798.440	38.8	6.1	93.0	1.2	0.0	0.0	H-Horn	PK	0.0	44.9	74.0	-29.1
12011.030	52.8	-9.1	268.0	1.2	0.0	0.0	V-Horn	PK	0.0	43.7	74.0	-30.3
12011.220	51.9	-9.1	217.0	1.2	0.0	0.0	H-Horn	PK	0.0	42.8	74.0	-31.2
1494.395	25.3	-3.0	90.0	3.2	20.0	20.0	V-Horn	AV	0.0	22.3	54.0	-31.7
12011.280	47.7	-9.1	268.0	1.2	20.0	0.0	V-Horn	AV	0.0	18.6	54.0	-35.4
12011.270	46.5	-9.1	217.0	1.2	20.0	0.0	H-Horn	AV	0.0	17.4	54.0	-36.6
4804.526	24.5	10.3	252.0	1.2	20.0	0.0	V-Horn	AV	0.0	14.8	54.0	-39.2

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/10/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	43%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jeremiah Darden	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

MidChannel. 8dBi Omni Antenna.

EUT OPERATING MODES

Transmitting at 2442 MHz.

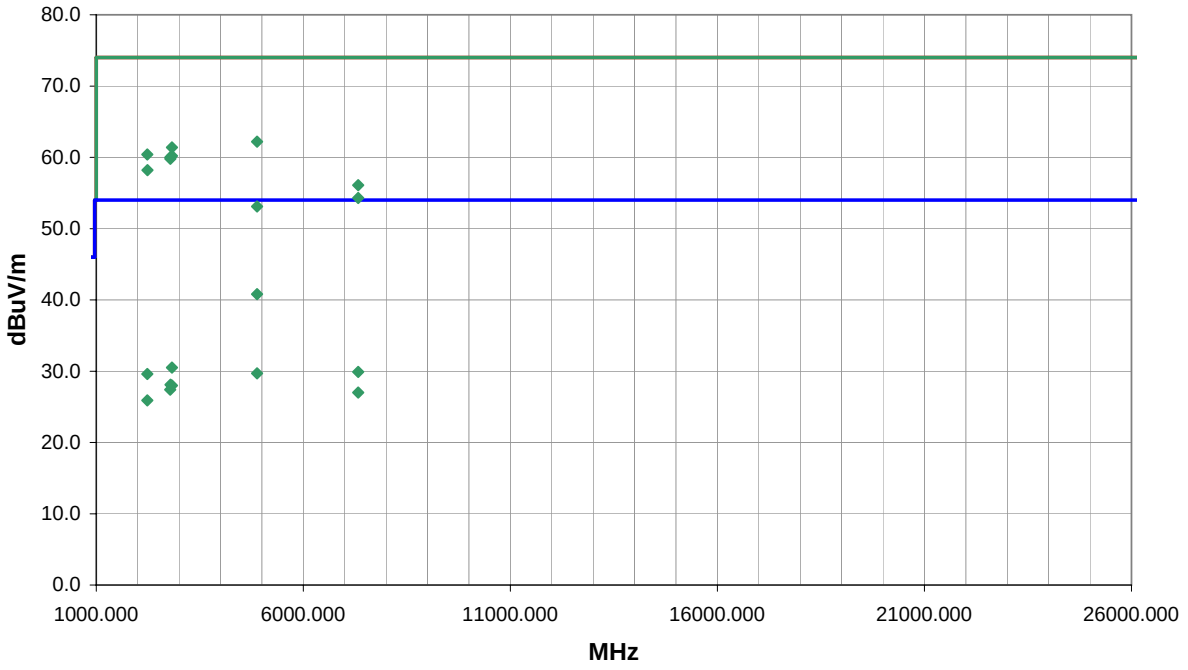
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	13
Configuration #	1
Results	Pass

NVLAP Lab Code 200629-0

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
4884.514	51.6	10.6	136.0	1.2	0.0	0.0	V-Horn	PK	0.0	62.2	74.0	-11.8
2826.252	38.5	2.9	53.0	1.9	0.0	20.0	V-Horn	PK	0.0	61.4	74.0	-12.6
4884.521	50.2	10.6	136.0	1.2	20.0	0.0	V-Horn	AV	0.0	40.8	54.0	-13.2
2234.133	39.5	0.9	260.0	1.0	0.0	20.0	V-Horn	PK	0.0	60.4	74.0	-13.6
2826.532	37.3	2.9	72.0	1.0	0.0	20.0	H-Horn	PK	0.0	60.2	74.0	-13.8
2790.081	37.3	2.7	329.0	1.0	0.0	20.0	V-Horn	PK	0.0	60.0	74.0	-14.0
2789.660	37.1	2.7	120.0	1.9	0.0	20.0	H-Horn	PK	0.0	59.8	74.0	-14.2
2235.748	37.3	0.9	335.0	3.8	0.0	20.0	H-Horn	PK	0.0	58.2	74.0	-15.8
7326.780	40.9	15.2	166.0	1.2	0.0	0.0	H-Horn	PK	0.0	56.1	74.0	-17.9
7326.512	39.1	15.2	173.0	2.0	0.0	0.0	V-Horn	PK	0.0	54.3	74.0	-19.7
4884.505	42.5	10.6	151.0	1.2	0.0	0.0	H-Horn	PK	0.0	53.1	74.0	-20.9
2826.251	27.6	2.9	53.0	1.9	20.0	20.0	V-Horn	AV	0.0	30.5	54.0	-23.5
7326.776	34.7	15.2	166.0	1.2	20.0	0.0	H-Horn	AV	0.0	29.9	54.0	-24.1
4884.500	39.1	10.6	151.0	1.2	20.0	0.0	H-Horn	AV	0.0	29.7	54.0	-24.3
2234.248	28.7	0.9	260.0	1.0	20.0	20.0	V-Horn	AV	0.0	29.6	54.0	-24.4
2794.264	25.4	2.7	120.0	1.9	20.0	20.0	H-Horn	AV	0.0	28.1	54.0	-25.9
2826.232	25.1	2.9	72.0	1.0	20.0	20.0	H-Horn	AV	0.0	28.0	54.0	-26.0
2787.065	24.7	2.7	329.0	1.0	20.0	20.0	V-Horn	AV	0.0	27.4	54.0	-26.6
7326.739	31.8	15.2	173.0	2.0	20.0	0.0	V-Horn	AV	0.0	27.0	54.0	-27.0

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/10/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	43%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jeremiah Darden	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

HighChannel. 8dBi Omni Antenna

EUT OPERATING MODES

Transmitting at 2482 MHz

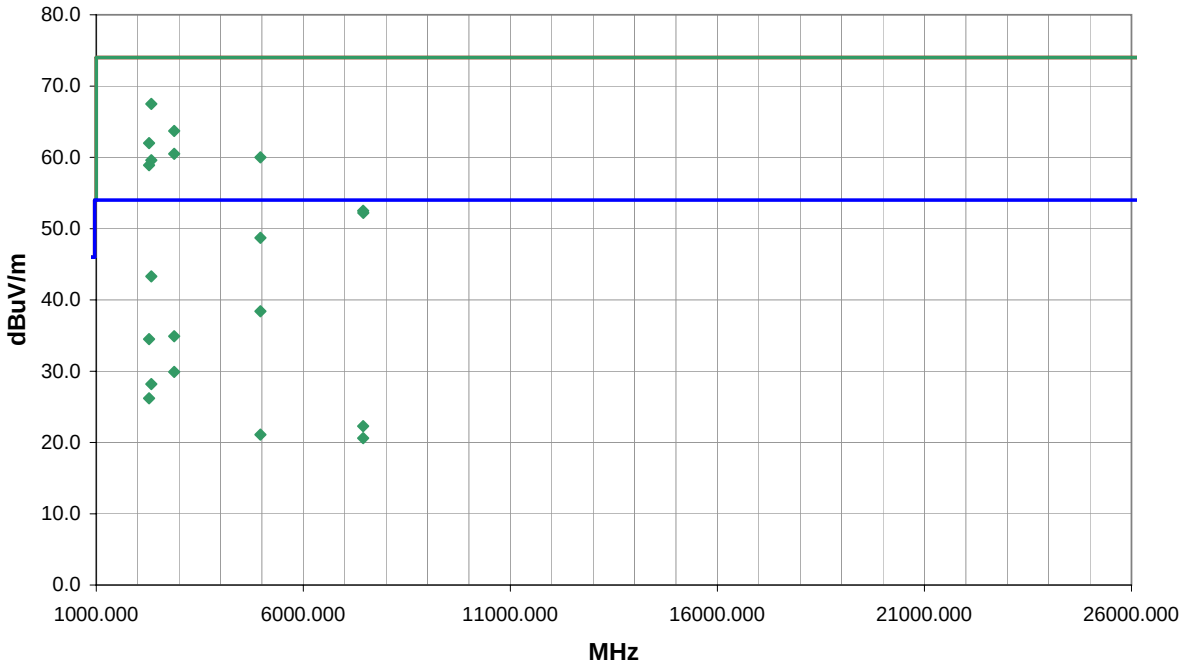
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	16
Configuration #	1
Results	Pass

NVLAP Lab Code 200629-0

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2329.723	46.3	1.2	351.0	1.0	0.0	20.0	V-Horn	PK	0.0	67.5	74.0	-6.5
2882.052	40.6	3.1	140.0	1.8	0.0	20.0	V-Horn	PK	0.0	63.7	74.0	-10.3
2329.768	42.1	1.2	351.0	1.0	20.0	20.0	V-Horn	AV	0.0	43.3	54.0	-10.7
2274.363	40.9	1.1	144.0	1.0	0.0	20.0	V-Horn	PK	0.0	62.0	74.0	-12.0
2882.157	37.4	3.1	203.0	1.2	0.0	20.0	H-Horn	PK	0.0	60.5	74.0	-13.5
4964.577	49.0	11.0	111.0	1.5	0.0	0.0	V-Horn	PK	0.0	60.0	74.0	-14.0
2330.804	38.4	1.2	359.0	1.0	0.0	20.0	H-Horn	PK	0.0	59.6	74.0	-14.4
2273.869	37.8	1.1	135.0	3.5	0.0	20.0	H-Horn	PK	0.0	58.9	74.0	-15.1
4964.528	47.4	11.0	111.0	1.5	20.0	0.0	V-Horn	AV	0.0	38.4	54.0	-15.6
2882.231	31.8	3.1	140.0	1.8	20.0	20.0	V-Horn	AV	0.0	34.9	54.0	-19.1
2274.258	33.4	1.1	144.0	1.0	20.0	20.0	V-Horn	AV	0.0	34.5	54.0	-19.5
7446.648	36.8	15.7	95.0	1.8	0.0	0.0	V-Horn	PK	0.0	52.5	74.0	-21.5
7447.343	36.5	15.7	137.0	1.2	0.0	0.0	H-Horn	PK	0.0	52.2	74.0	-21.8
2882.180	26.8	3.1	203.0	1.2	20.0	20.0	H-Horn	AV	0.0	29.9	54.0	-24.1
4964.517	37.7	11.0	116.0	1.5	0.0	0.0	H-Horn	PK	0.0	48.7	74.0	-25.3
2329.782	27.0	1.2	359.0	1.0	20.0	20.0	H-Horn	AV	0.0	28.2	54.0	-25.8
2274.172	25.1	1.1	135.0	3.5	20.0	20.0	H-Horn	AV	0.0	26.2	54.0	-27.8
7446.729	26.6	15.7	95.0	1.8	20.0	0.0	V-Horn	AV	0.0	22.3	54.0	-31.7
4964.504	30.1	11.0	116.0	1.5	20.0	0.0	H-Horn	AV	0.0	21.1	54.0	-32.9

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	**Work Order:**	HONE0010
Serial Number:	None	**Date:**	04/10/07
Customer:	Honeywell	**Temperature:**	23c
Attendees:	David Shipley	**Humidity:**	43%
Project:	None	**Barometric Pres.:**	30.08
Tested by:	Jeremiah Darden	**Power:** 120VAC/60Hz	**Job Site:** OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

LowChannel. 5dBi Omni Antenna

EUT OPERATING MODES

Transmitting at 2402 MHz

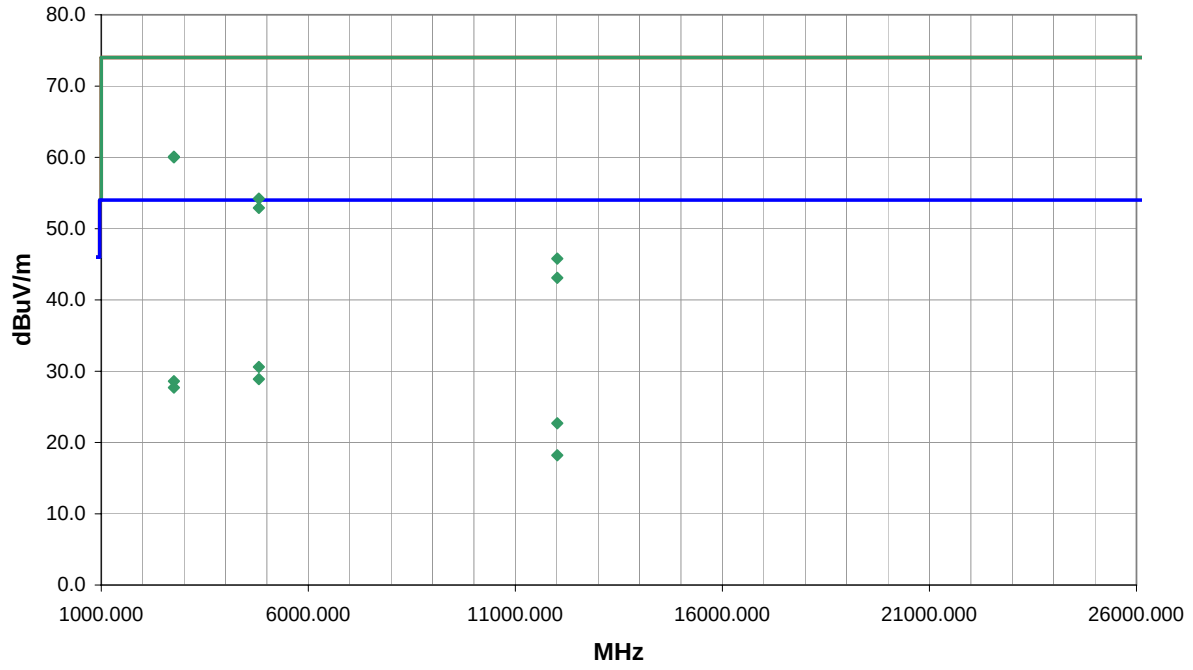
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	19
Configuration #	1
Results	Pass

NVLAP Lab Code 200629-0

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2754.118	37.5	2.6	192.0	1.8	0.0	20.0	H-Horn	PK	0.0	60.1	74.0	-13.9
2755.920	37.4	2.6	162.0	1.2	0.0	20.0	V-Horn	PK	0.0	60.0	74.0	-14.0
4804.475	43.9	10.3	206.0	1.2	0.0	0.0	H-Horn	PK	0.0	54.2	74.0	-19.8
4804.537	42.6	10.3	182.0	1.2	0.0	0.0	V-Horn	PK	0.0	52.9	74.0	-21.1
4804.517	40.3	10.3	206.0	1.2	20.0	0.0	H-Horn	AV	0.0	30.6	54.0	-23.4
4804.521	38.6	10.3	182.0	1.2	20.0	0.0	V-Horn	AV	0.0	28.9	54.0	-25.1
2754.300	26.0	2.6	192.0	1.8	20.0	20.0	H-Horn	AV	0.0	28.6	54.0	-25.4
2754.119	25.1	2.6	162.0	1.2	20.0	20.0	V-Horn	AV	0.0	27.7	54.0	-26.3
12011.260	54.9	-9.1	132.0	1.2	0.0	0.0	H-Horn	PK	0.0	45.8	74.0	-28.2
12011.160	52.2	-9.1	146.0	1.2	0.0	0.0	V-Horn	PK	0.0	43.1	74.0	-30.9
12011.260	51.8	-9.1	132.0	1.2	20.0	0.0	H-Horn	AV	0.0	22.7	54.0	-31.3
12011.260	47.3	-9.1	146.0	1.2	20.0	0.0	V-Horn	AV	0.0	18.2	54.0	-35.8

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/10/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	41%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jeremiah Darden	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

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

COMMENTS

MidChannel. 5dBi Omni Antenna

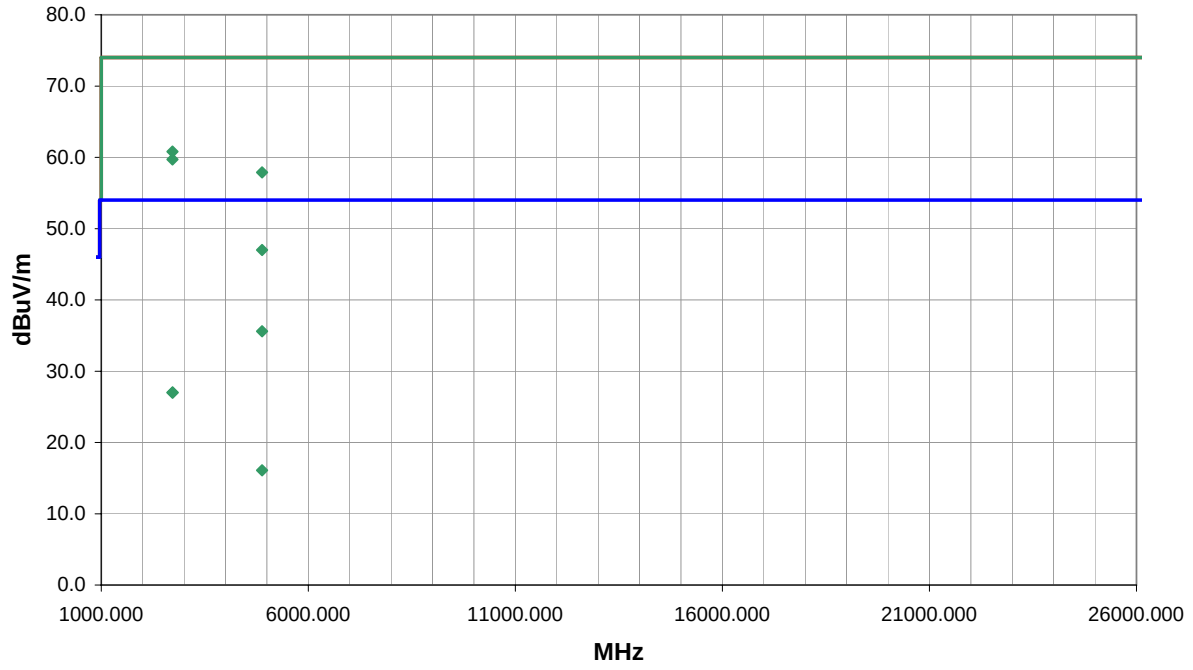
EUT OPERATING MODES

Transmitting at 2442 MHz

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	21		
Configuration #	1		
Results	Pass	NVLAP Lab Code 200629-0	Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2719.407	38.4	2.4	138.0	2.9	0.0	20.0	H-Horn	PK	0.0	60.8	74.0	-13.2
2718.973	37.3	2.4	266.0	1.0	0.0	20.0	V-Horn	PK	0.0	59.7	74.0	-14.3
4884.428	47.3	10.6	191.0	1.2	0.0	0.0	V-Horn	PK	0.0	57.9	74.0	-16.1
4884.519	45.0	10.6	191.0	1.2	20.0	0.0	V-Horn	AV	0.0	35.6	54.0	-18.4
4884.576	36.4	10.6	316.0	1.2	0.0	0.0	H-Horn	PK	0.0	47.0	74.0	-27.0
2720.418	24.7	2.3	138.0	2.9	20.0	20.0	H-Horn	AV	0.0	27.0	54.0	-27.0
2723.451	24.7	2.3	266.0	1.0	20.0	20.0	V-Horn	AV	0.0	27.0	54.0	-27.0
4884.545	25.5	10.6	316.0	1.2	20.0	0.0	H-Horn	AV	0.0	16.1	54.0	-37.9

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.01.31
EMI 2006.4.26

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY	Work Order:	HONE0010
Serial Number:	None	Date:	04/11/07
Customer:	Honeywell	Temperature:	23c
Attendees:	David Shipley	Humidity:	41%
Project:	None	Barometric Pres.:	30.08
Tested by:	Jaemi Suh	Power: 120VAC/60Hz	Job Site: OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

TEST PARAMETERS

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

COMMENTS

High Channel. 5dBi Omni Antenna

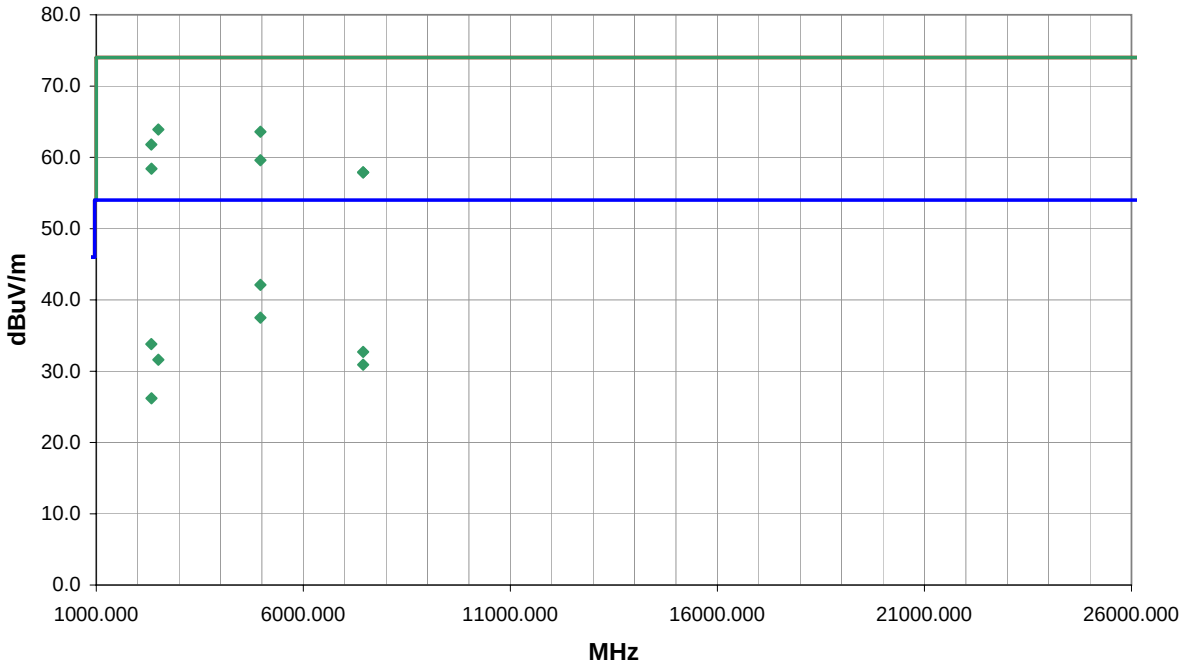
EUT OPERATING MODES

Transmitting at 2482 MHz

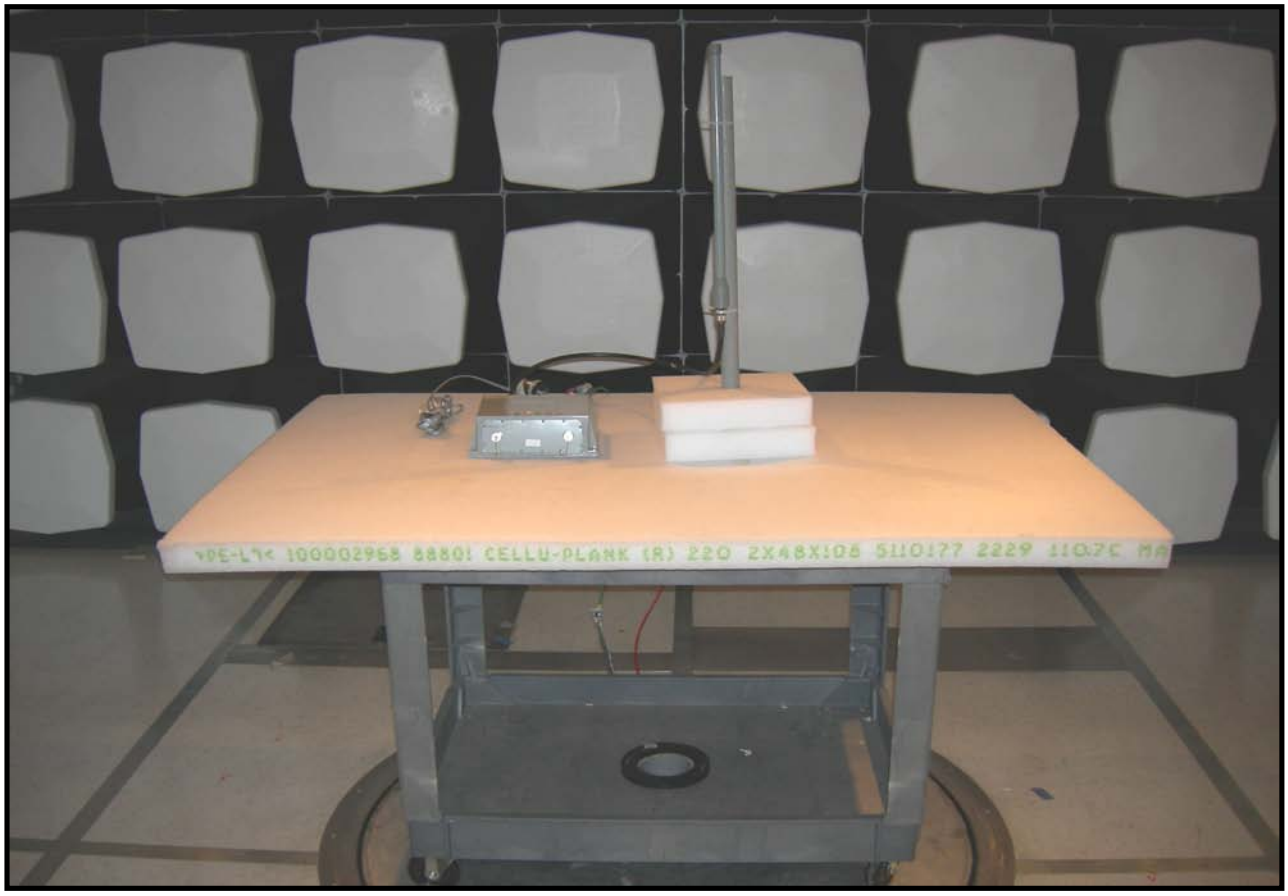
DEVIATIONS FROM TEST STANDARD

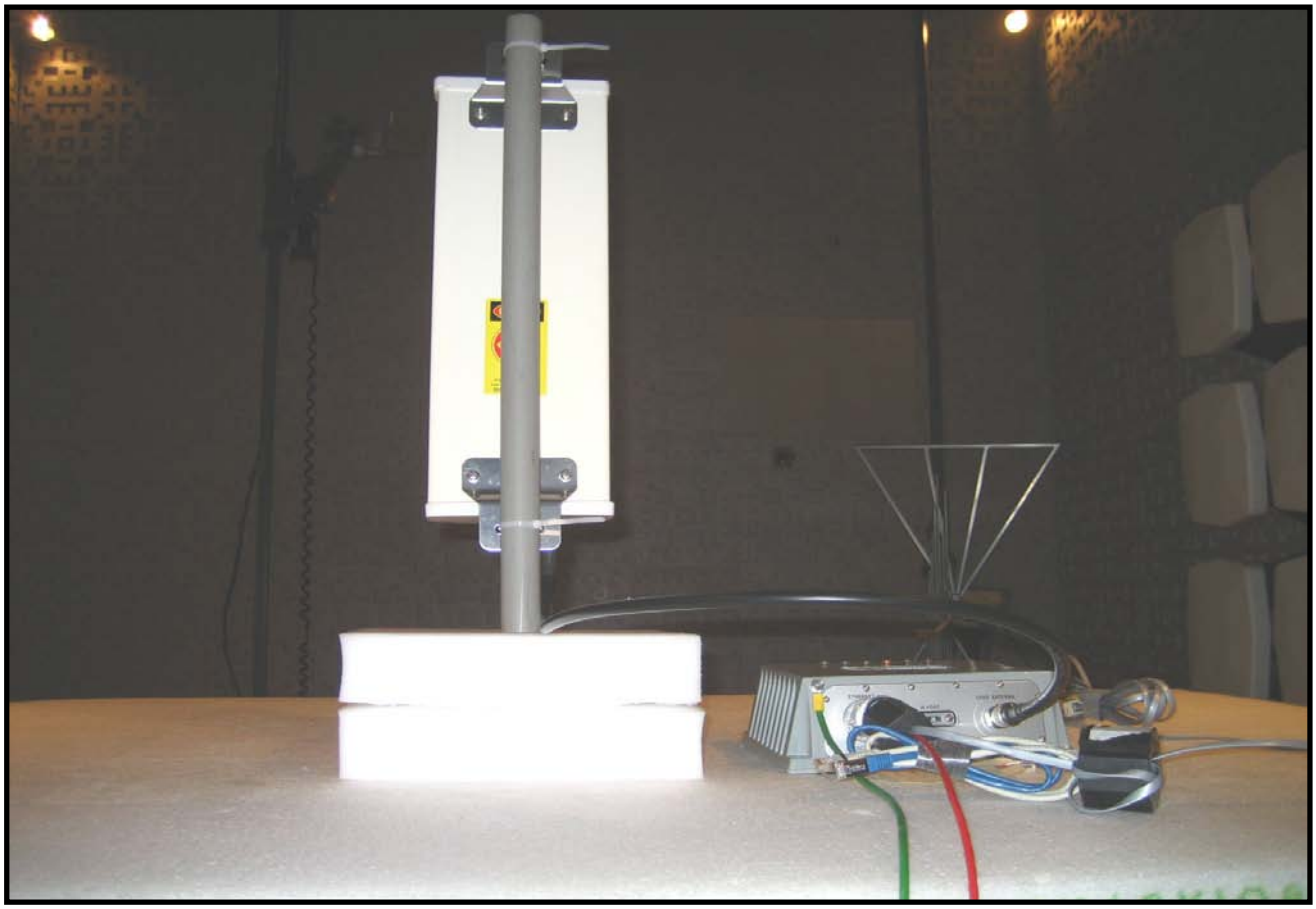
No deviations.

Run #	22		
Configuration #	1		
Results	Pass	NVLAP Lab Code 200629-0	*Signature*



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Duty Cycle Correction Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2500.600	42.5	1.4	58.0	1.2	0.0	20.0	H-Horn	PK	0.0	63.9	74.0	-10.1
4964.530	52.6	11.0	132.0	1.0	0.0	0.0	H-Horn	PK	0.0	63.6	74.0	-10.4
4964.528	51.1	11.0	132.0	1.0	20.0	0.0	H-Horn	AV	0.0	42.1	54.0	-11.9
2329.705	40.6	1.2	200.0	1.5	0.0	20.0	H-Horn	PK	0.0	61.8	74.0	-12.2
4964.506	48.6	11.0	133.0	1.0	0.0	0.0	V-Horn	PK	0.0	59.6	74.0	-14.4
2333.736	37.2	1.2	300.0	1.6	0.0	20.0	H-Horn	PK	0.0	58.4	74.0	-15.6
7446.765	42.2	15.7	160.0	1.0	0.0	0.0	V-Horn	PK	0.0	57.9	74.0	-16.1
7446.785	42.2	15.7	128.0	1.6	0.0	0.0	H-Horn	PK	0.0	57.9	74.0	-16.1
4964.523	46.5	11.0	133.0	1.0	20.0	0.0	V-Horn	AV	0.0	37.5	54.0	-16.5
2329.763	32.6	1.2	200.0	1.5	20.0	20.0	H-Horn	AV	0.0	33.8	54.0	-20.2
7446.773	37.0	15.7	128.0	1.6	20.0	0.0	H-Horn	AV	0.0	32.7	54.0	-21.3
2498.085	30.3	1.3	58.0	1.2	20.0	20.0	H-Horn	AV	0.0	31.6	54.0	-22.4
7446.780	35.2	15.7	160.0	1.0	20.0	0.0	V-Horn	AV	0.0	30.9	54.0	-23.1
2333.773	25.0	1.2	300.0	1.6	20.0	20.0	H-Horn	AV	0.0	26.2	54.0	-27.8





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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAQ	1/18/2007	13

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate in a no hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency.

NORTHWEST EMC

SPURIOUS CONDUCTED EMISSIONS

XMit 2007.03.30

EUT:	51153884-100, REVISION B, MULTINODE ASSEMBLY w/51306301-100, REVISION A, 2.4GHZ FHSS RADIO BOARD ASSEMBLY			**Work Order:**	HONE0010
Serial Number:	None			**Date:**	05/10/07
Customer:	Honeywell			**Temperature:**	23°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	30.02
Tested by:	Jaemi Suh	**Power:**	24VDC	**Job Site:**	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.247 (FHSS):2006	ANSI C63.4:2003 DA 00-705:2000

COMMENTS

No Hop. All 0's Data Pattern.

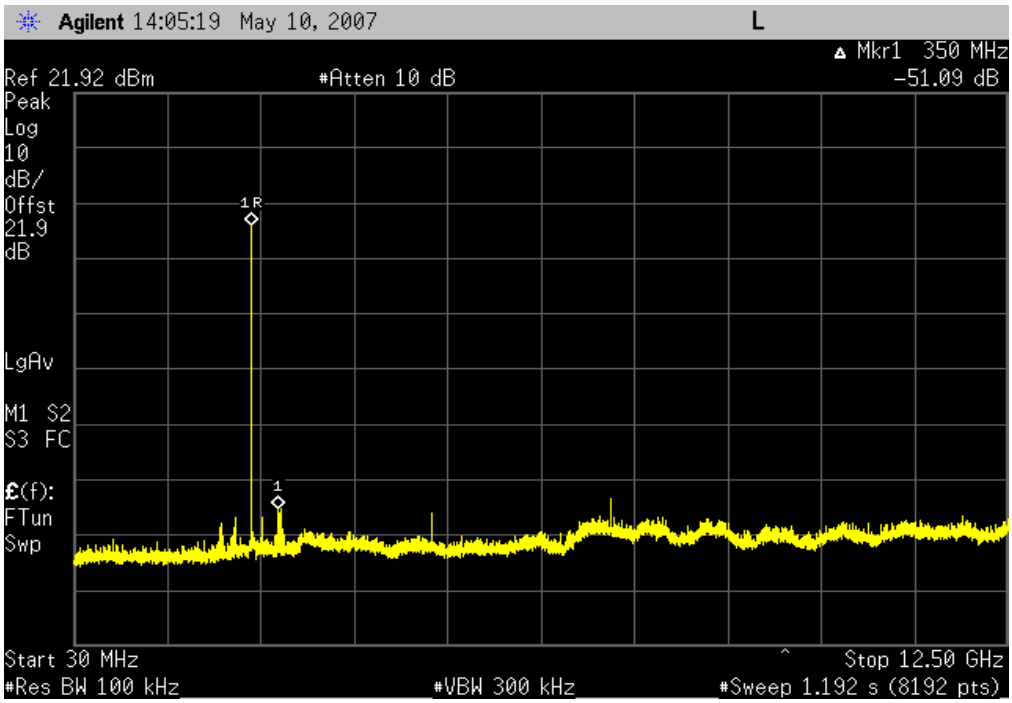
DEVIATIONS FROM TEST STANDARD

Configuration #	1	Signature

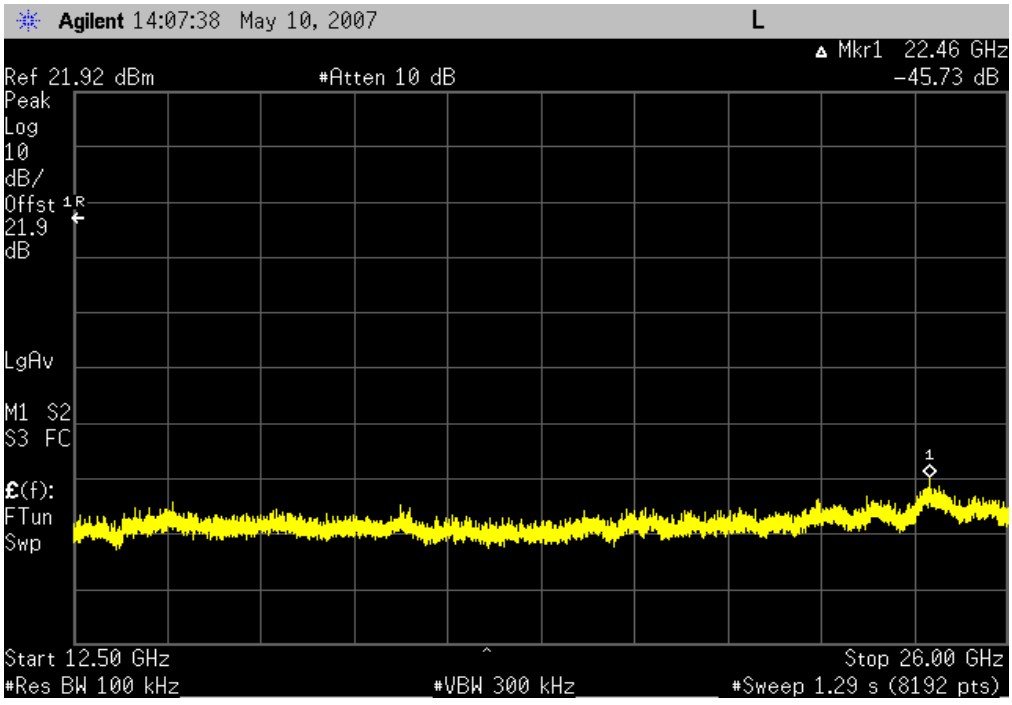
		Value	Limit	Results
Low Output Power				
	Low Channel			
	30 MHz - 12.5 GHz	- 51.09 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 45.73 dBc	≤ - 20 dBc	Pass
	Mid Channel			
	30 MHz - 12.5 GHz	- 49.84 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 49.35 dBc	≤ - 20 dBc	Pass
	High Channel			
	30 MHz - 12.5 GHz	- 49.48 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 50.11 dBc	≤ - 20 dBc	Pass
Mid Output Power				
	Low Channel			
	30 MHz - 12.5 GHz	- 49.79 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 49.57 dBc	≤ - 20 dBc	Pass
	Mid Channel			
	30 MHz - 12.5 GHz	- 50.01 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 49.42 dBc	≤ - 20 dBc	Pass
	High Channel			
	30 MHz - 12.5 GHz	- 49.15 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 50.50 dBc	≤ - 20 dBc	Pass
High Output Power				
	Low Channel			
	30 MHz - 12.5 GHz	- 49.23 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 49.43 dBc	≤ - 20 dBc	Pass
	Mid Channel			
	30 MHz - 12.5 GHz	- 49.74 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 50.85 dBc	≤ - 20 dBc	Pass
	High Channel			
	30 MHz - 12.5 GHz	- 49.96 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	- 50.54 dBc	≤ - 20 dBc	Pass

SPURIOUS CONDUCTED EMISSIONS

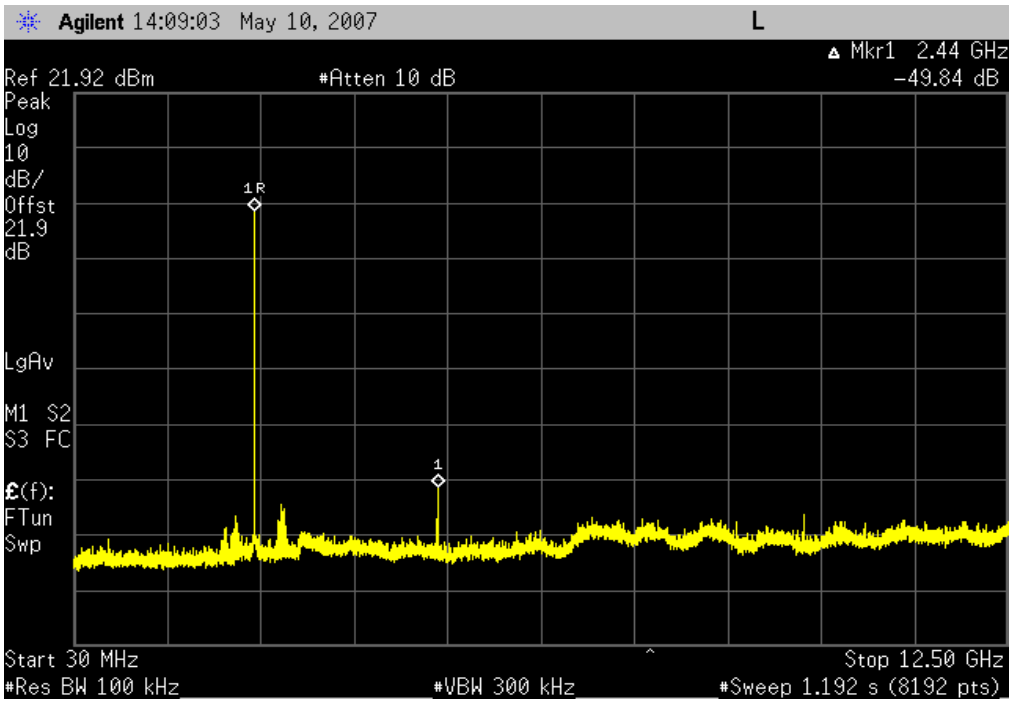
Low Output Power, Low Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 51.09 dBc	**Limit:**	≤ - 20 dBc



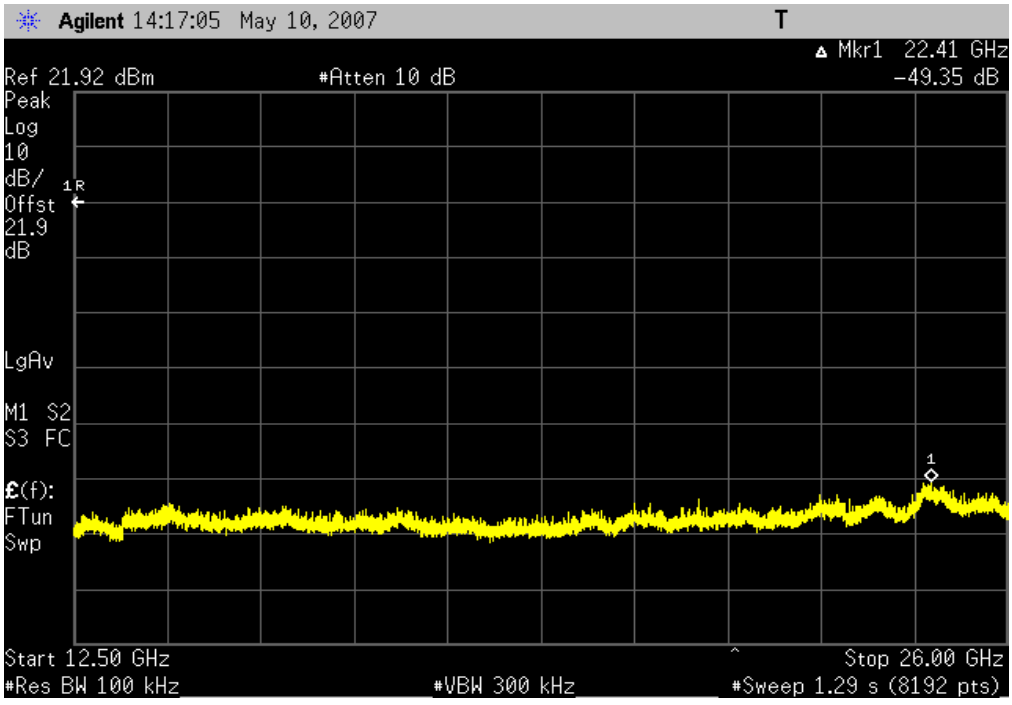
Low Output Power, Low Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 45.73 dBc	**Limit:**	≤ - 20 dBc



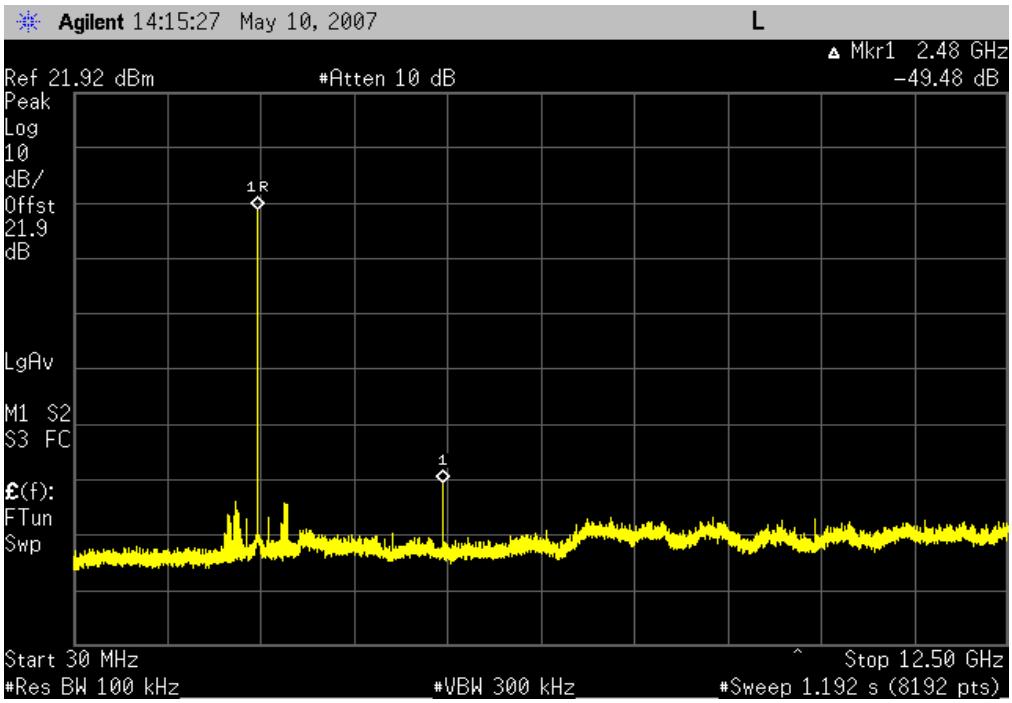
Low Output Power, Mid Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.84 dBc	**Limit:**	≤ - 20 dBc



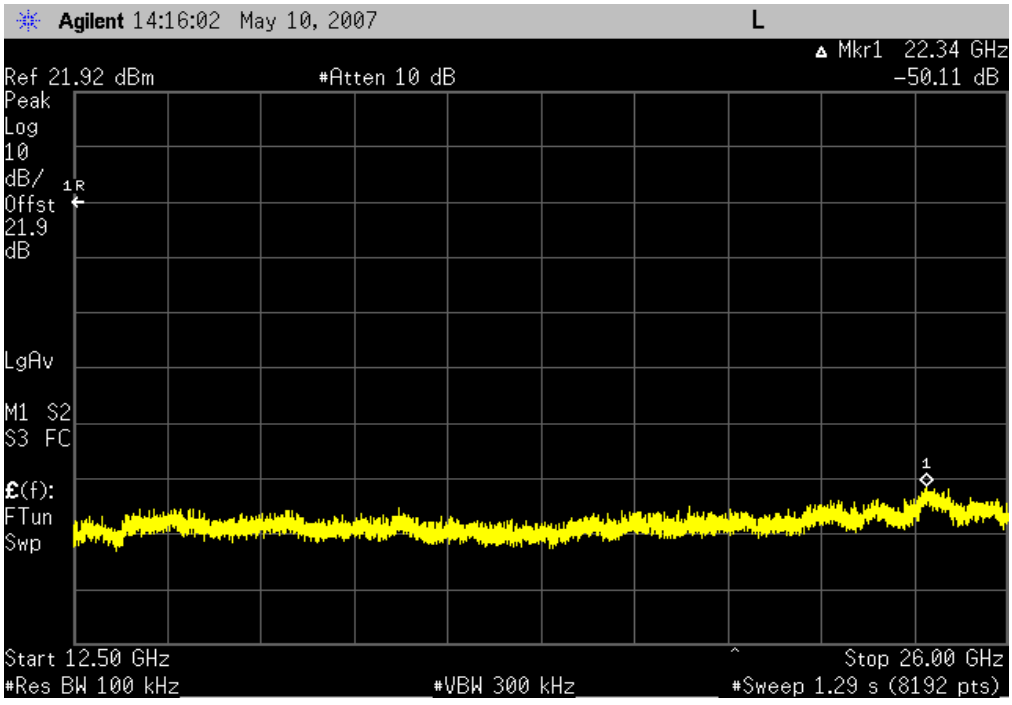
Low Output Power, Mid Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 49.35 dBc	**Limit:**	≤ - 20 dBc



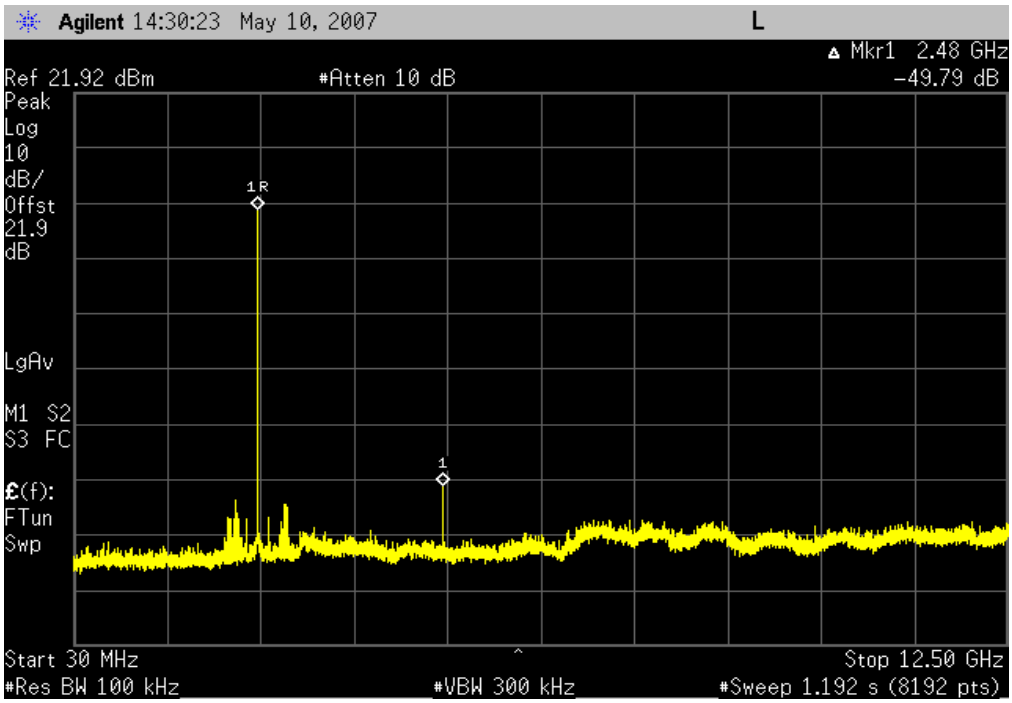
Low Output Power, High Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.48 dBc	**Limit:**	≤ - 20 dBc



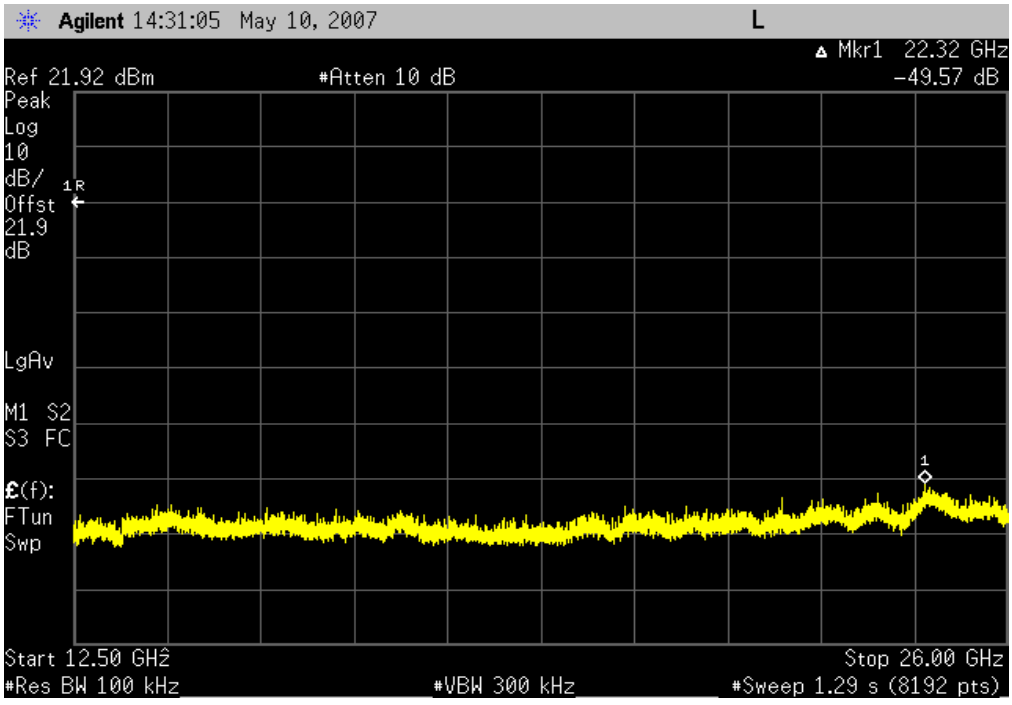
Low Output Power, High Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 50.11 dBc	**Limit:**	≤ - 20 dBc



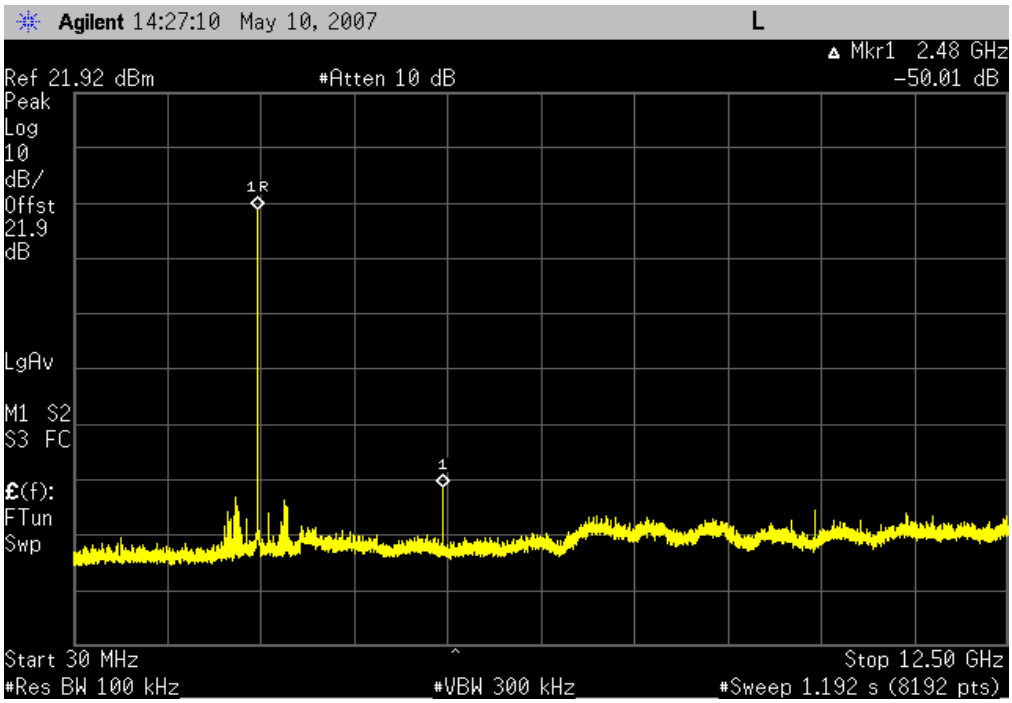
Mid Output Power, Low Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.79 dBc	**Limit:**	≤ - 20 dBc



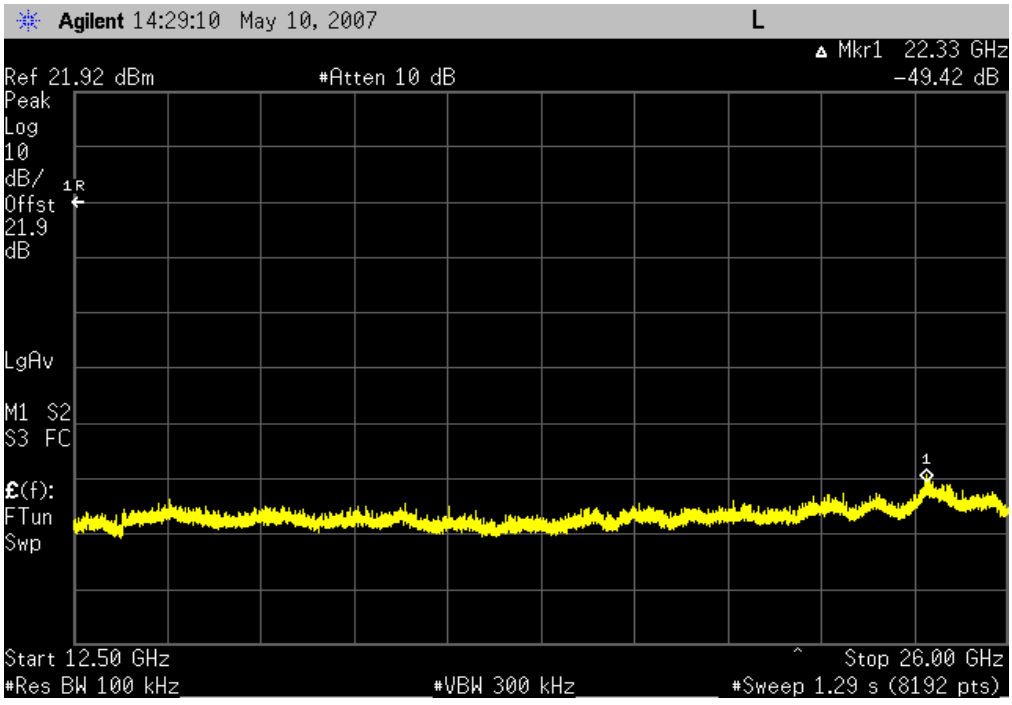
Mid Output Power, Low Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 49.57 dBc	**Limit:**	≤ - 20 dBc



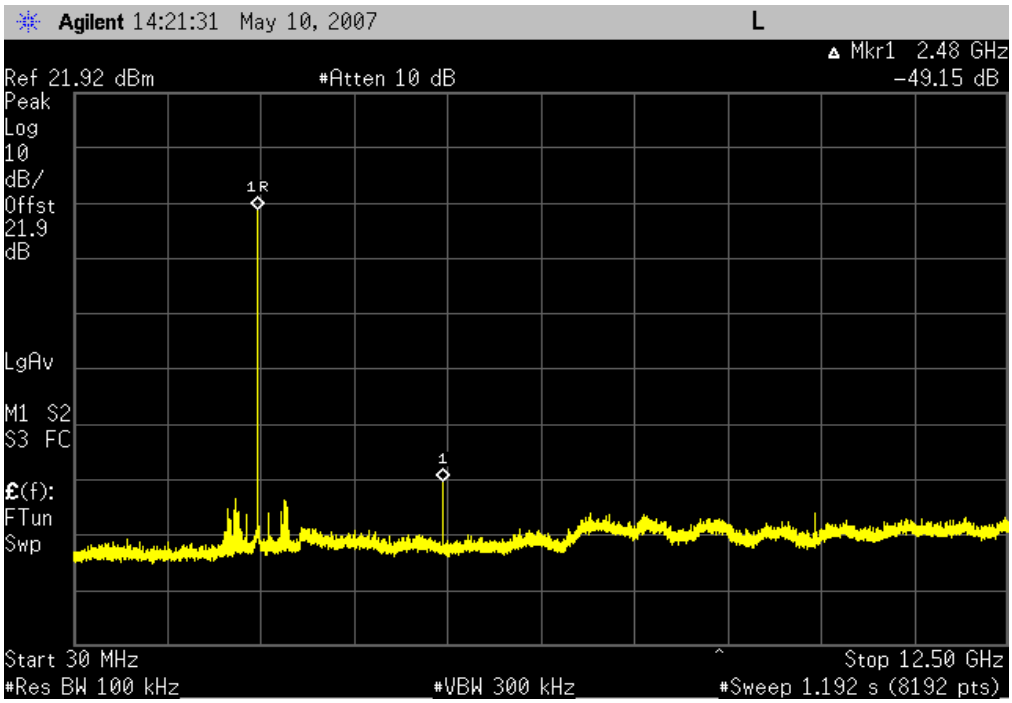
Mid Output Power, Mid Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 50.01 dBc	**Limit:**	≤ - 20 dBc



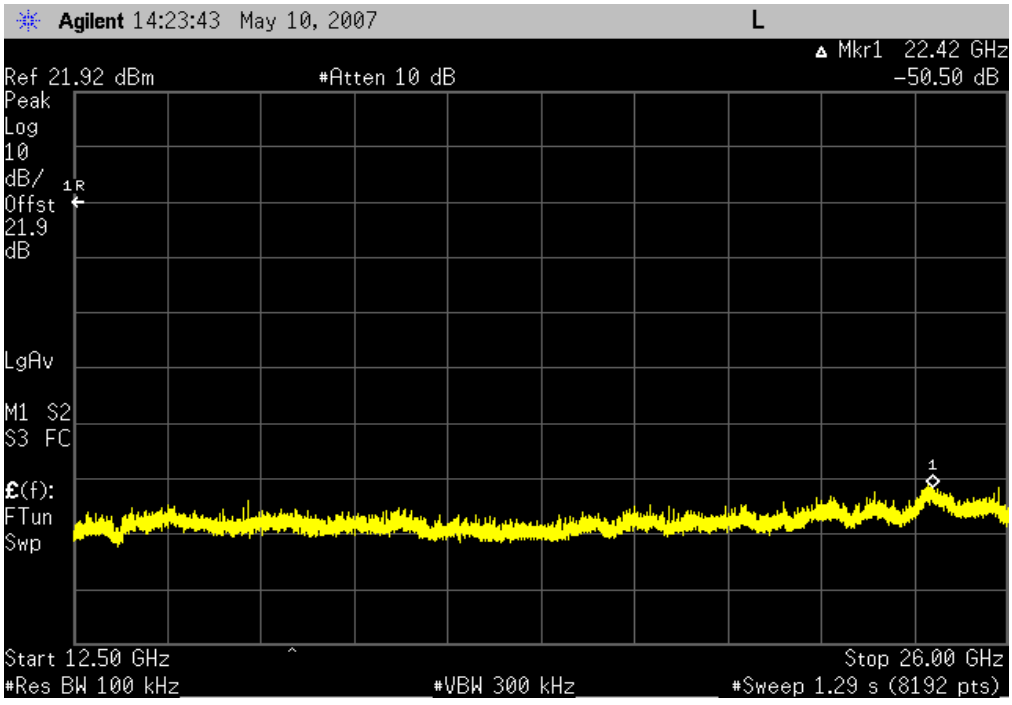
Mid Output Power, Mid Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 49.42 dBc	**Limit:**	≤ - 20 dBc



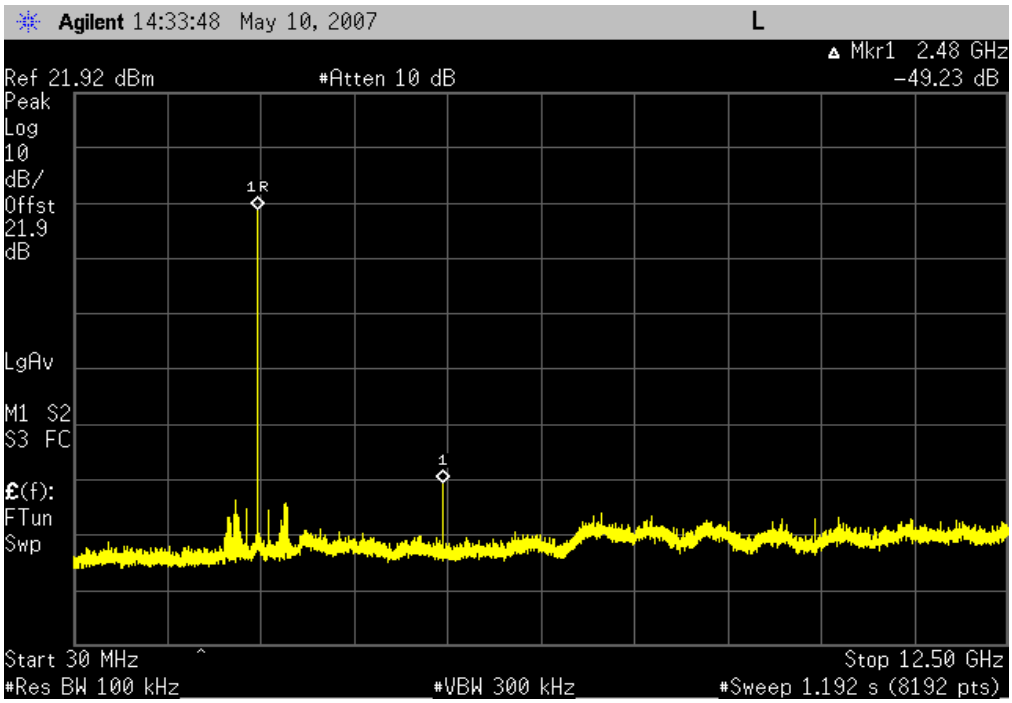
Mid Output Power, High Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.15 dBc	**Limit:**	≤ - 20 dBc



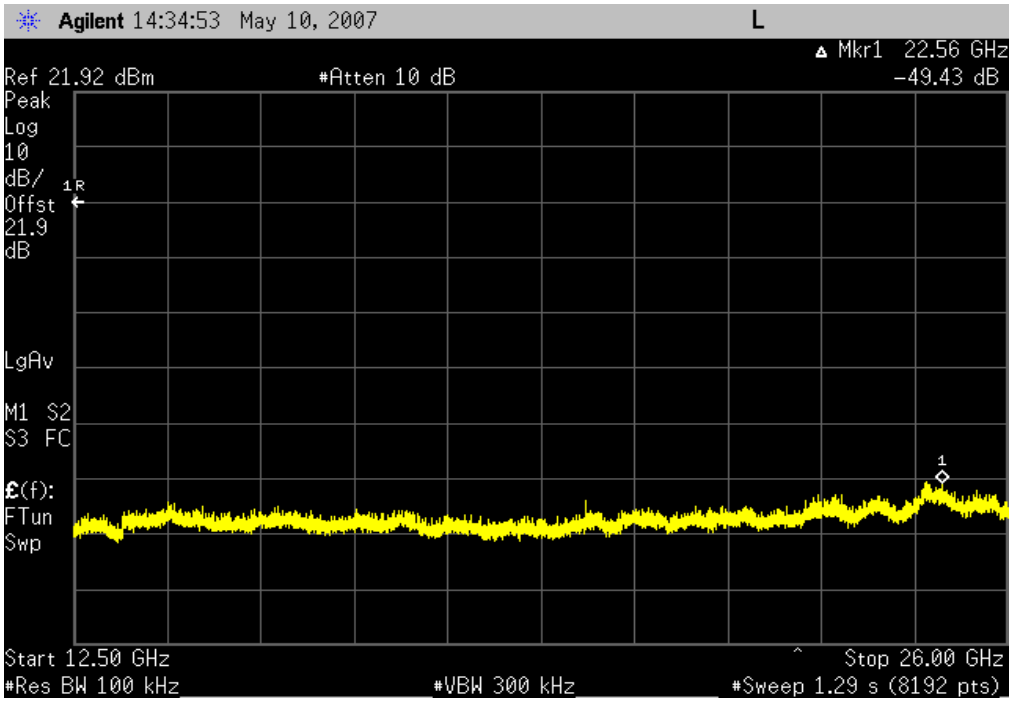
Mid Output Power, High Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 50.50 dBc	**Limit:**	≤ - 20 dBc



High Output Power, Low Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.23 dBc	**Limit:**	≤ - 20 dBc

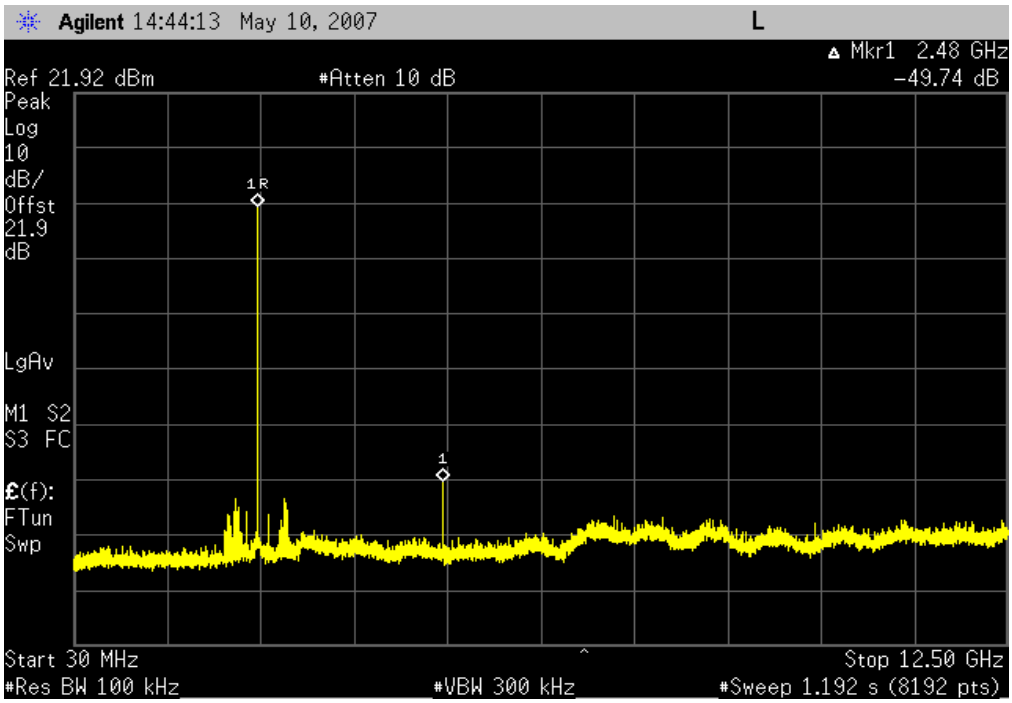


High Output Power, Low Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 49.43 dBc	**Limit:**	≤ - 20 dBc

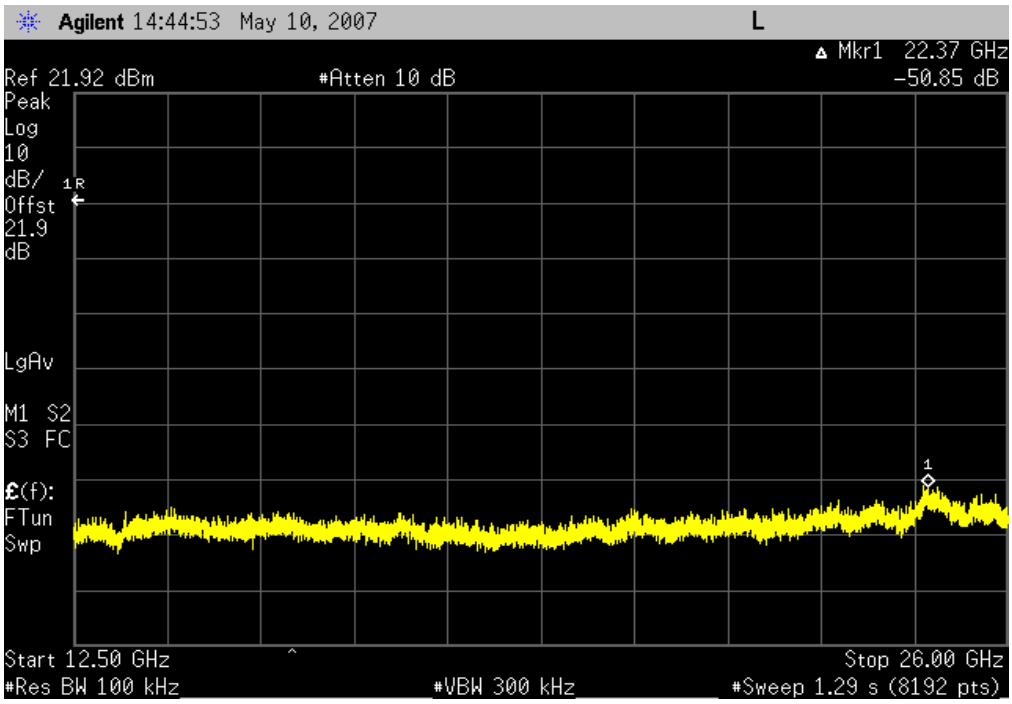


SPURIOUS CONDUCTED EMISSIONS

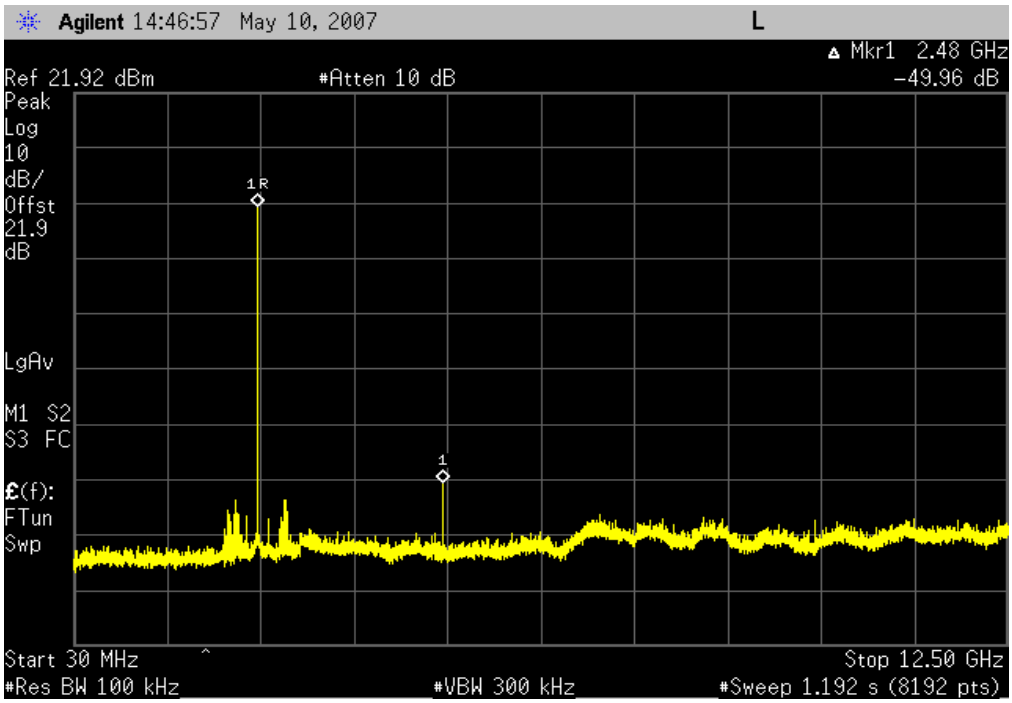
High Output Power, Mid Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.74 dBc	**Limit:**	≤ - 20 dBc



High Output Power, Mid Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 50.85 dBc	**Limit:**	≤ - 20 dBc



High Output Power, High Channel, 30 MHz - 12.5 GHz					
Result:	Pass	**Value:**	- 49.96 dBc	**Limit:**	≤ - 20 dBc



High Output Power, High Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	- 50.54 dBc	**Limit:**	≤ - 20 dBc