MET Laboratories, Inc. *Safety Certification - EMI - Telecom Environmental Simulation*
914 WEST PATAPSCO AVENUE ● BALTIMORE, MARYLAND 21230-3432 ● PHONE (410) 354-3300 ● FAX (410) 354-3313

November 15, 2006

Motorola - Mesh Networks Product Group
485 Keller Rd, Suite 250
Maitland, FL 32751

Dear Daniel DiLuzio,

Enclosed is the EMC test report for compliance testing of the Motorola - Mesh Networks Product Group, HotZone Duo as tested to the requirements of Title 47 of the CFR, Ch. 1 (10-1-03 ed.), Title 47 of the CFR, Part 15.407 for U-NII devices.

Thank you for using the services of MET Laboratories, Inc. If you have any questions regarding these results or if MET can be of further service to you, please feel free to contact me.

Sincerely yours,
MET LABORATORIES, INC.

Angela D. Brown
Documentation Department

Reference: (\Motorola - Mesh Networks Product Group\EMC19771-FCC407 Rev 3)

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Electromagnetic Compatibility Criteria
Test Report

for the

Motorola - Mesh Networks Product Group
HotZone Duo

Verified under
the FCC Certification Rules
contained in
Title 47 of the CFR, Part 15.407
For U-NII Devices

MET Report: EMC19771-FCC407

November 15, 2006

Prepared For:

Motorola - Mesh Networks Product Group
485 Keller Rd, Suite 250
Maitland, FL 32751

Prepared By:
MET Laboratories, Inc.
914 W. Patapsco Avenue
Baltimore, MD 221230

Electromagnetic Compatibility Criteria
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Motorola - Mesh Networks Product Group
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Tested Under

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contained in
Title 47 of the CFR, Part 15.407 and 15.247
for U-NII Devices

Len Knight, Project Engineer
Electromagnetic Compatibility Lab

Angela D. Brown
Documentation Department

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of Parts 15.407 and 15.247, of the FCC Rules under normal use and maintenance.

Kevin A. Mehaffey, Manager
Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	October 5, 2006	Initial Issue.
1	November 2, 2006	Follow up conducted emissions to address RTs.
2	November 14, 2006	Follow up harmonic emissions to address RTs.
3	November 15, 2006	Editorial change on pg. 43.

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List of Terms and Abbreviations

AC	**A**lternating **C**urrent
ACF	**A**ntenna **C**orrection **F**actor
Cal	**Cal**ibration
d	**M**easurement **D**istance
dB	**D**eci**b**els
dBµA	**D**eci**b**els above one **micro**amp
dBµV	**D**eci**b**els above one **micro**volt
dBµA/m	**D**eci**b**els above one **micro**amp **per m**eter
dBµV/m	**D**eci**b**els above one **micro**volt **per m**eter
DC	**D**irect **C**urrent µ
E	**E**lectric Field
ESD	**E**lectro**s**tatic **D**ischarge
EUT	**E**quipment **U**nder **T**est
f	**F**requency
FCC	**F**ederal **C**ommunications **C**ommission
GRP	**G**round **R**eference **P**lane
H	Magnetic Field
HCP	**H**orizontal **C**oupling **P**lane
Hz	**H**ert**z**
IEC	**I**nternational **E**lectrotechnical **C**ommission
kHz	**k**ilo**h**ert**z**
kPa	**k**ilo**pa**scal
kV	**k**ilo**v**olt
LISN	**L**ine **I**mpedance **S**tabilization **N**etwork
MHz	**M**ega**h**ertz
µ**H**	**microh**enry
µ	**microf**arad
µ**s**	**micros**econds
PRF	**P**ulse **R**epetition **F**requency
RF	**R**adio **F**requency
RMS	**R**oot-**M**ean-**S**quare
TWT	**T**raveling **W**ave **T**ube
V/m	**V**olts **per m**eter
VCP	**V**ertical **C**oupling **P**lane

I. Executive Summary

A. Purpose of Test

An EMC evaluation was performed to determine compliance of the Motorola - Mesh Networks Product Group, HotZone Duo, with the requirements of Part 15, §15.407. All references are to the most current version of Title 47 of the Code of Federal Regulations in effect. In accordance with §2.1033, the following data is presented in support of the Certification of the HotZone Duo. Motorola - Mesh Networks Product Group should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the HotZone Duo, has been **permanently** discontinued.

B. Executive Summary

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, §15.407, in accordance with Motorola - Mesh Networks Product Group, purchase order number PO-1362. All tests were conducted using measurement procedure ANSI C63.4-2003.

Reference	Description	Results
15.403 (c)	26dB Occupied Bandwidth	Compliant
15.407 (a)(1), (2), (3)	Conducted Transmitter Output Power	Compliant
15.407 (a)(1), (2), (3), (5)	Power Spectral Density	Compliant
15.407 (a)(6)	Peak Excursion	Compliant
15.407 (b)(1), (2), (5), (6)	Undesirable Emissions	Compliant
15.205/15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Compliant
15.207	AC Conducted Emissions 150kHz – 30MHz	Compliant

Table 1. Executive Summary of EMC Part 15.407 ComplianceTesting

II. Equipment Configuration

A. Overview

MET Laboratories, Inc. was contracted by Motorola - Mesh Networks Product Group to perform testing on the HotZone Duo, under Motorola - Mesh Networks Product Group's purchase order number PO-1362.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the Motorola - Mesh Networks Product Group HotZone Duo.

The results obtained relate only to the item(s) tested.

Model(s) Tested:	HotZone Duo	
Model(s) Covered:	HotZone Duo	
EUT Specifications:	Primary Power: 120VAC, 60Hz	
	FCC ID:	
	Type of Modulations:	Orthogonal Frequency Division Multiplexing (OFDM)
	Equipment Code:	DTS
	Peak RF Conducted Output Power:	25.32 dBm
	EUT TX Frequency Ranges:	5745 MHz – 5805 MHz
Analysis:	The results obtained relate only to the item(s) tested.	
Evaluated by:	Len Knight	
Date(s):	September 27, 2006	

B. References

CFR 47, Part 15, Subpart C	Federal Communication Commission, Code of Federal Regulations, Title 47, Part 15: General Rules and Regulations, Allocation, Assignment, and Use of Radio Frequencies
CFR 47, Part 15, Subpart B	Electromagnetic Compatibility: Criteria for Radio Frequency Devices
CFR 47, Part 15, Subpart E	Unlicensed National Information Infrastructure Devices
ANSI C63.4:2003	Methods and Measurements of Radio-Noise Emissions from Low-Voltage Electrical And Electronic Equipment in the Range of 9 kHz to 40 GHz
ANSI/NCSL Z540-1-1994	Calibration Laboratories and Measuring and Test Equipment - General Requirements
ANSI/ISO/IEC 17025:2000	General Requirements for the Competence of Testing and Calibration Laboratories

C. Test Site

All testing was performed at MET Laboratories, Inc., 914 West Patapsco Avenue, Baltimore, MD 21230. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

Radiated Emissions measurements were performed in a semi-anechoic chamber. In accordance with §2.948(a)(3), a complete site description is contained at MET Laboratories. In accordance with §2.948(d), MET Laboratories has been accredited by the National Voluntary Laboratory Accreditation Program (Lab Code: 100273-0).

D. Description of Test Sample

The HotZone Duo, Equipment Under Test (EUT), is an 802.11 Access Point. The system supports 802.11 a/b/g via an Atheros AP30 chipset.

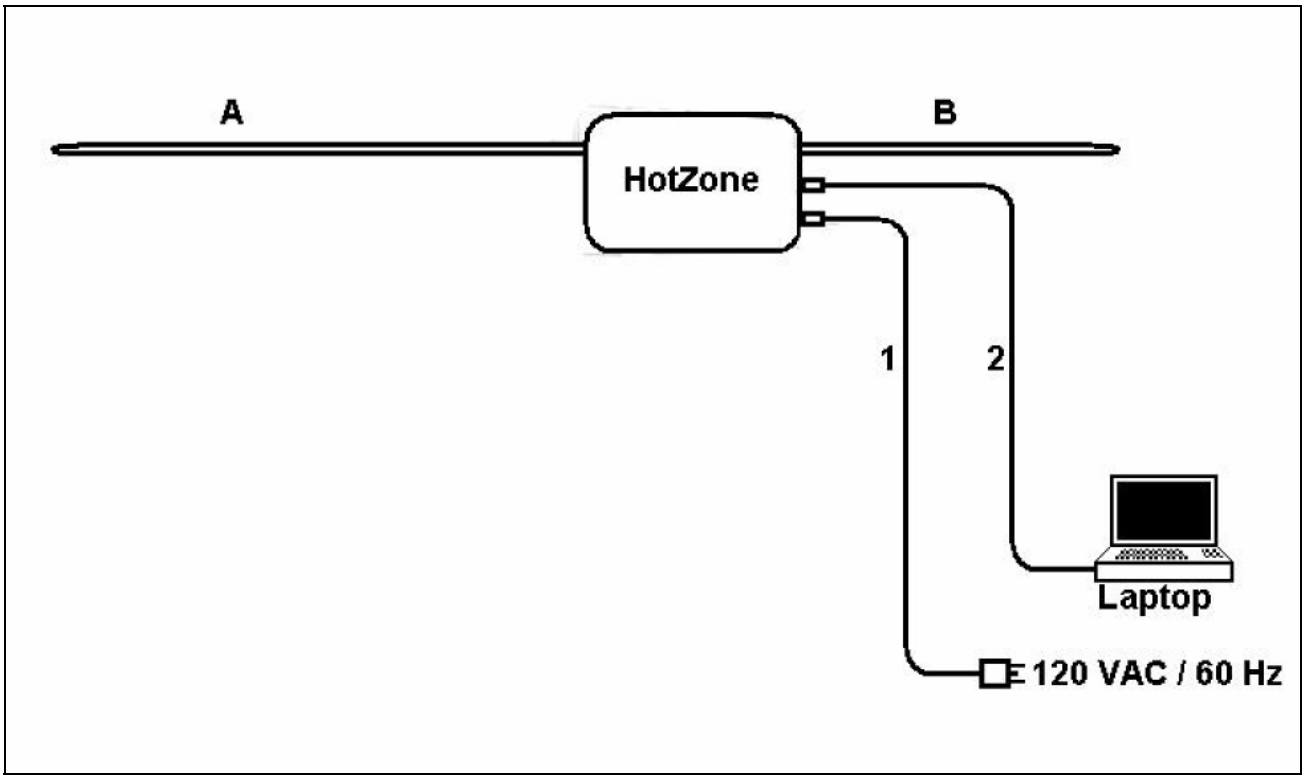


Figure 1. Block Diagram of Test Configuration (Radiated Emissions)

E. Equipment Configuration

The EUT was set up as outlined in Figure 1, Block Diagram of Test Setup. All cards, etc., incorporated as part of the EUT is included in the following list.

Ref. ID	Name / Description	Gain	Manufacturer	Model Number
B	5.725-5.875 GHz Antenna	10 dBi	Radiall/Larsen	R380700212
A	2.4-2.5 GHz Antenna	8 dBi	Radiall/Larsen	R380.500.226

Table 2. Equipment Configuration

	Card Name	Card Description
Hot Zone	AP30 – 2.4	AP30 802.11 b/g 2.4 GHz Radio Module
	AP30 – 5.8	AP30 802.11 a 5.8 GHz Radio Module

F. Support Equipment

HotZone Duo supplied support equipment necessary for the operation and testing of the HotZone Duo. All support equipment supplied is listed in the following Support Equipment List.

Ref. ID	Manufacturer	Model	Serial Number	FCC ID
Laptop	Dell	Inspiron 3800	33252720049	LNQUSA-34522-M5-E

Table 3. Support Equipment

G. Ports and Cabling Information

Ref. ID	Port Name on EUT	Cable Description	Qty.	Length (m)	Shielded (Y/N)	Termination Point
1	Power	4 cond, 18 ga.	1	3.7	Yes	AC Power
2	Ethernet	4 pair twisted, 24 ga.	1	3.7	Yes	Laptop

Table 4. Ports and Cabling Information

H. Method of Monitoring EUT Operation

I. Modifications

a) Modifications to EUT

No modifications were made to the EUT.

b) Modifications to Test Standard

No modifications were made to the test standard.

J. Disposition of EUT

The test sample including all support equipment submitted to the Electro-Magnetic Compatibility Lab for testing was returned to Motorola - Mesh Networks Product Group upon completion of testing.

III. Electromagnetic Compatibility Criteria for Intentional Radiators

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.207 Conducted Emissions Limits

Test Requirement(s): **§ 15.207 (a):** For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency range (MHz)	§ 15.207(a), Conducted Limit (dBμV)	
	Quasi-Peak	Average
* 0.15- 0.45	66 - 56	56 - 46
0.45 - 0.5	56	46
0.5 - 30	60	50

Table 5. Conducted Limits for Intentional Radiators from FCC Part 15 § 15.207(a)

Test Procedure: The EUT was situated such that the back of the EUT was 0.4 m from one wall of the vertical ground plane, and the remaining sides of the EUT were no closer than 0.8 m from any other conductive surface. The EUT was powered from a 50 Ω/50 μH Line Impedance Stabilization Network (LISN). The EMC receiver scanned the frequency range from 150 kHz to 30 MHz. Conducted Emissions measurements were made in accordance with *ANSI C63.4-1992 "Methods and Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40 GHz"*. The measurements were performed over the frequency range of 0.15 MHz to 30 MHz using a 50 Ω/50 μH LISN as the input transducer to an EMC/field intensity meter. The tests were conducted in a RF-shielded enclosure.

Test Results: The EUT was found compliant with the Conducted Emission limits of **§15.207(a)** for Intentional Radiators. See following pages for detailed test results

Test Engineer(s): Len Knight

Test Date(s): July 17, 2006

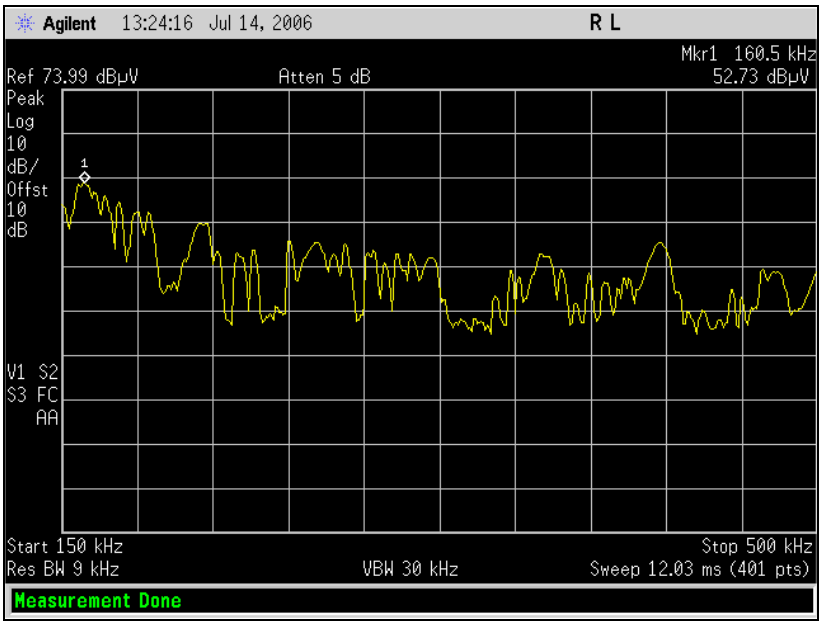
Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.207 Conducted Emissions Limits

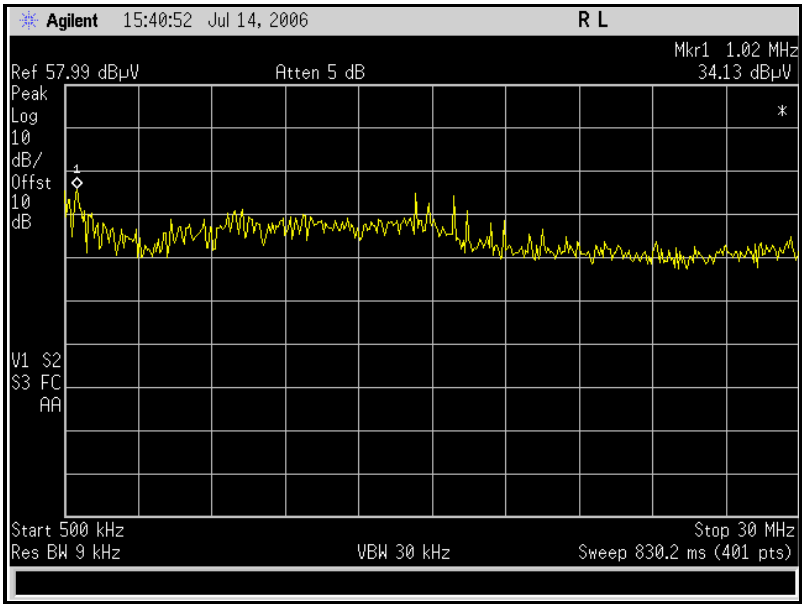
Conducted Emissions - Voltage, Phase (120VAC, 60Hz), 802.11 a

Line Under Test	FREQ. (MHz)	Corrected Amplitude (dBuV) QP	Limit (dBuV) QP	Margin (dB) QP	Corrected Amplitude (dBuV) AVG	Limit (dBuV) AVG	Margin (dB) AVG
Phase A	0.1588	50.45	79	-28.55	44.97	66	-21.03
	0.1818	39.97	79	-39.03	22.96	66	-43.04
	0.2087	37.77	79	-41.23	30.62	66	-35.38
	0.4256	37.58	79	-41.42	36.55	66	-29.45
	1.008	34.43	73	-38.57	30.02	60	-29.98
	14.15	27.37	73	-45.63	21.87	60	-38.13
	16.12	32.06	73	-40.94	30.59	60	-29.41

Table 6. Conducted Emissions - Voltage, Phase (120VAC, 60Hz), 802.11 a



Plot 1. Conducted Emissions, Phase Plot, Low, 802.11 a



Plot 2. Conducted Emission, Phase Plot, High, 802.11 a

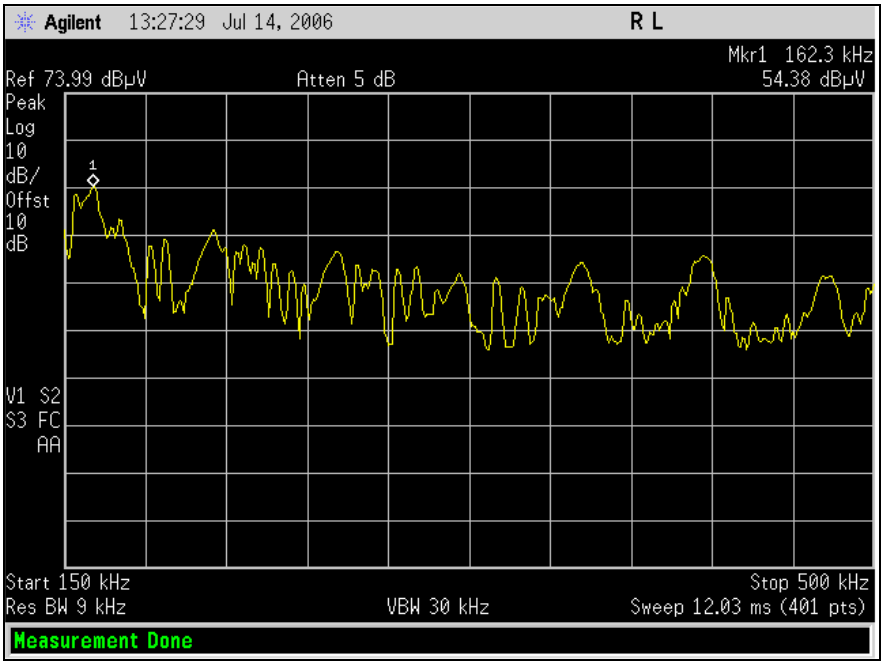
Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.207 Conducted Emissions Limits

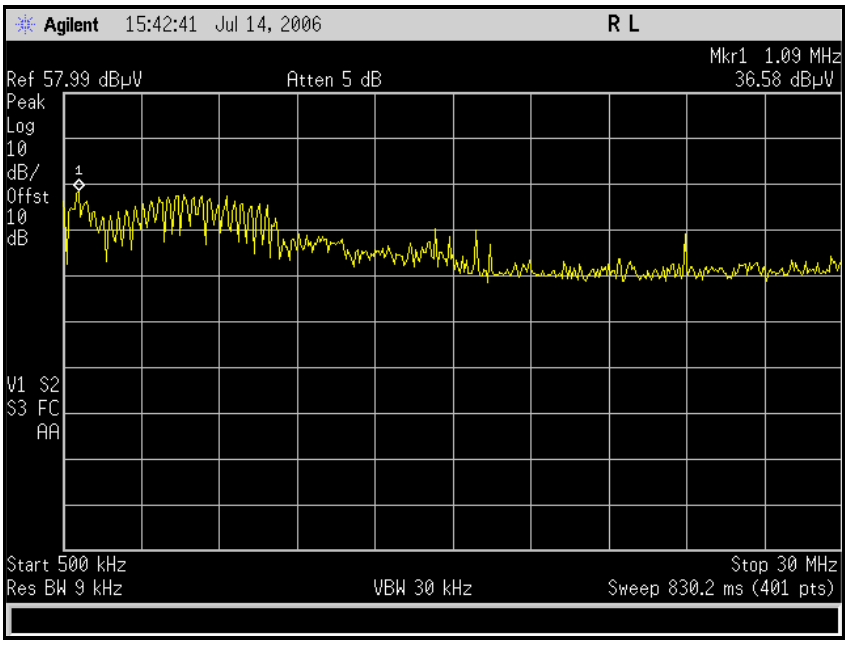
Conducted Emissions - Voltage, Neutral (120VAC, 60Hz), 802.11 a

Line Under Test	FREQ. (MHz)	Corrected Amplitude (dBuV) QP	Limit (dBuV) QP	Margin (dB) QP	Corrected Amplitude (dBuV) AVG	Limit (dBuV) AVG	Margin (dB) AVG
Neutral	0.1592	50.53	79	-28.47	45.16	66	-20.84
	0.2655	36.48	79	-42.52	33.44	66	-32.56
	0.423	38.02	79	-40.98	37.46	66	-28.54
	0.3714	36.07	79	-42.93	34.34	66	-31.66
	1.109	36.29	79	-42.71	34.91	66	-31.09
	5.09	32.71	79	-46.29	26.61	66	-39.39
	7.3	33.38	79	-45.62	28.35	66	-37.65

Table 7. Conducted Emissions - Voltage, Neutral (120VAC, 60Hz), 802.11 a

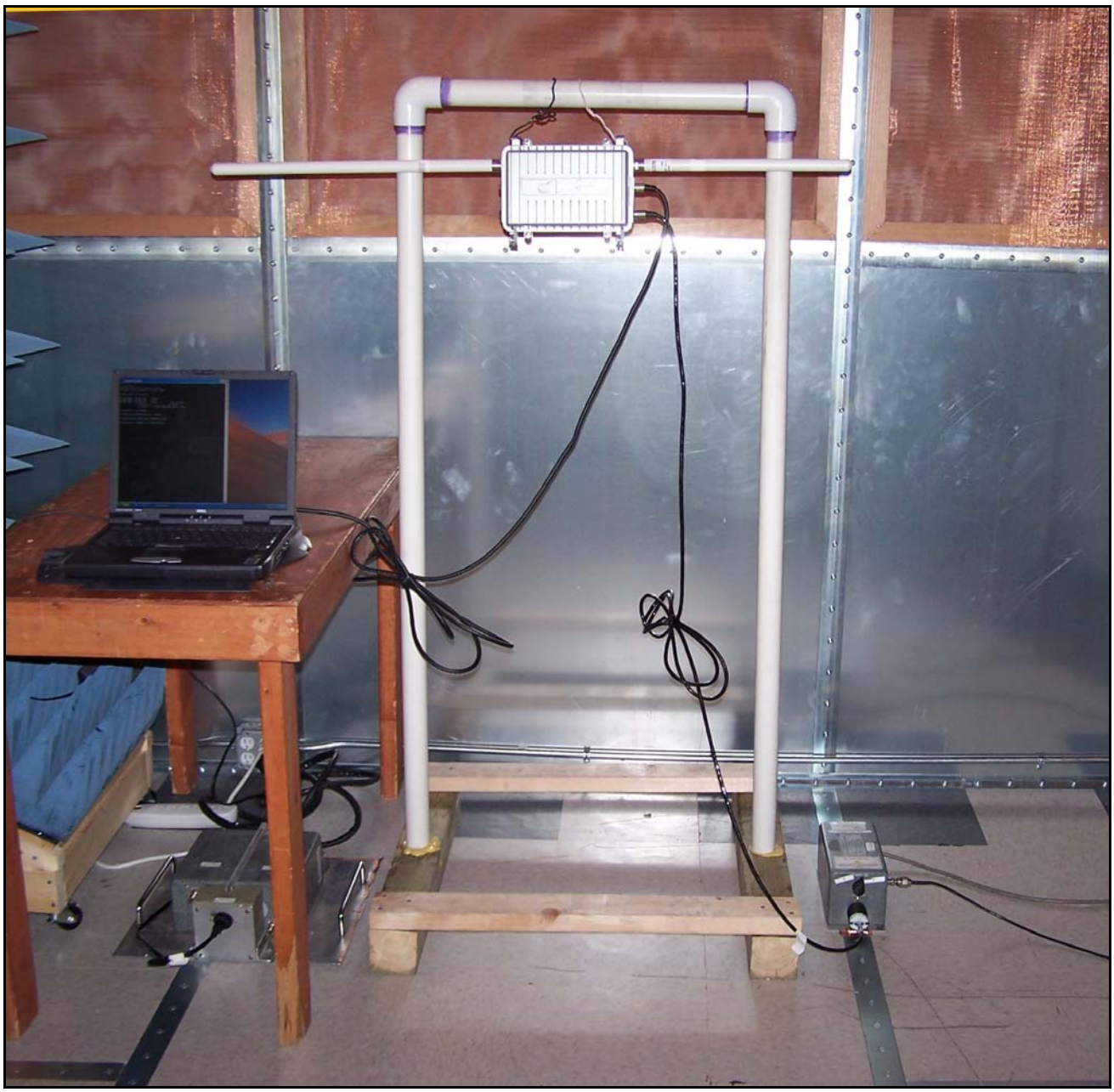


Plot 3. Conducted Emission, Neutral Plot, Low, 802.11 a



Plot 4. Conducted Emission, Neutral Plot, High, 802.11 a

Conducted Emission Limits Test Setup



Photograph 1. Conducted Emissions Test Setup

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.209 Radiated Emissions Limits

Test Requirement(s): **§ 15.209 (a):** Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in Table 8.

Frequency (MHz)	§ 15.209(a),Radiated Emission Limits (dBµV) @ 3m
30 - 88	40.00
88 - 216	43.50
216 - 960	46.00
Above 960	54.00

Table 8. Radiated Emissions Limits Calculated from FCC Part 15, § 15.209 (a)

Test Procedure: For frequencies from 30 MHz to 1 GHz, the transmitter was set to the mid channel at the highest output power and placed table inside in a semi-anechoic chamber. Measurements were performed with the EUT rotated 360 degrees and varying the adjustable antenna mast with 1 m to 4 m height to determine worst case orientation for maximum emissions.

EUT Field Strength Final Amplitude = Raw Amplitude – Preamp gain + Antenna Factor + Cable Loss

Test Results: The EUT was found compliant with the Radiated Emission limits of **§15.209(a)** for Intentional Radiators. See following pages for detailed test results.

Test Engineer(s): Len Knight, John Mason and Jeffrey Hazen

Test Date(s): June 7, 2006

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.209 Radiated Emissions Limits

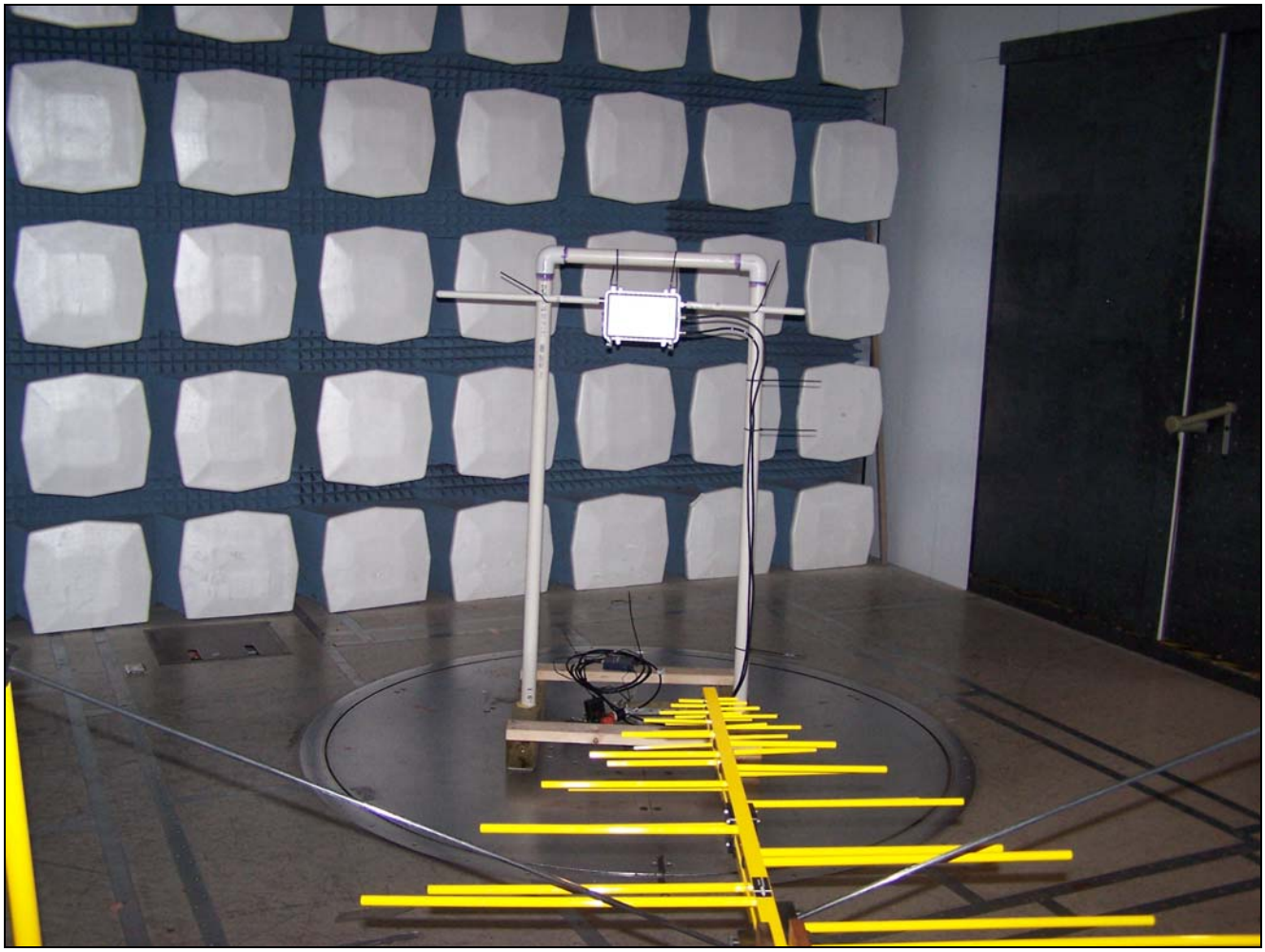
Radiated Emissions Limits Test Results – 30 MHz to 1 GHz, 802.11a

Frequency (MHz)	EUT Azimuth (Degrees)	Antenna Polarity (H/V)	Antenna HEIGHT (m)	Uncorrected Amplitude (dBuv)	Antenna Correction Factor (dB) (+)	Cable Loss (dB) (+)	Corrected Amplitude (dBuv)	Limit (dBuv)
52.088552	360	H	4	21.34	10.20	0.63	32.18	40
52.088552	285	V	1	33.32	9.23	0.63	43.18	40
104.14078	188	H	1.91	26.44	7.32	0.81	34.58	43.5
104.14078	237	V	1	21.34	7.83	0.81	29.99	43.5
634.82916	295	H	2	16.03	19.59	2.23	37.85	46.0
634.82916	93	V	1.88	14.8	20.20	2.23	37.23	46.0

Table 9. Radiated Emissions Limits Test Results, 802.11a

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.209 Radiated Emissions Limits



Photograph 2. Radiated Emission Test Setup

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15. 403(c) 26dB Bandwidth

Test Requirements: **§ 15.403 (c):** Operation under the provisions of this section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:

Test Procedure: The transmitter was set to the highest output power and connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using a RBW approximately equal to 1% of the total emission bandwidth, VBW > RBW. The 26 dB Bandwidth was measured and recorded. The measurements were at the low and high channels and two channels in between.

Test Results Equipment complies with § 15.407 (c). The 26 dB Bandwidth was determined from the plots on the following pages.

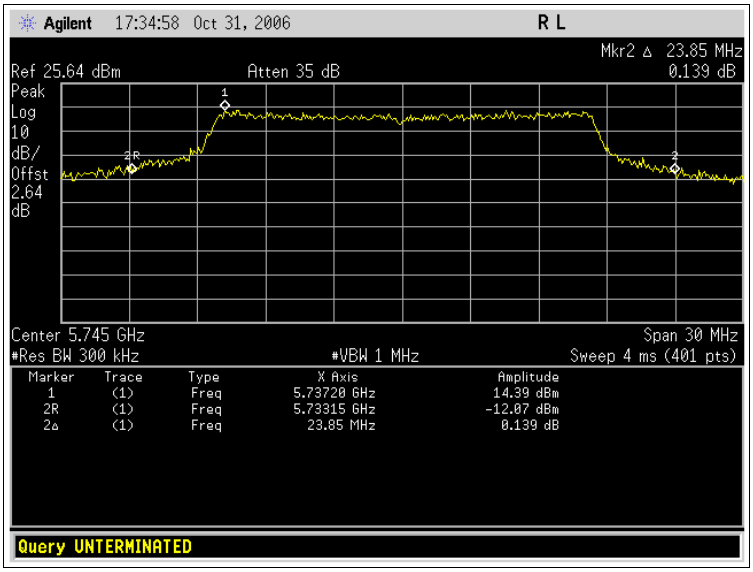
Frequency	Measured 26dB Bandwidth
5.745 GHz	23.85 MHz
5.765 GHz	23.55 MHz
5.775 GHz	22.95 MHz
5.805 GHz	23.70 MHz

802.11 a Mode

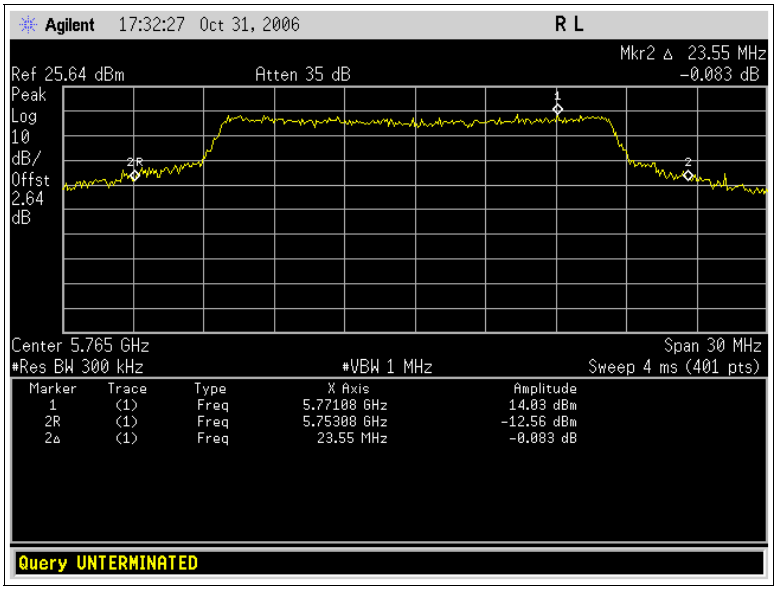
Test Engineer: Len Knight

Test Date: October 31, 2006

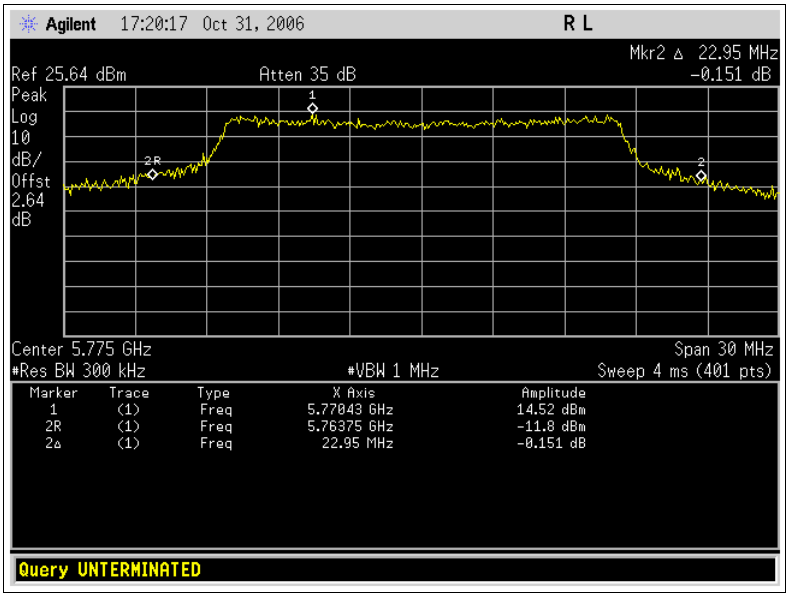
Electromagnetic Compatibility Criteria for Intentional Radiators



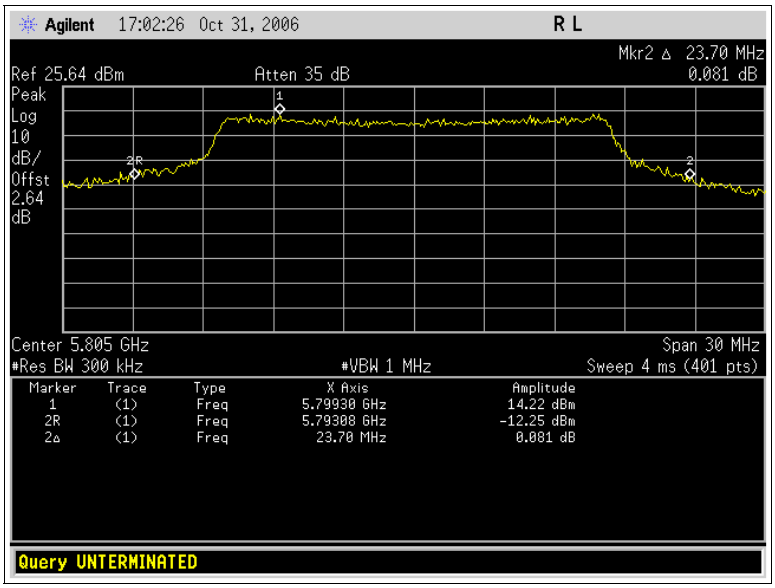
Plot 5. 802.11/a Low Band Occupied Band Width



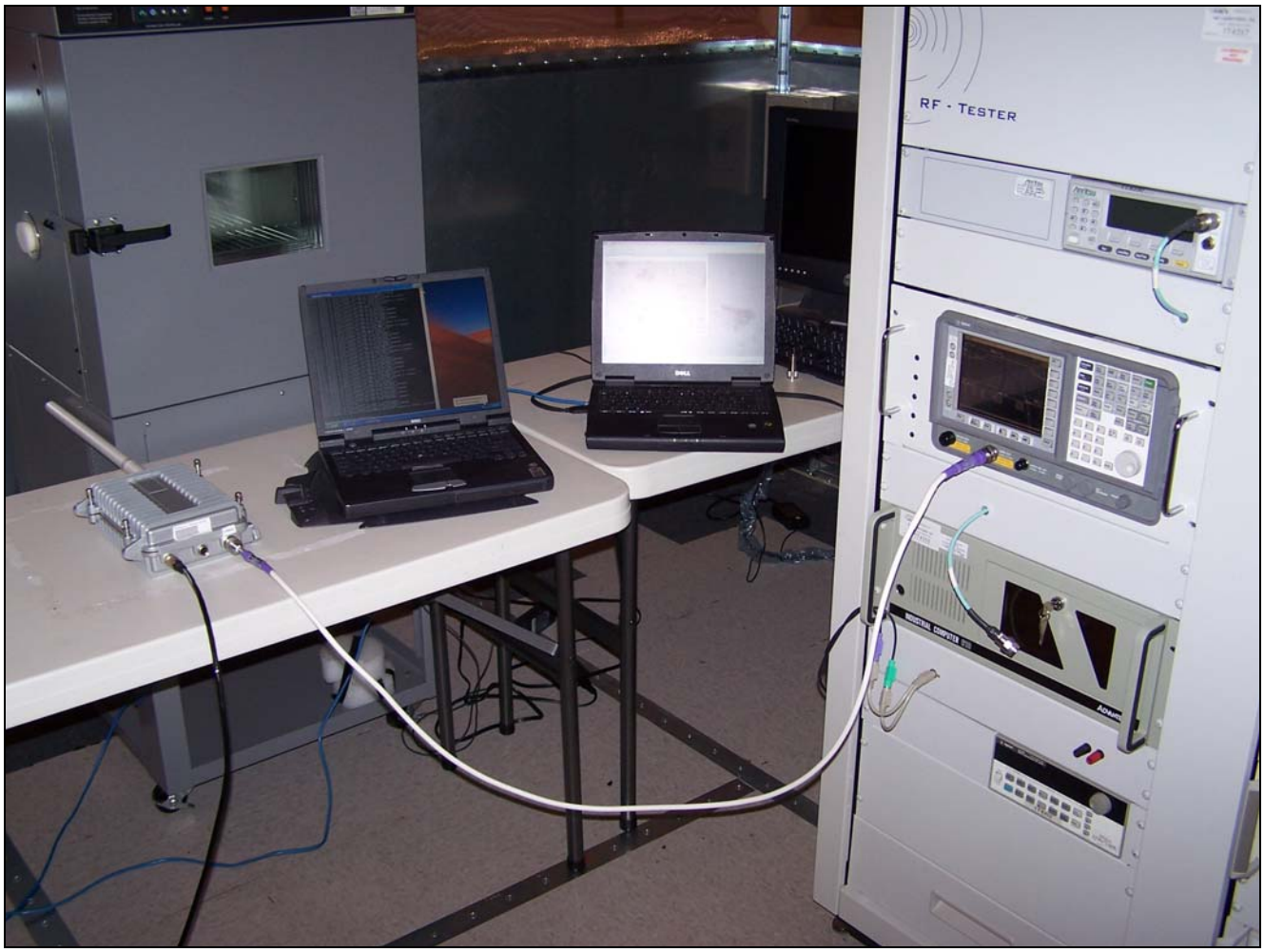
Plot 6. 802.11/a Mid Band Occupied Band Width



Plot 7. 802.11/a Mid Band Occupied Band Width



Plot 8. 802.11/a High Band Occupied Band Width



Photograph 3. 26 dB Bandwidth

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15. 407(a) (1), (2): RF Power Output

Test Requirements: **§15.407(a) (1), (2):** The maximum output power of the intentional radiator shall not exceed the following:

Digital Transmission Systems (MHz)	Output Limit (mW)
5150-5250	50
5250-5350	250
5725-5825	1000

Table 10. Output Power Requirements from §15.407 and §15.247.

§15.407(a) (2): For the band 5.725-5.825GHz the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1W or 17dBm + 10logB, where B is the 26-dB emission bandwidth in MHz.

§15.247(c): Systems operating in the 5725 – 5850 MHz band the power over the frequency band of operation shall not exceed 30dBm or 1000mW.

§15.247(c): If transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in the Table 10, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Procedure: The transmitter was connected to a calibrated PSA Spectrum Analyzer. The EUT was measured at the low, two mid and high channels at all available data rates.

Test Engineer: Len Knight

Test Date: November 1, 2006

Test Limit (dBm)	Antenna Gain (dBi)	Adjusted test Limit (dBm)
30	10	26

Note: Since the antenna has a gain of 10 dBi, the test limit has been adjusted to 26 dBm.

Channel	Freq	Data Rate	Power
Low	5745	6 Mbps	25.19
Low	5745	9 Mbps	25.03
Low	5745	12 Mbps	24.84
Low	5745	18 Mbps	25.05
Low	5745	24 Mbps	25.02
Low	5745	36 Mbps	25.22
Low	5745	48 Mbps	25.06
Low	5725	54 Mbps	25.01

Table 11. Conducted Output Power, Low

Channel	Freq	Data Rate	Power
Mid	5765	6 Mbps	24.97
Mid	5765	9 Mbps	24.96
Mid	5765	12 Mbps	25.05
Mid	5765	18 Mbps	25.14
Mid	5765	24 Mbps	25.05
Mid	5765	36 Mbps	25.05
Mid	5765	48 Mbps	25.10
Mid	5765	54 Mbps	25.01

Table 12. Conducted Output Power, Mid

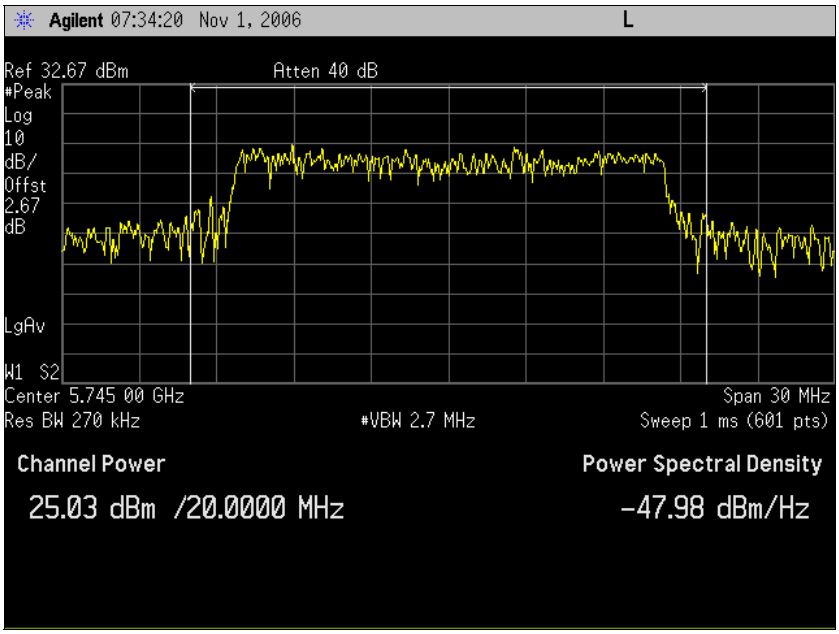
Channel	Freq	Data Rate	Power
Mid	5775	6 Mbps	24.51
Mid	5775	9 Mbps	24.98
Mid	5775	12 Mbps	25.11
Mid	5775	18 Mbps	25.14
Mid	5775	24 Mbps	25.10
Mid	5775	36 Mbps	25.07
Mid	5775	48 Mbps	25.01
Mid	5775	54 Mbps	25.22

Table 13. Conducted Output Power, Mid

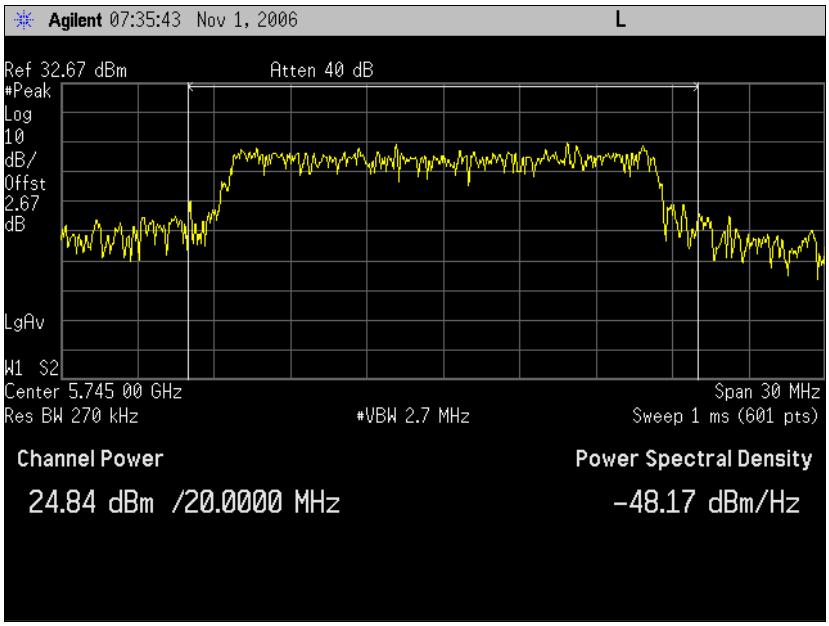
Channel	Freq	Data Rate	Power
High	5805	6 Mbps	24.95
High	5805	9 Mbps	24.85
High	5805	12 Mbps	24.92
High	5805	18 Mbps	25.02
High	5805	24 Mbps	25.16
High	5805	36 Mbps	25.32
High	5805	48 Mbps	25.08
High	5805	54 Mbps	25.18

Table 14. Conducted Output Power, High

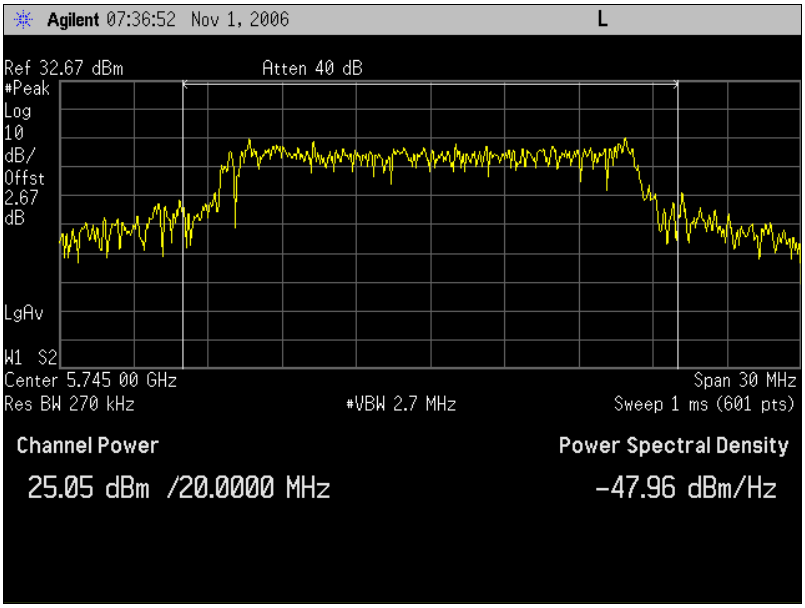
Plot 9. Conducted Power, 5745 MHz, 6 Mbps



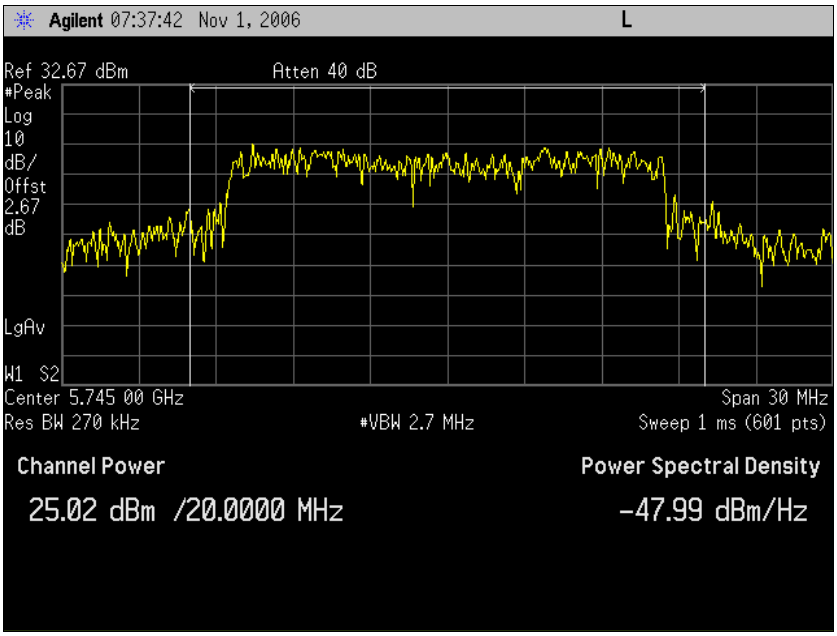
Plot 10. Conducted Power, 5745 MHz, 9 Mbps



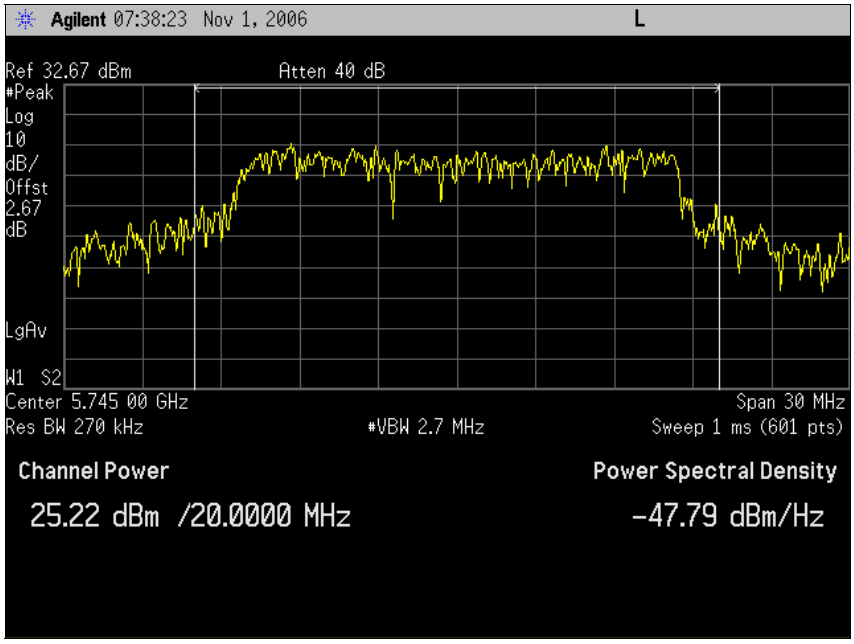
Plot 11. Conducted Power, 5745 MHz, 12 Mbps



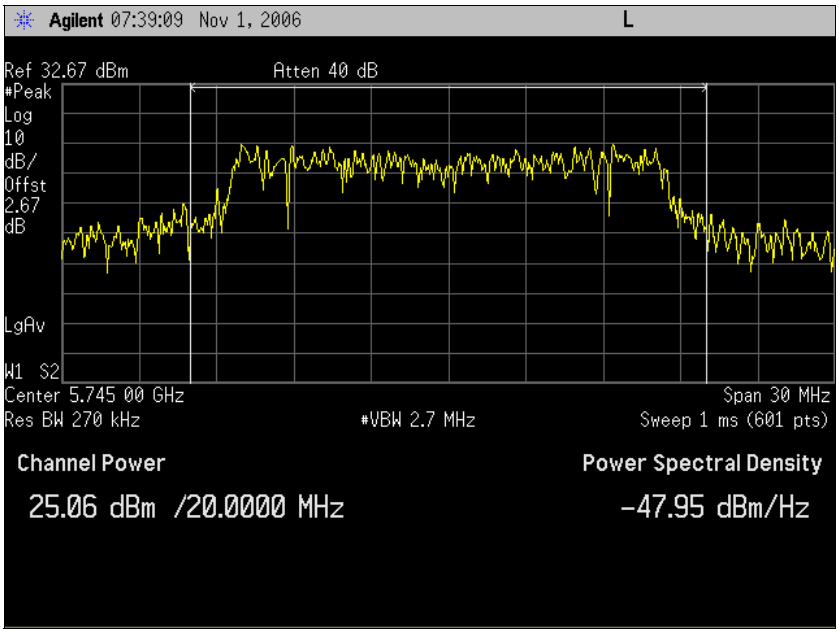
Plot 12. Conducted Power, 5745 MHz, 18 Mbps



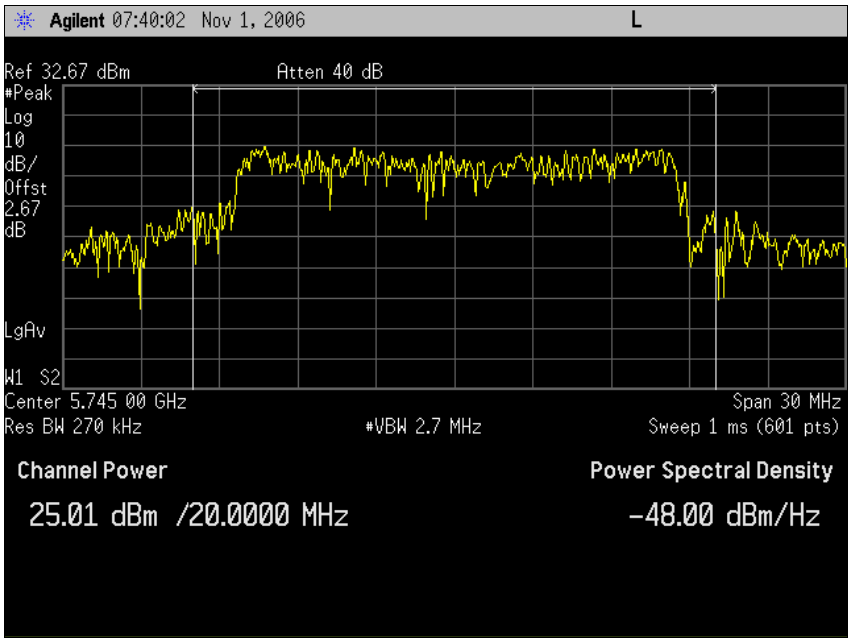
Plot 13. Conducted Power, 5745 MHz, 24 Mbps



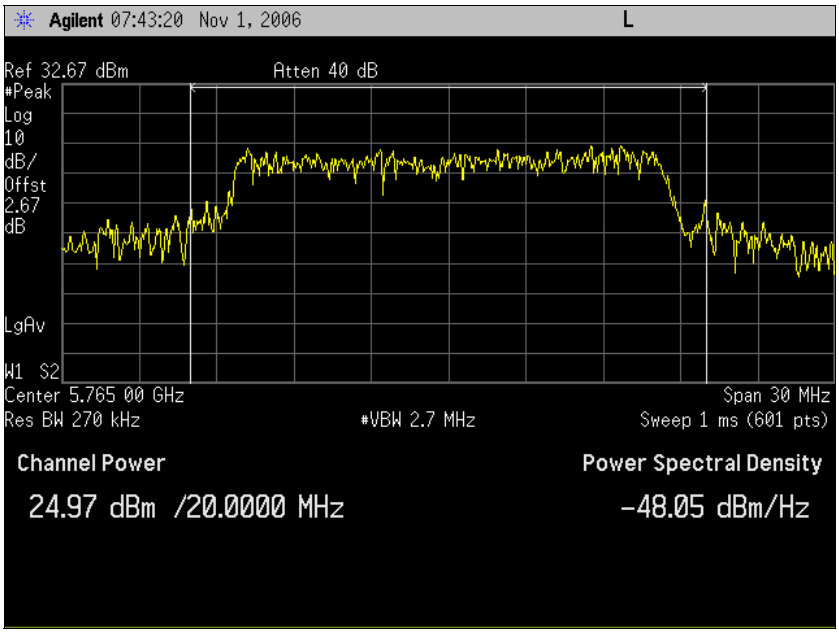
Plot 14. Conducted Power, 5745 MHz, 36 Mbps



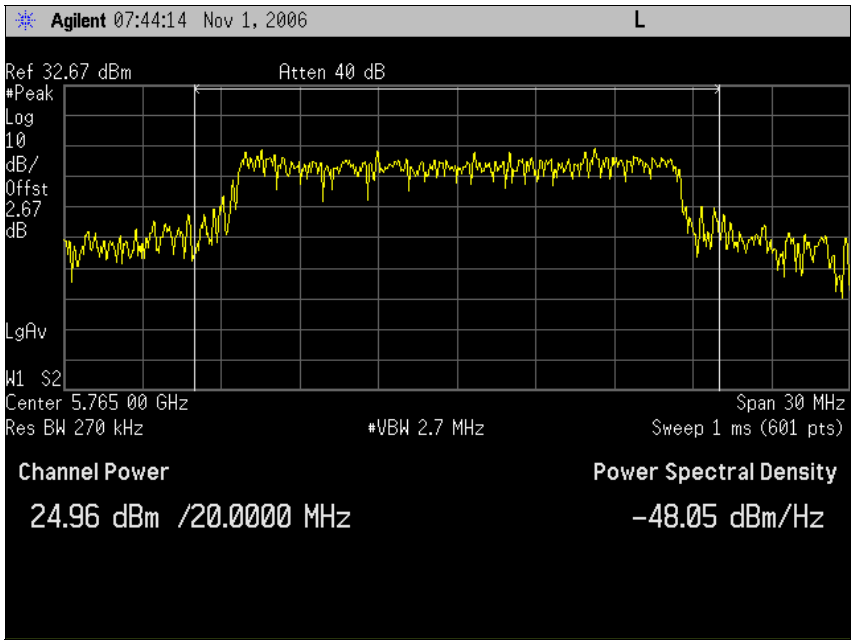
Plot 15. Conducted Power, 5745 MHz, 48 Mbps



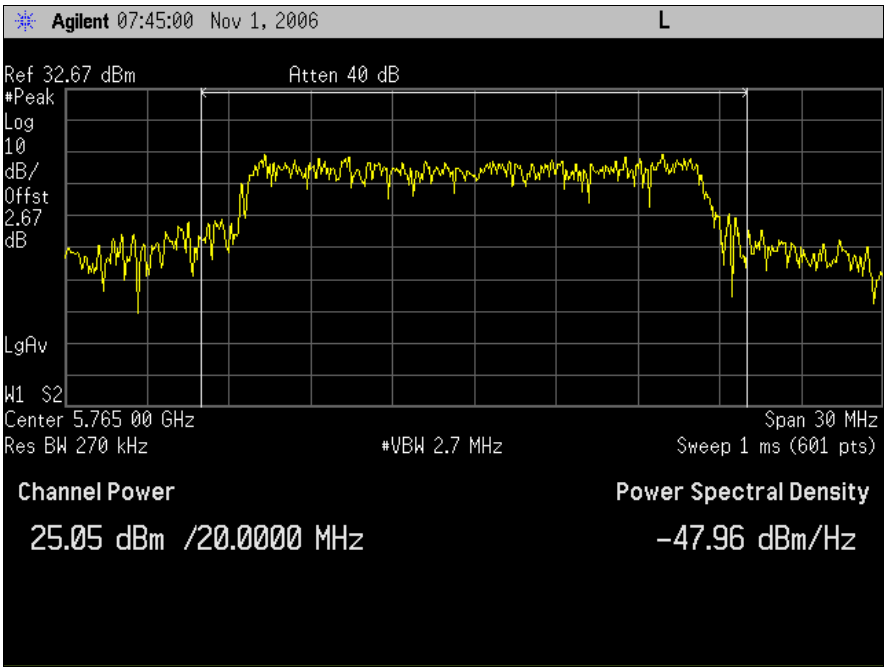
Plot 16. Conducted Power, 5745 MHz, 54 Mbps



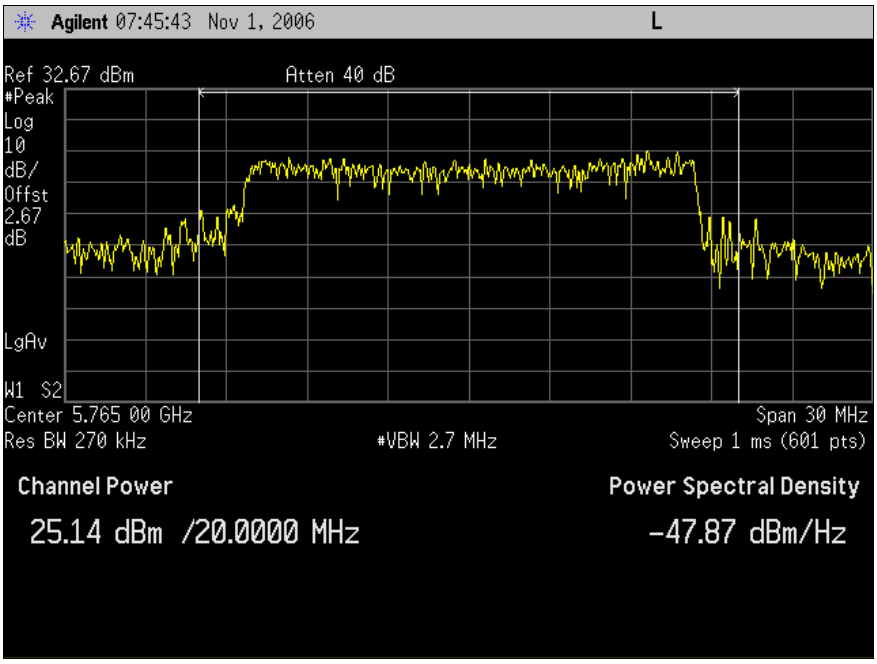
Plot 17. Conducted Power, 5765 MHz, 6 Mbps



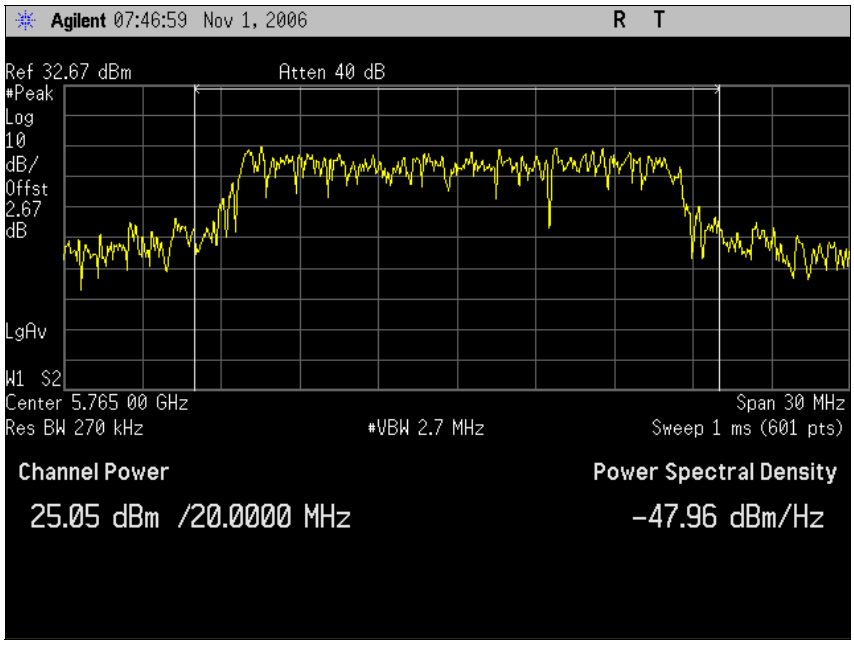
Plot 18. Conducted Power, 5765 MHz, 9 Mbps



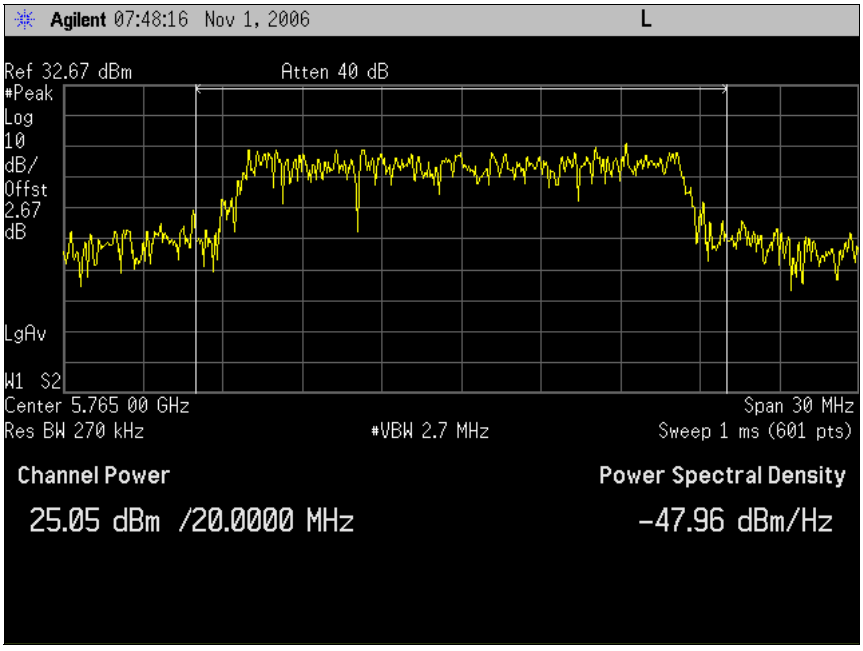
Plot 19. Conducted Power, 5765 MHz, 12 Mbps



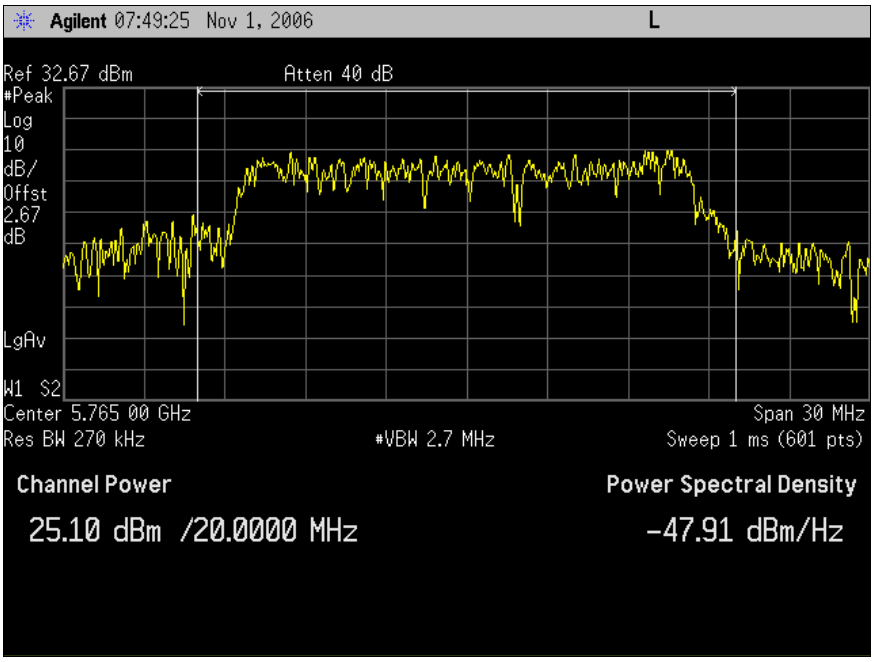
Plot 20. Conducted Power, 5765 MHz, 18 Mbps



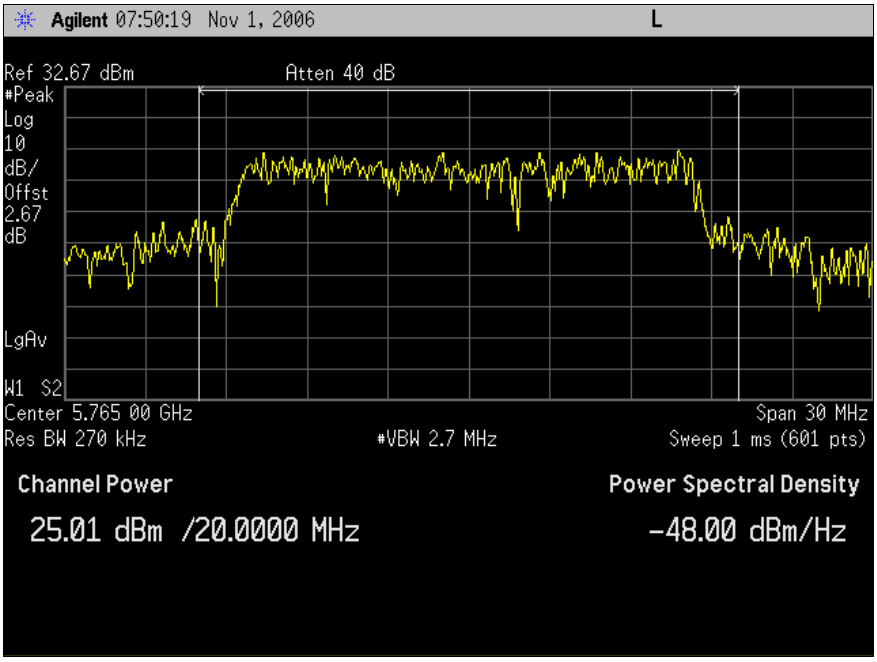
Plot 21. Conducted Power, 5765 MHz, 24 Mbps



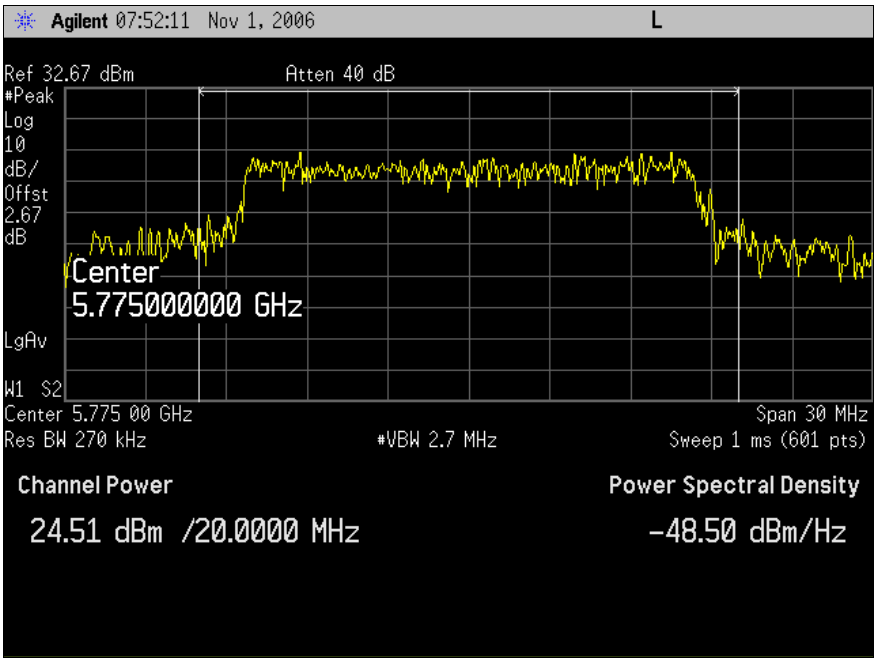
Plot 22. Conducted Power, 5765 MHz, 36 Mbps



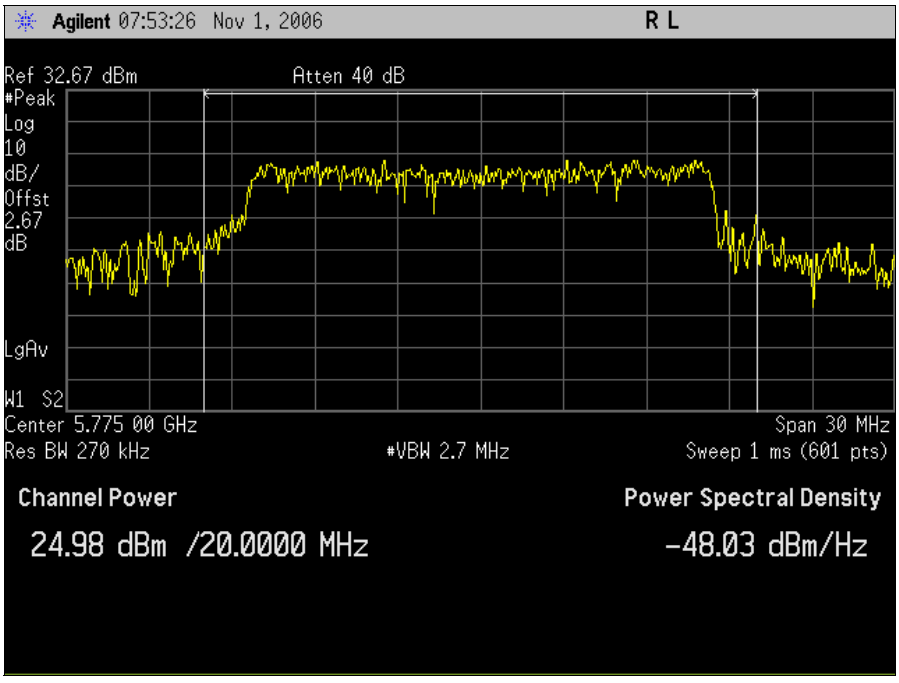
Plot 23. Conducted Power, 5765 MHz, 48 Mbps



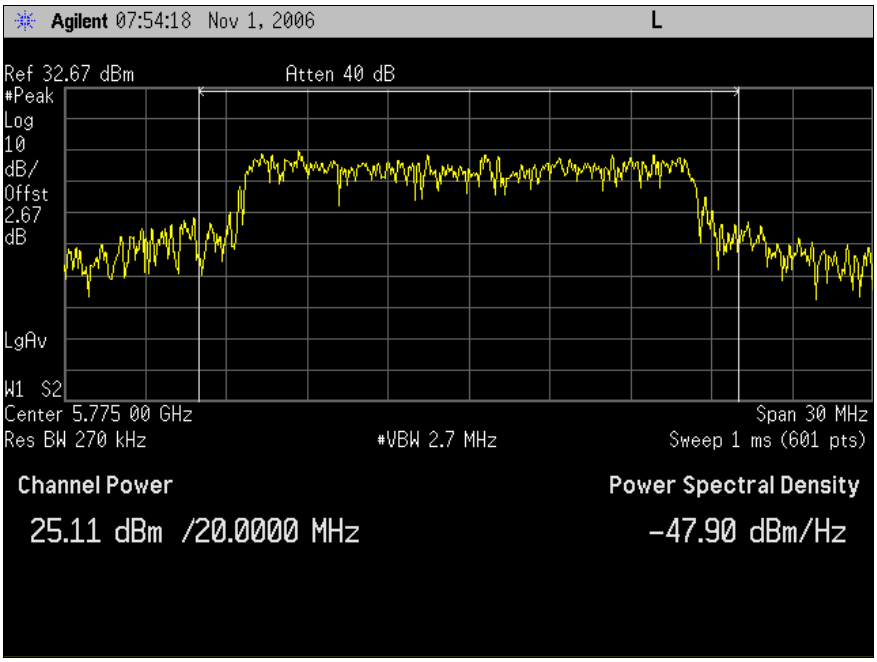
Plot 24. Conducted Power, 5765 MHz, 54 Mbps



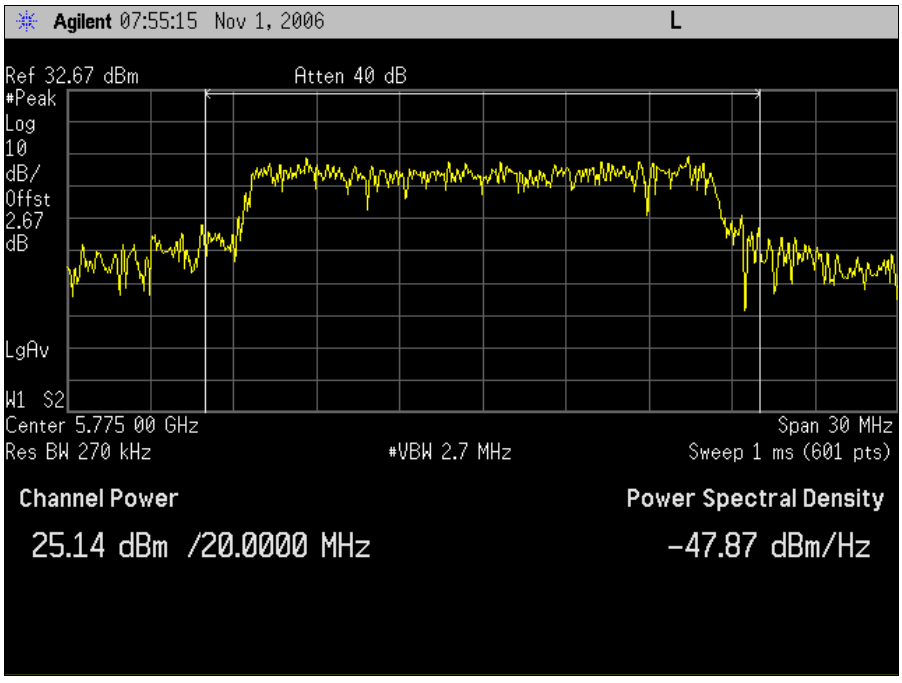
Plot 25. Conducted Power, 5775 MHz, 6 Mbps



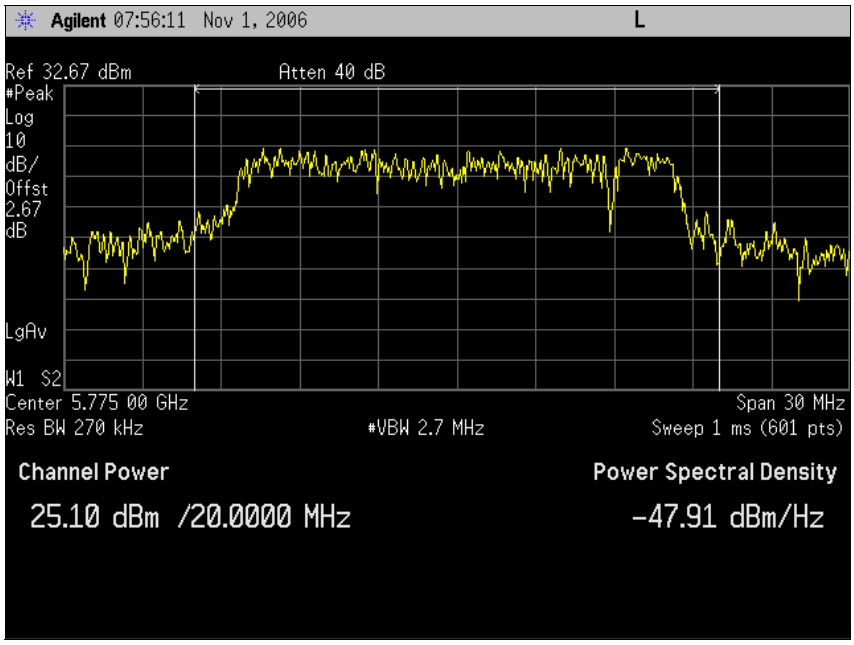
Plot 26. Conducted Power, 5775 MHz, 9 Mbps



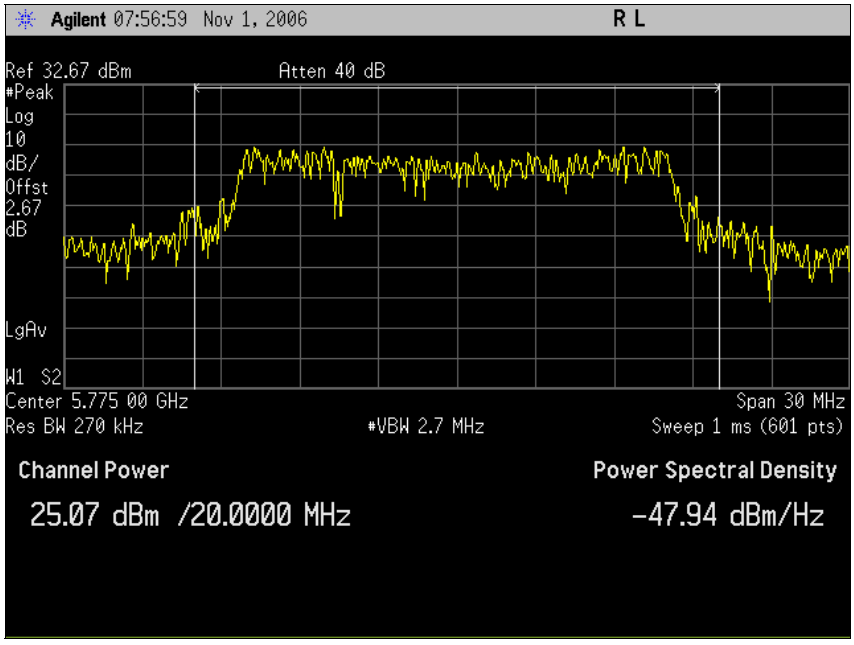
Plot 27. Conducted Power, 5775 MHz, 12 MHz



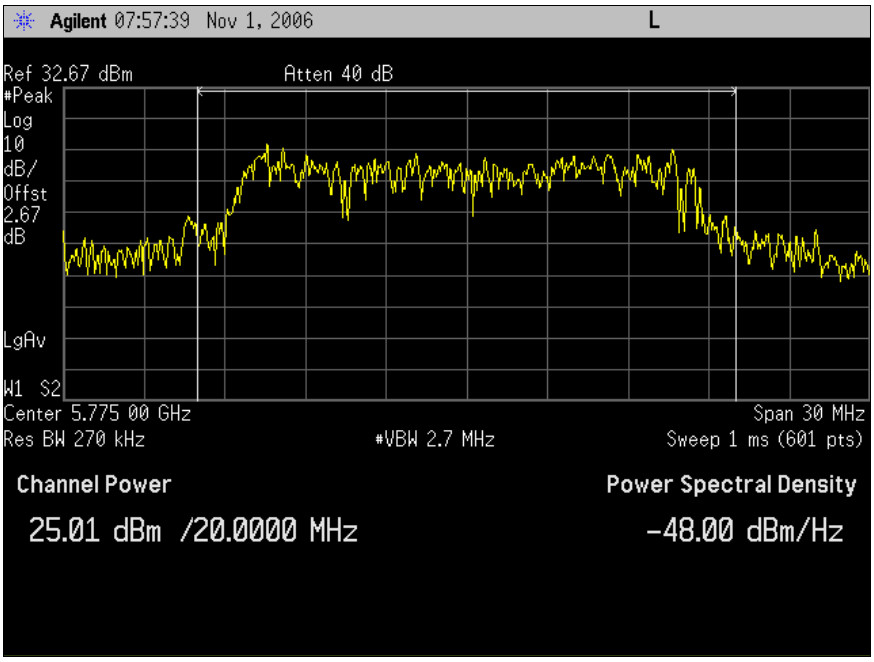
Plot 28. Conducted Power, 5775 MHz, 18 Mbps



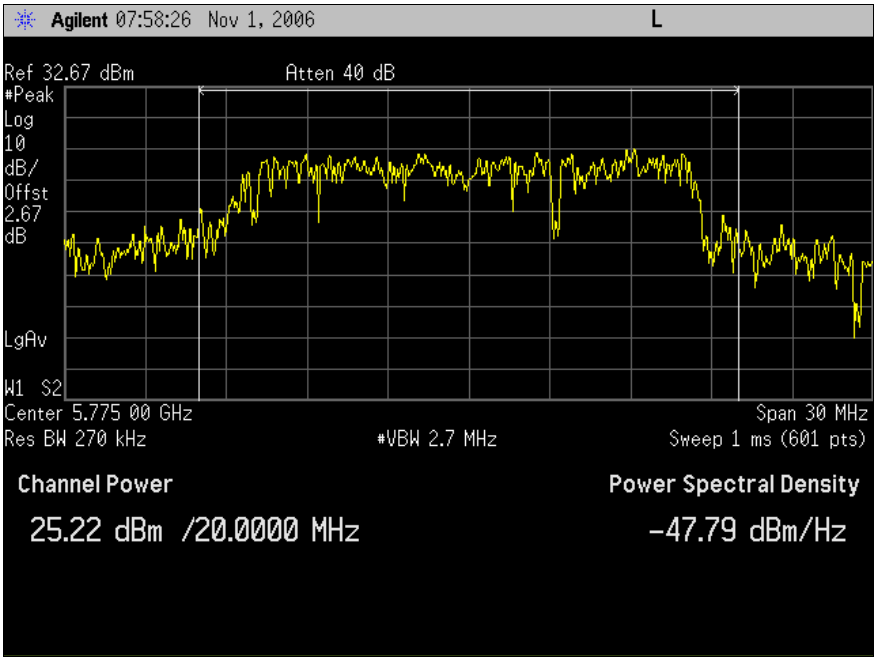
Plot 29. Conducted Power, 5775 MHz, 24 Mbps



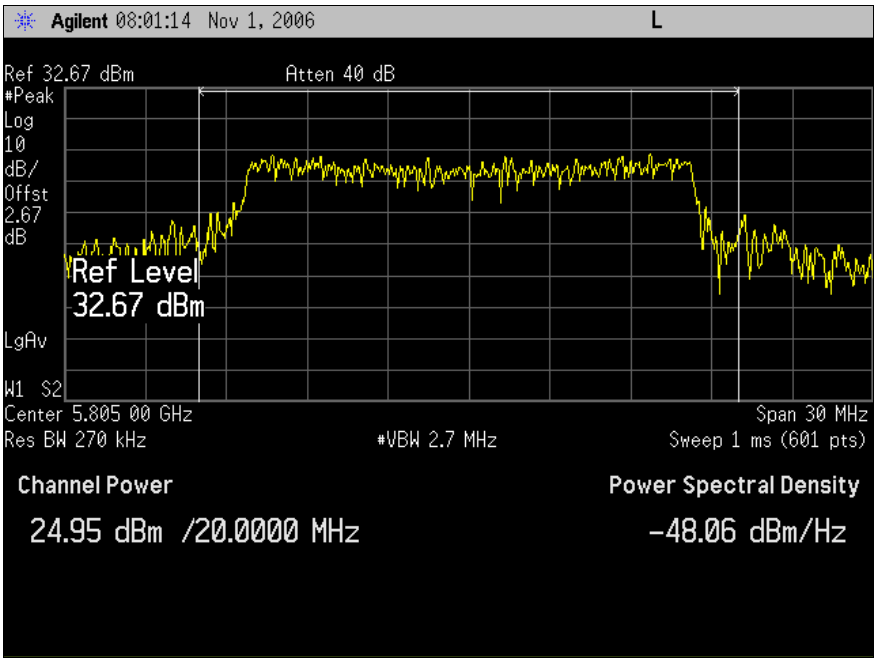
Plot 30. Conducted Power, 5775 MHz, 36 Mbps



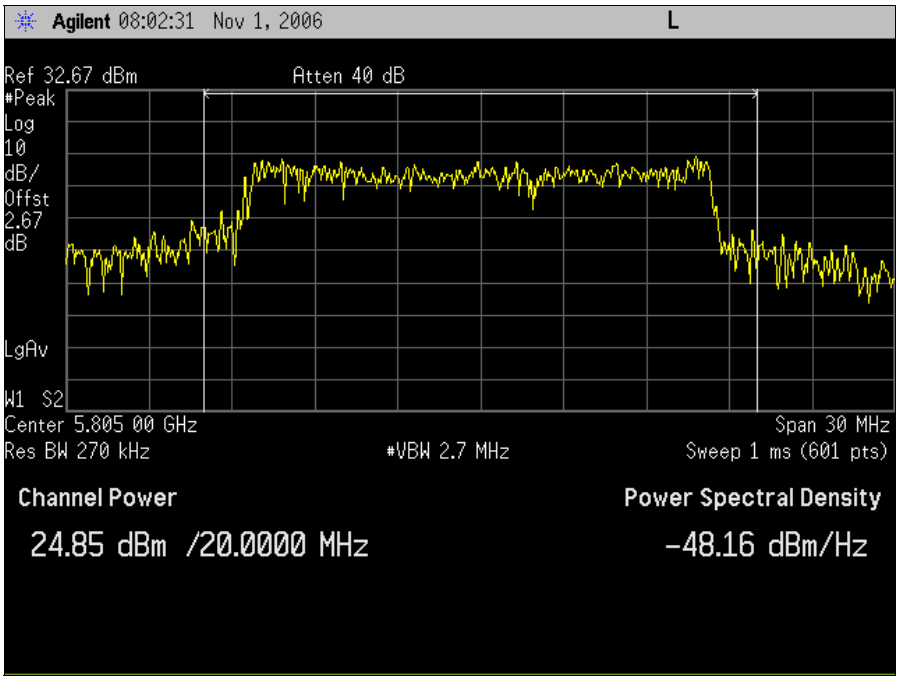
Plot 31. Conducted Power, 5775 MHz, 48 Mbps



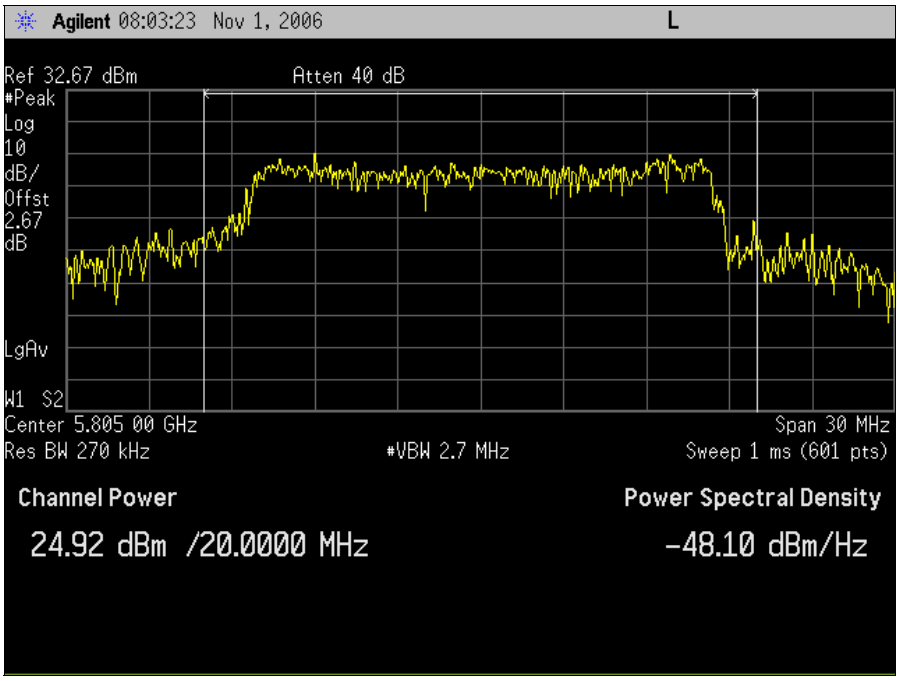
Plot 32. Conducted Power, 5775 MHz, 54 Mbps



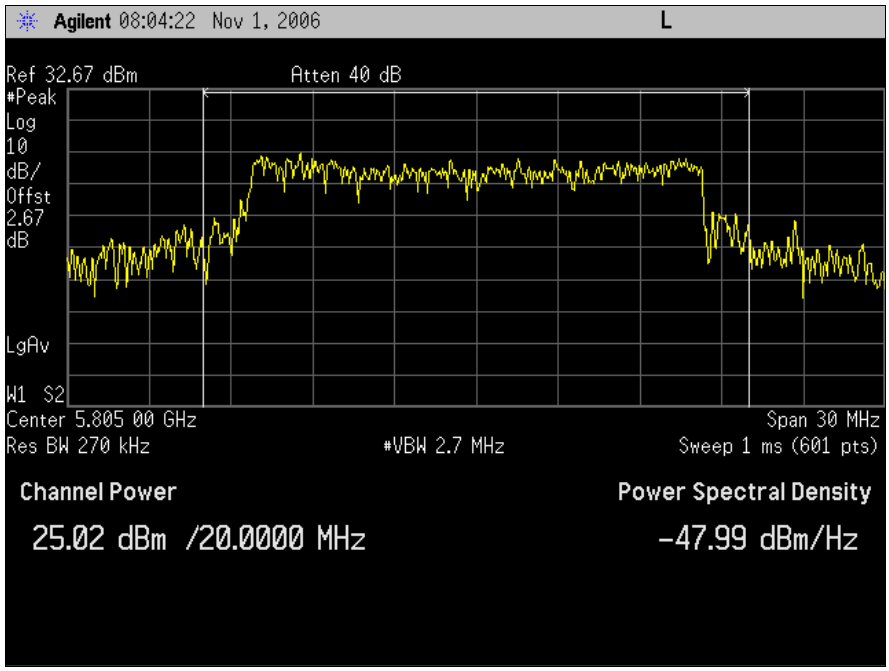
Plot 33. Conducted Power, 5805 MHz, 6 Mbps



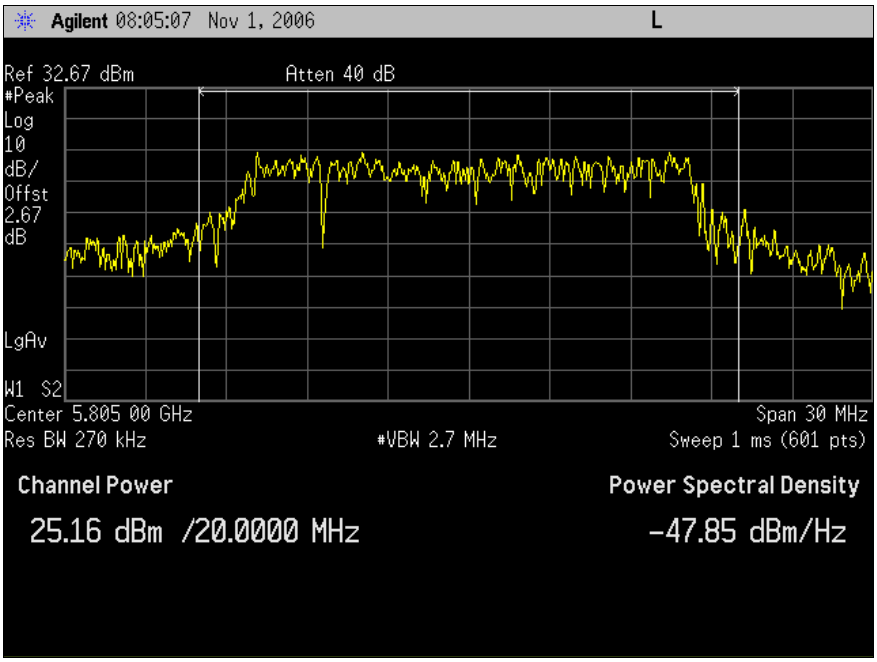
Plot 34. Conducted Power, 5805 MHz, 9 Mbps



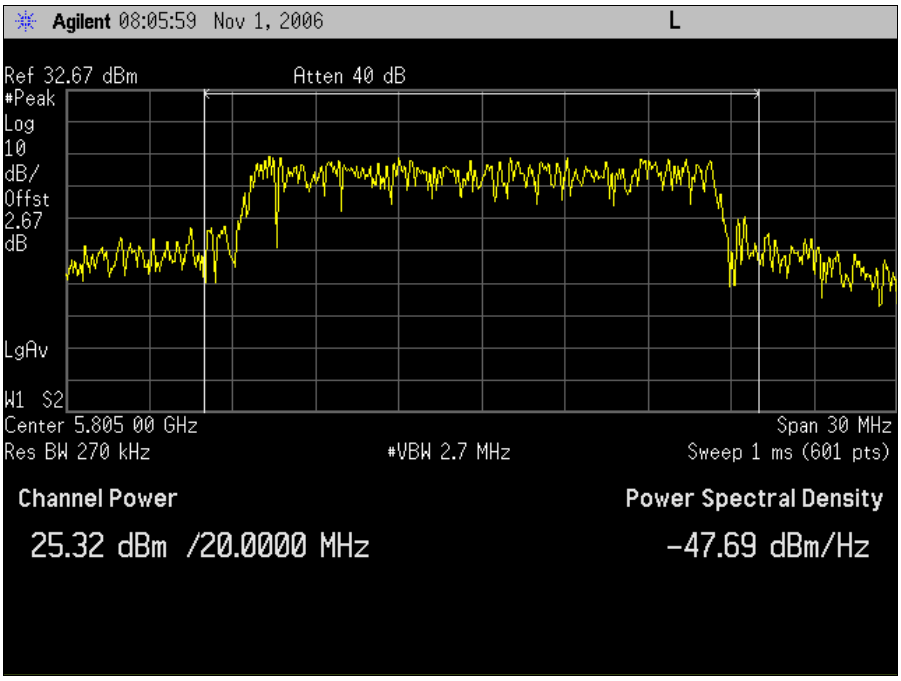
Plot 35. Conducted Power, 5805 MHz, 12 Mbps



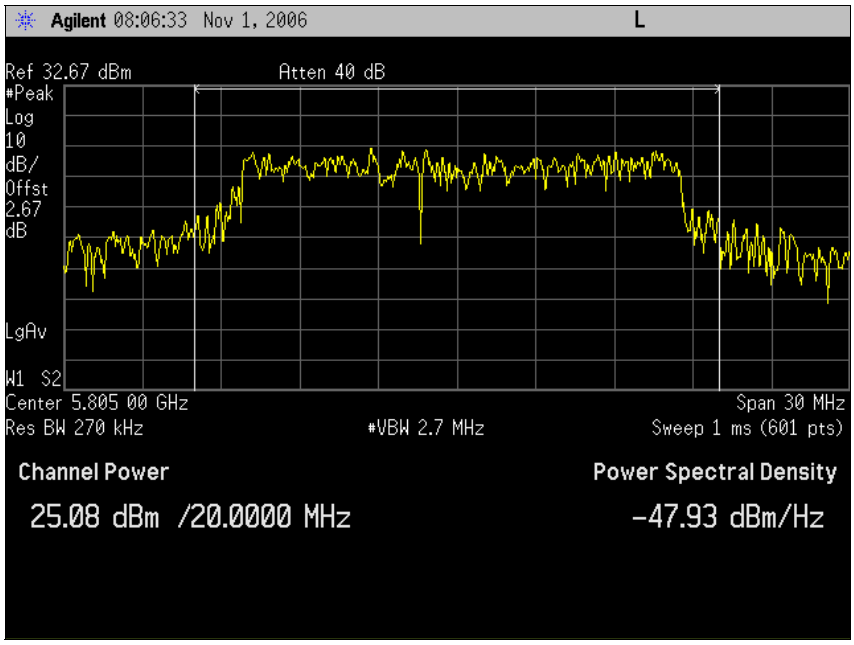
Plot 36. Conducted Power, 5805 MHz, 18 Mbps



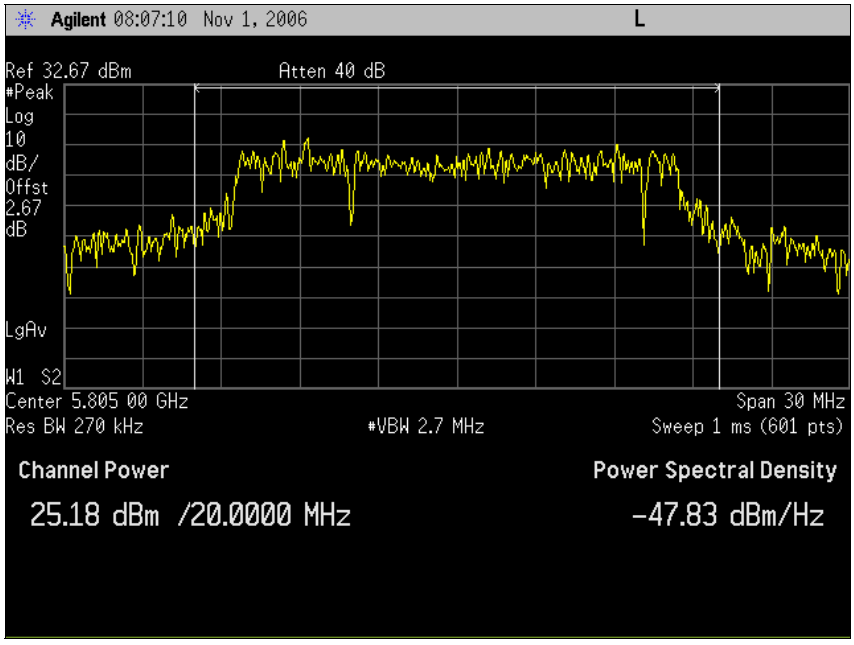
Plot 37. Conducted Power, 5805 MHz, 24 Mbps



Plot 38. Conducted Power, 5805 MHz, 36 Mbps



Plot 39. Conducted Power, 5805 MHz, 48 Mbps



Plot 40. Conducted Power, 5805 MHz, 54 Mbps

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(a)(1), (a)(2) Peak Power Spectral Density

Test Requirements: **§ 15.407, (a)(3):** For the band 5.725 – 5.825 GHz, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band.

Test Procedure: The transmitter was connected directly to a Spectrum Analyzer. The power level was set to the maximum level on the EUT. The RBW was set to 1MHz and the VBW was set to 3MHz. The method of measurement #2 from the FCC Public Notice CA 02-2138 was used.

Test Results: Equipment complies with the peak power spectral density limits of **§ 15.407(a)(1), (a)(2).** The peak power spectral density was determined from plots on the following page(s).

Band	Frequency	Limit (dBm)	Adjusted Test Limit (dBm)	Measured PPSD (dBm)
Low	5.725 GHz	17	13	9.303
Mid	5.765 GHz	17	13	8.634
Mid	5.775 GHz	17	13	8.787
High	5.825 GHz	17	13	8.953

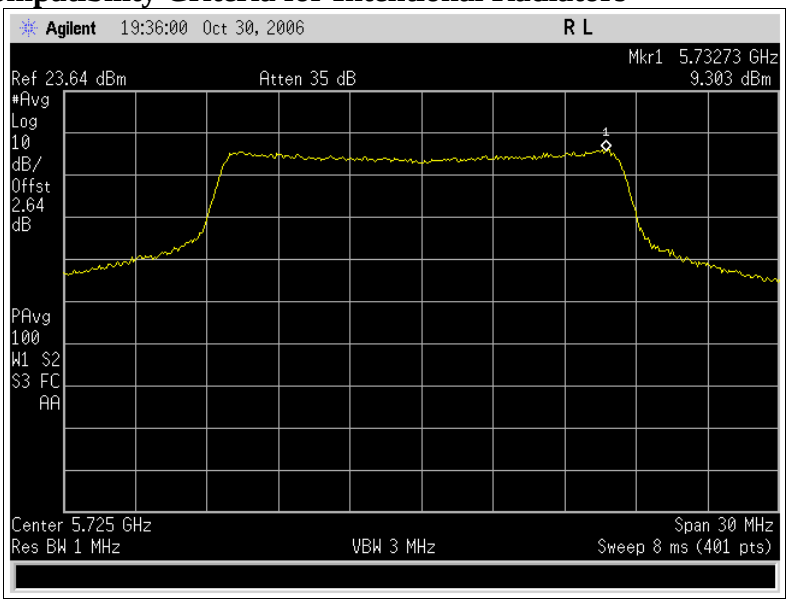
802.11 a Mode

Note: Since the antenna has a gain of 10 dBi (4 dB in excess of 6 dBi) the limit has been adjusted to 13 dBm.

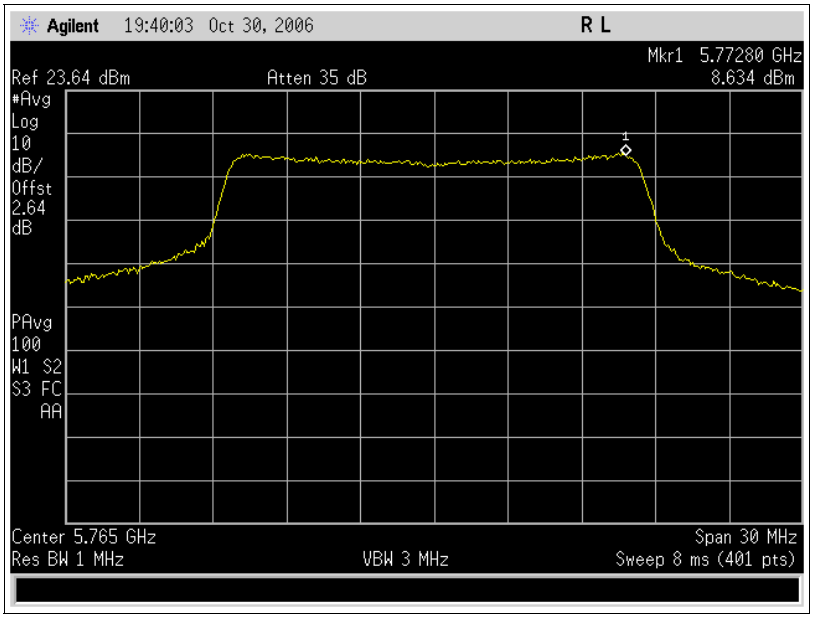
Test Engineer: Len Knight

Test Date: October 31, 2006

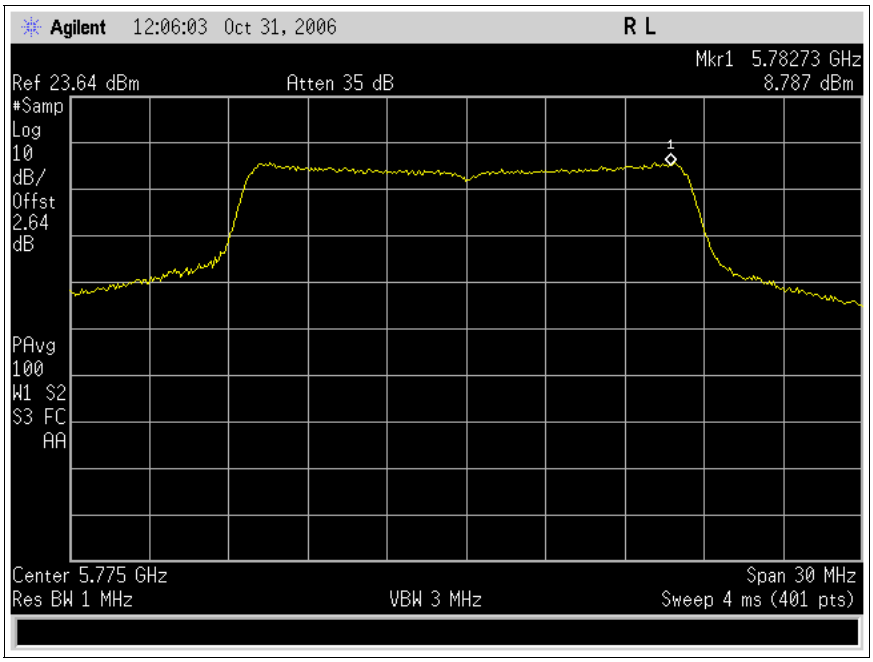
Electromagnetic Compatibility Criteria for Intentional Radiators



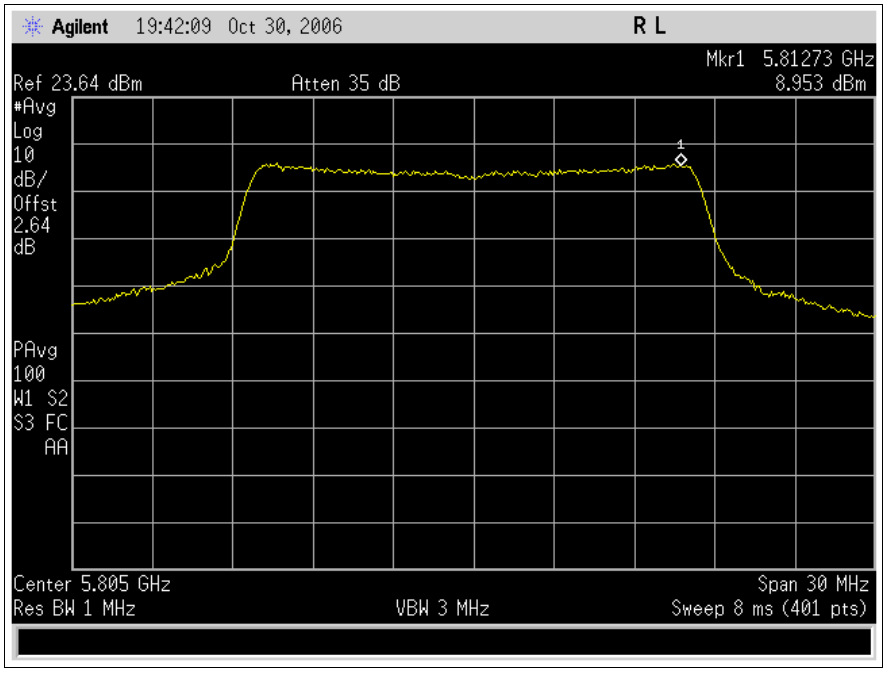
Plot 41. 802.11/a– Low Band Peak Power Spectral Density



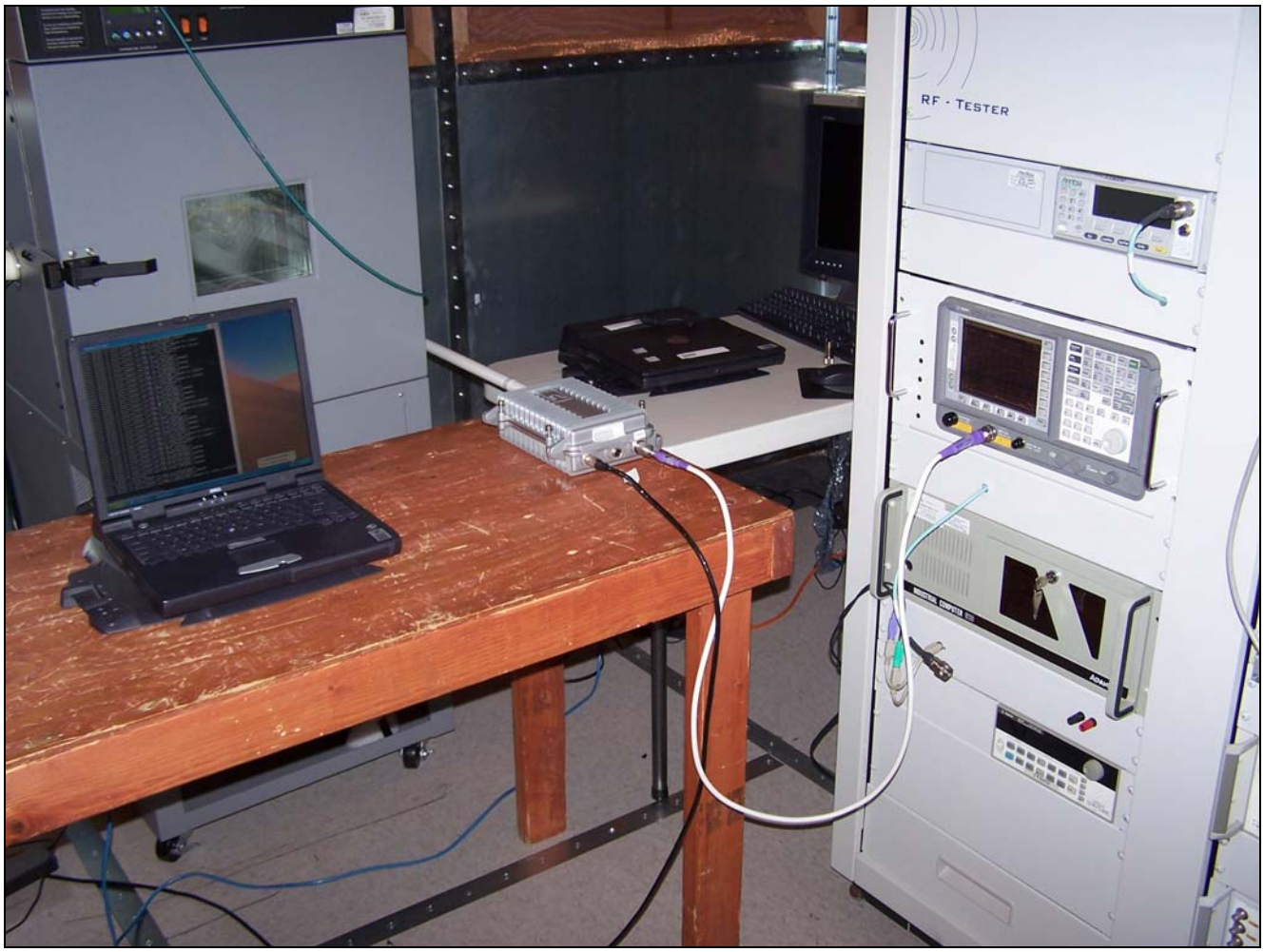
Plot 42. 802.11/a – Mid Band Peak Power Spectral Density



Plot 43. 802.11/a – Mid Band Peak Power Spectral Density



Plot 44. 802.11/a – High Band Peak Power Spectral Density



Photograph 4. Peak Power Spectral Density, Test Setup

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(a)(6) Peak Excursion Ratio

Test Requirements: **§ 15.407(a)(6):** For digitally modulated systems, the peak excursion of the modulation envelope to the peak transmit power shall not exceed 13dB across any 1MHz bandwidth of the emission bandwidth whichever is less.

Test Procedure: The method of measurement #2 from the FCC Public Notice CA 02-2138 was used. The EUT was connected directly to the spectrum analyzer through cabling and attenuation. The 1st trace on the spectrum analyzer was set to RBW=1MHz, VBW=3MHz. The peak detector mode was used and the trace max held. The 2nd trace on the spectrum analyzer was set to a RBW=1MHz, VBW=30 KHz. The detector mode was set to sample detector.

The Peak Excursion Ratio was determined from the difference between the maximum found in each trace.

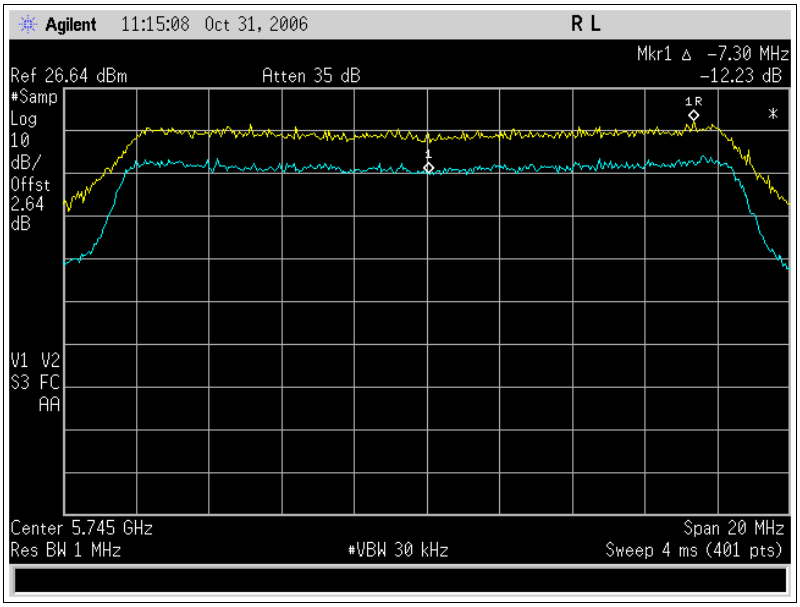
Test Results: Equipment complies with the peak excursion ratio limits of **§ 15.407(a)(6).** The peak excursion ratio was determined from plots on the following page(s).

Band	Frequency	Limit (dBm)	Excursion Ratio (dB)
Low	5.745 GHz	13	12.23
Mid	5.765 GHz	13	12.74
Mid	5.785 GHz	13	11.5
High	5.805 GHz	13	12.13

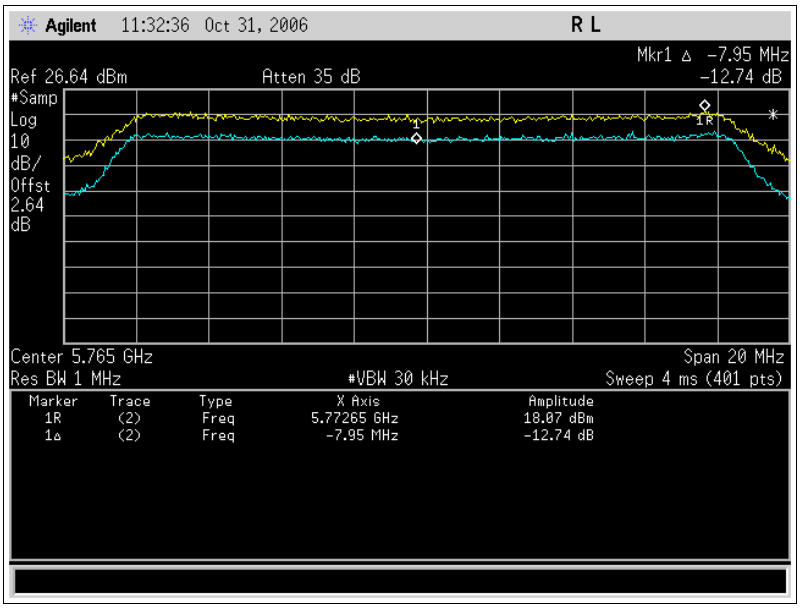
802.11 a Mode

Test Engineer: Len Knight

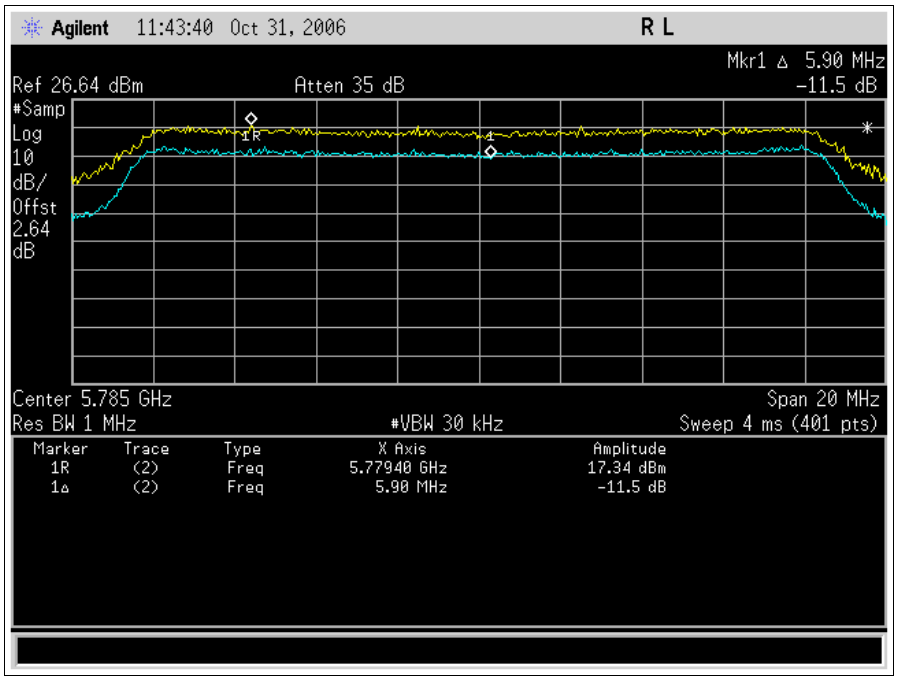
Test Date: October 31, 2006



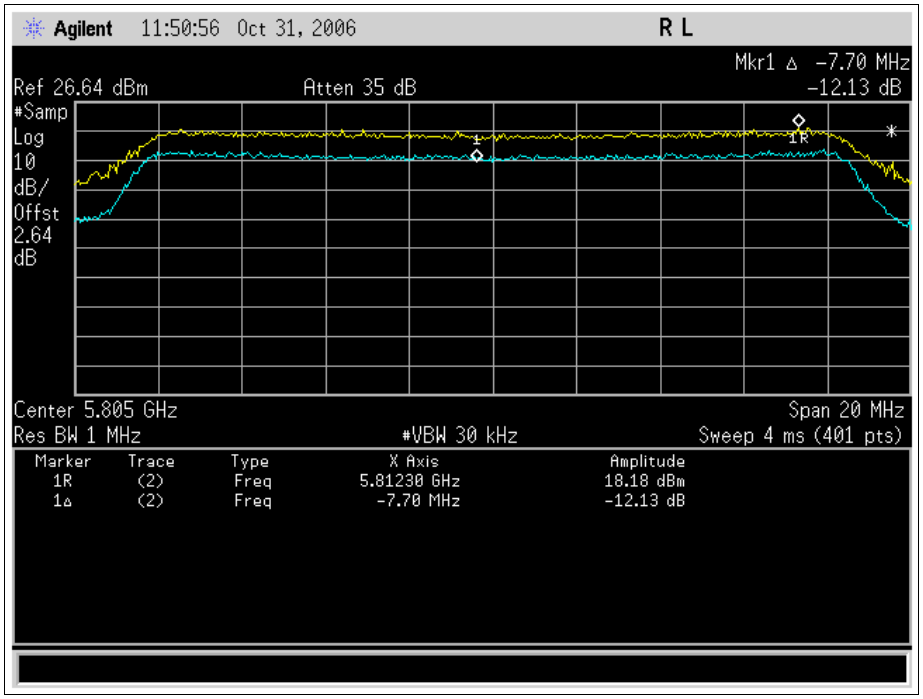
Plot 45. Peak Excursion Ratio for Low Band



Plot 46. Peak Excursion Ratio for Mid Band



Plot 47. Peak Excursion Ratio for Mid Band



Plot 48. Peak Excursion Ratio for High Band

Photograph 5. Peak Excursion Ratio, Test Setup

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(b)(1),(2), (5), (6): Undesirable Emissions

Test Requirements: **§ 15.407(b)(1),(2), (5), (6)**; **§ 15.209 (a) §15.205:** Emissions outside the frequency band.

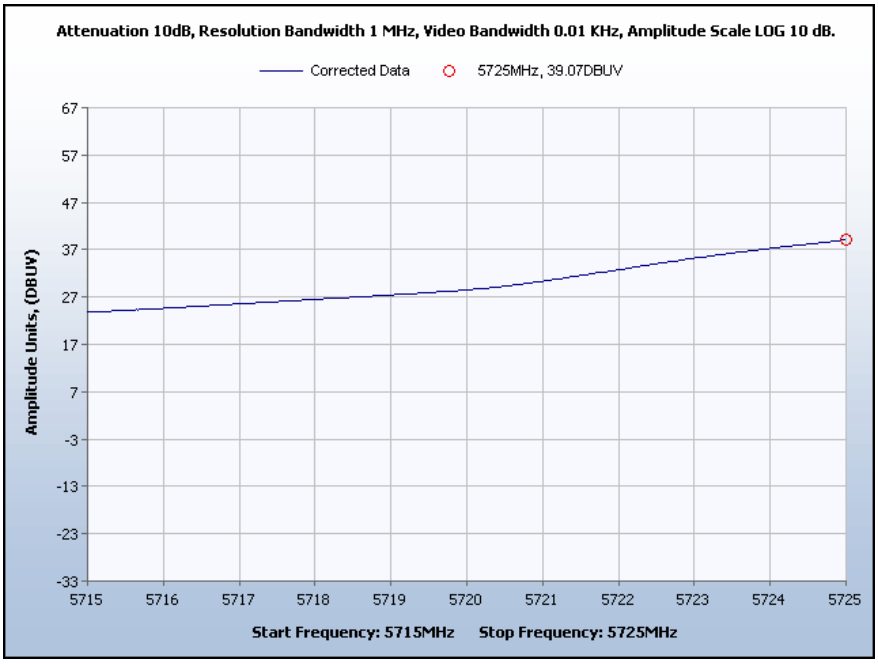
§ 15.407(b)(4): For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed in EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.

§ 15.407(b)(6): Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a).

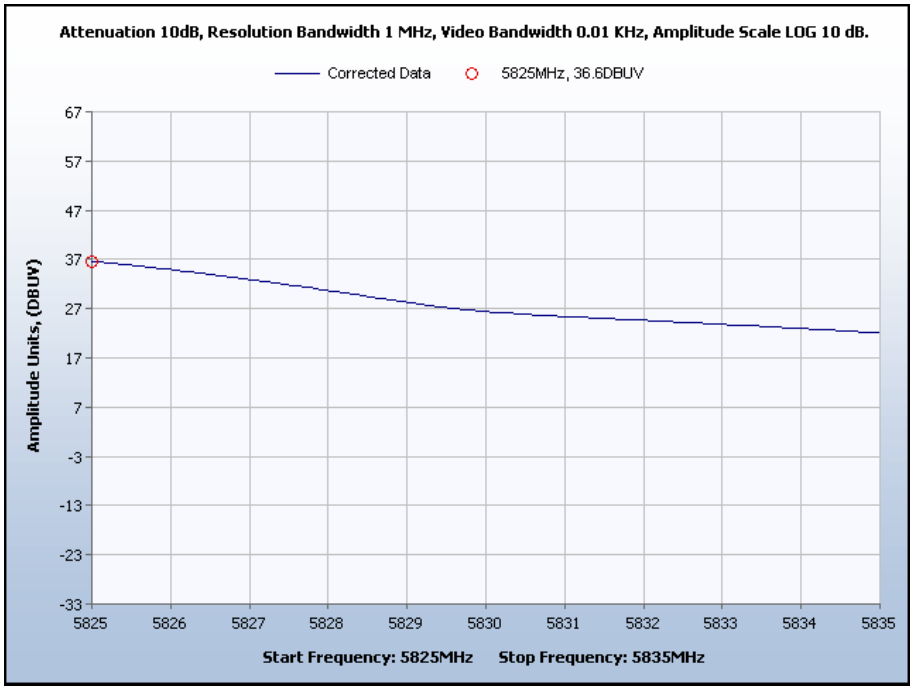
§15.205(a): Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Test Engineer: Jeff Hazen

Test Date: September 15, 2006



Plot 49. Low Channel Bandedge Average



Plot 50. High Channel Bandedge Average

Frequency (GHz)	EUT Azimuth (Degrees)	Spectrum Analyzer Measurement (dBuV) @ 3m	Antenna Polarity (H/V)	Antenna Correction Factor (dB)	Cable Loss/Pre-amp System Gain Correction Factor (dB)	Measurement Distance Correction Factor (dB) @ 3m	Corrected Measurement (dBuV/m)	Emissions Limit EIRP (dBm)	Calculated EIRP (dBm)
		Average							
5.725	0	39.07	H	35.07	3.2	0	77.34	-17	-17.86
5.825	0	36.6	H	35.18	3.2	0	74.98	-17	-20.22

Table 15. Undesirable Emissions Bandedge Test Results

Note: dBm EIRP = dBµV/m – 95.2 @ 3m

Electromagnetic Compatibility Criteria for Intentional Radiators

Harmonic Emissions Requirements – Radiated (802.11a)

Frequency (GHz)	EUT Azimuth (Degrees)	Antenna Polarity (H/V)	Antenna Height (m)	Antenna Correction Factor (dB)	Cable Loss/Pre-amp System Gain Correction Factor (dB)	Measurement Distance Correction Factor (dB) @ 3m	Corrected Measurement (dBuV/m)		Emissions Limit EIRP (dBm)	Calculated EIRP (dBm)	
							Peak	Average	Average	Peak	Average
11.45	0	H	1.37	39.19	-26.79	0	55.1	42.09	-27	-40.1	-53.12
13.99	0	H	1.37	41.8	-24.97	0	57.57	44.85	-27	-37.6	-50.3
14.72	0	H	1.37	40.9	-22.95	0	56.42	45.15	-27	-38.8	-50

Table 16. Low Channel 5725

Frequency (GHz)	EUT Azimuth (Degrees)	Antenna Polarity (H/V)	Antenna Height (m)	Antenna Correction Factor (dB)	Cable Loss/Pre-amp System Gain Correction Factor (dB)	Measurement Distance Correction Factor (dB) @ 3m	Corrected Measurement (dBuV/m)		Emissions Limit EIRP (dBm)	Calculated EIRP (dBm)	
							Peak	Average	Average	Peak	Average
11.55	0	H	1.37	39.21	-26.88	0	58.96	45.66	-27	-36.2	-49.5
16.64	0	H	1.37	40.19	-22.38	0	57.55	42.79	-27	-37.6	-52.4
13.92	0	H	1.37	41.75	-25.2	0	56.57	43.64	-27	-38.6	-51.6
14.71	0	H	1.37	40.83	-23	0	57.03	44.99	-27	-38.2	-50.2

Table 17. Mid Channel 5775 MHz

Frequency (GHz)	EUT Azimuth (Degrees)	Antenna Polarity (H/V)	Antenna Height (m)	Antenna Correction Factor (dB)	Cable Loss/Pre-amp System Gain Correction Factor (dB)	Measurement Distance Correction Factor (dB) @ 3m	Corrected Measurement (dBuV/m)		Emissions Limit EIRP (dBm)	Calculated EIRP (dBm)	
							Peak	Average	Average	Peak	Average
11.65	0	H	1.37	39.2	-26.73	0	56.95	42.6	-27	-38.3	-52.6
13.98	0	H	1.37	41.79	-25	0	58.36	44.28	-27	-36.8	-50.9
14.7	0	H	1.37	40.87	-23.04	0	56.33	45.05	-27	-38.9	-50.2
15.48	0	H	1.37	38.32	-22.46	0	56.73	42.71	-27	-38.5	-52.5
15.89	0	H	1.37	38.54	-22.59	0	56.73	42.47	-27	-38.5	-52.7

Table 18. High Channel 5825 MHz

Note 1: All other emissions were measured at the noise floor of the spectrum analyzer.
Note 2: dBm EIRP = dBµV/m – 95.2 @ 3m

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(g): Temperature Stability

Test Requirements: § 15.407 (g) Manufacturers of U-NII devices are responsible for ensuring frequency stability such than an emission is maintained within the band ofoperation under all conditions of normal operation as specified in the users manual.

Test Procedures: The EUT was placed in Single Carrier mode. A frequency measurement was made at ambient room temperature. The EUT was placed in a calibrated thermal chamber. A calibrated thermal couple was placed on the EUT. The EUT frequency output was monitored as the temperature was changed in 10° increments through its temperature range of operation. This was done for both the low channel and the high channel.

Test Results: The following are the resulting differences in frequency in parts per million.

Test Engineer: Len Knight

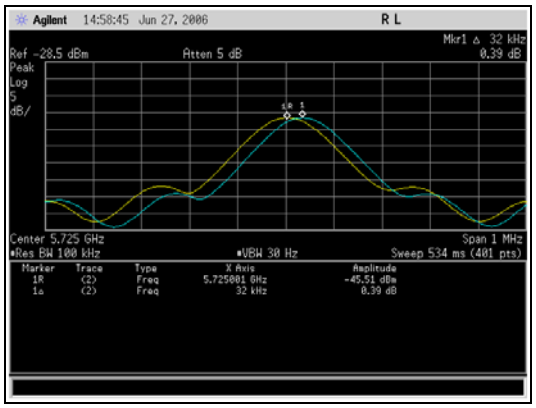
Test Date: June 27, July 5, 2006

Electromagnetic Compatibility Criteria for Intentional Radiators

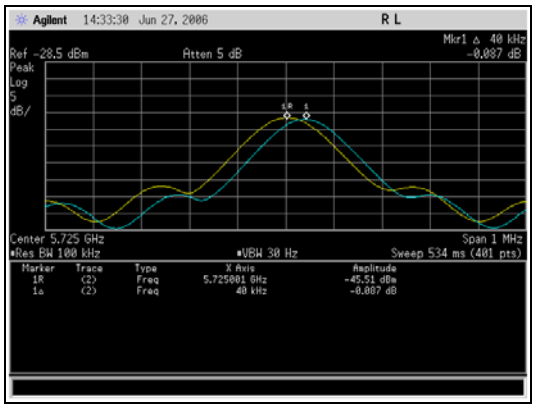
§ 15.407(g): Temperature Stability

Operating Condition	Channel 1 5.725001 (GHz)	Error (ppm)	Channel 11 5.824999 (GHz)	Error (ppm)
Normal	5.725001	--	5.824999	--
-30°C	5.725033	5.59	5.825084	14.59
-20°C	5.725041	6.99	5.825059	10.3
-10°C	5.725091	15.72	5.825023	4.12
-0°C	5.7250488.21	8.21	5.825016	2.92
10°C	5.725025	4.19	5.824993	-1.03
20°C	5.725003	0.35	5.824996	-0.52
30°C	5.724995	-1.05	5.824996	-0.52
40°C	5.724995	-1.05	5.824996	-0.52
50°C	5.724993	-1.4	5.825006	1.20
60°C	5.725006	0.87	5.825034	6.01
70°C	5.725025	4.19	5.825061	10.64

Table 19. Temperature Stability Test Results



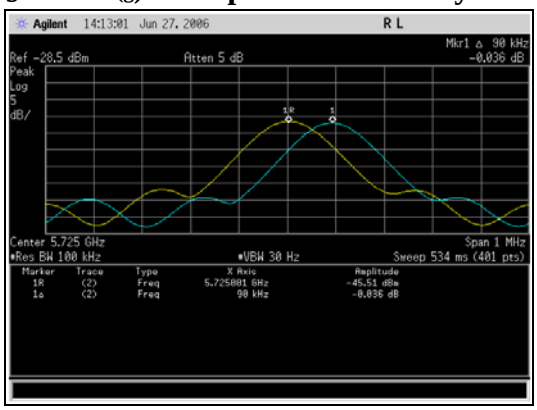
Plot 51. Low Channel , -30°C



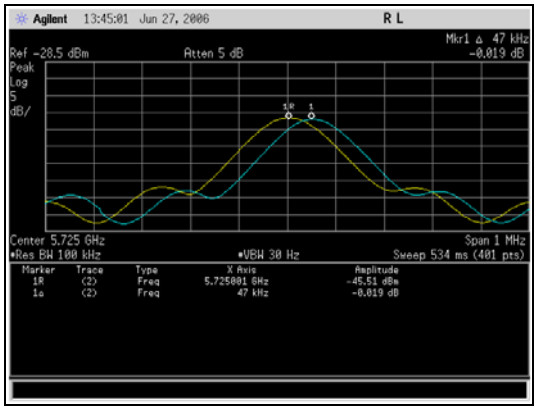
Plot 52. Low Channel , -20°C

Electromagnetic Compatibility Criteria for Intentional Radiators

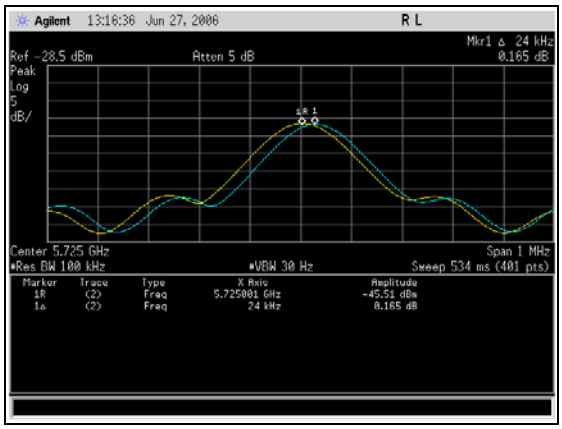
§ 15.407(g): Temperature Stability



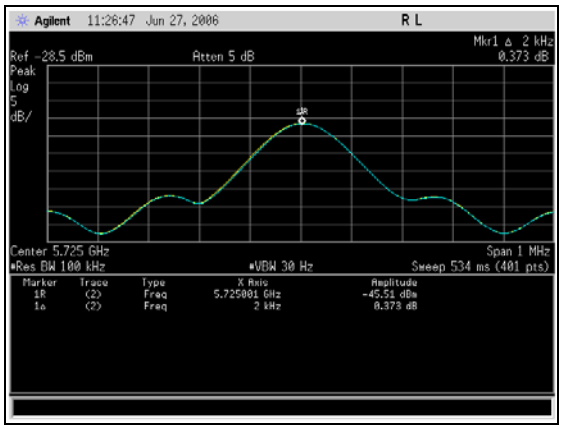
Plot 53. Low Channel, -10°C



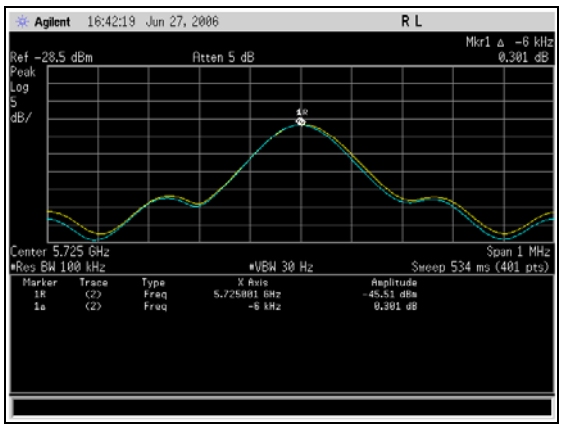
Plot 54. Low Channel, 0°C



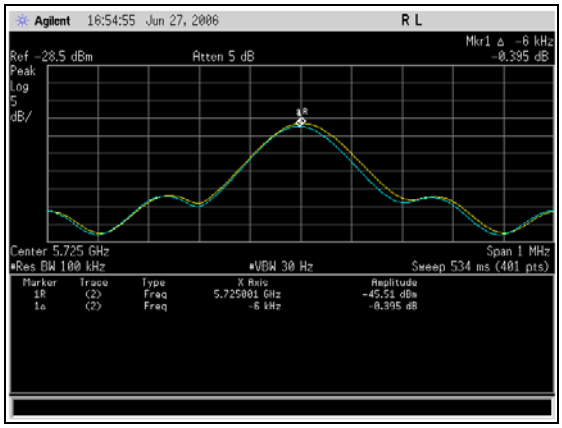
Plot 55. Low Channel, 10°C



Plot 56. Low Channel, 20°C



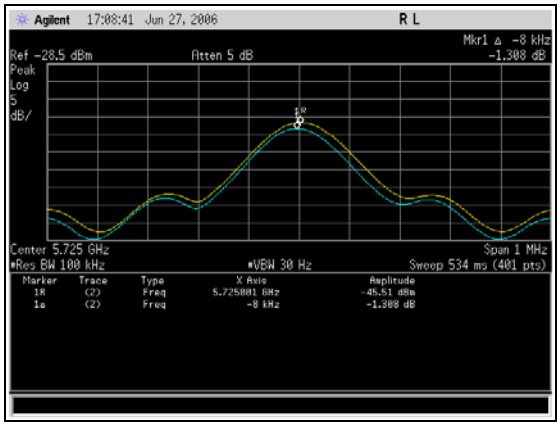
Plot 57. Low Channel, 30°C



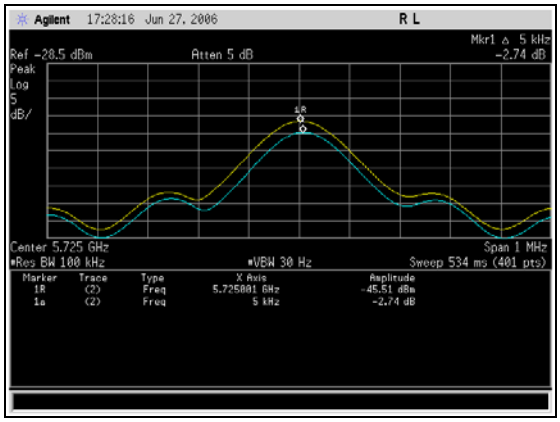
Plot 58. Low Channel, 40°C

Electromagnetic Compatibility Criteria for Intentional Radiators

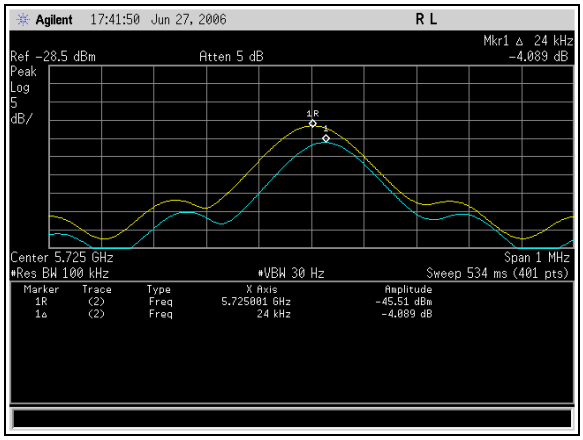
§ 15.407(g): Temperature Stability



Plot 59. Low Channel, 50°C



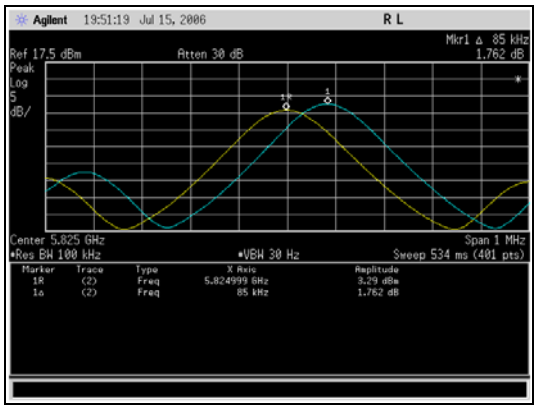
Plot 60. Low Channel, 60°C



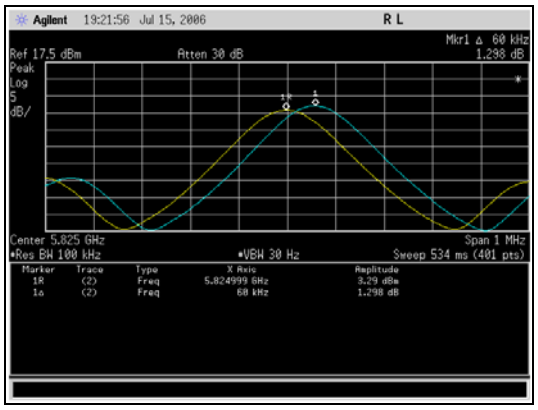
Plot 61. Low Channel, 70°C

Electromagnetic Compatibility Criteria for Intentional Radiators

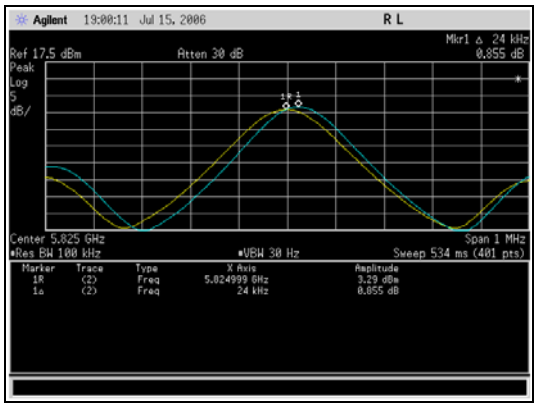
§ 15.407(g): Temperature Stability



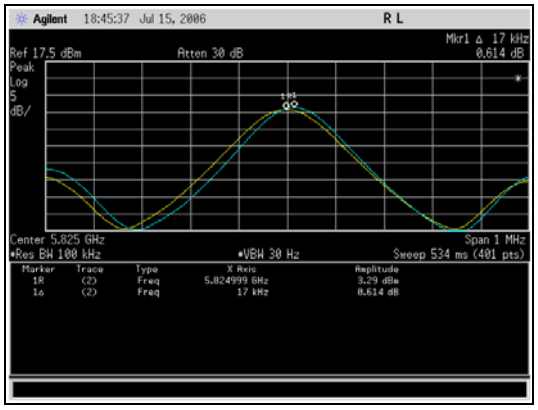
Plot 62. High Channel, -30°C



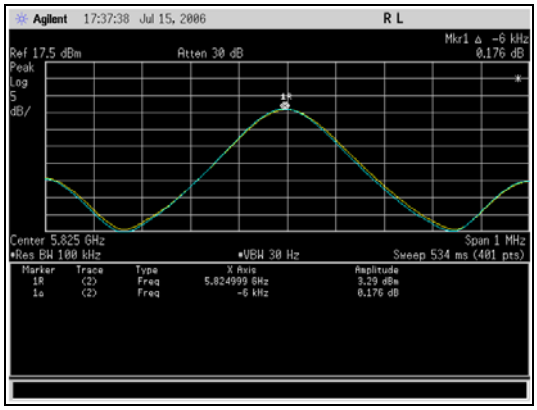
Plot 63. High Channel, -20°C



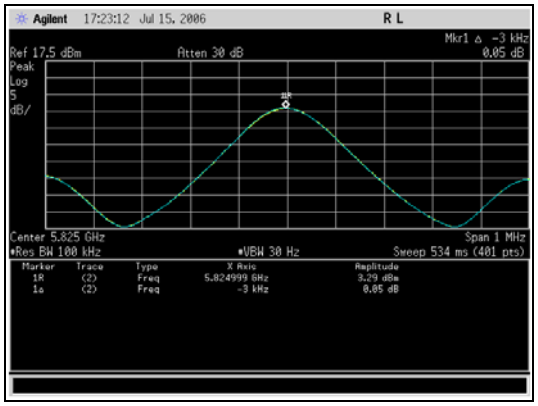
Plot 64. High Channel, -10°C



Plot 65. High Channel, 0°C



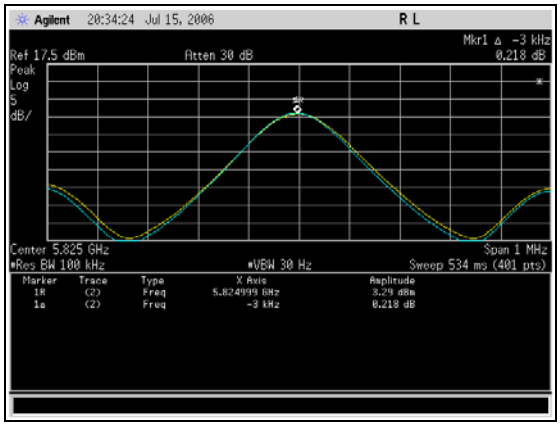
Plot 66. High Channel, 10°C



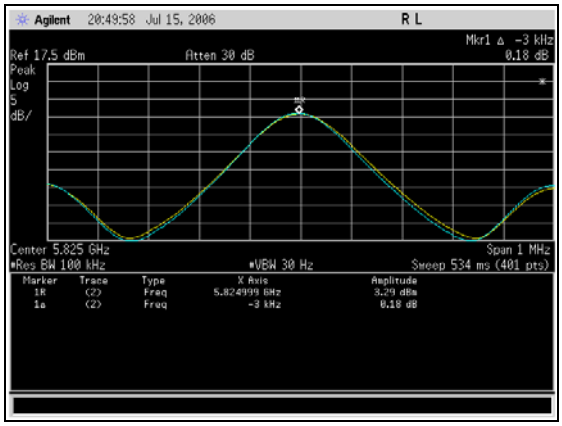
Plot 67. High Channel, 20°C

Electromagnetic Compatibility Criteria for Intentional Radiators

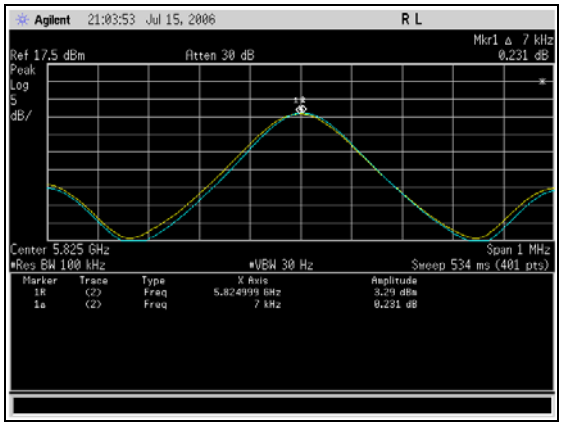
§ 15.407(g): Temperature Stability



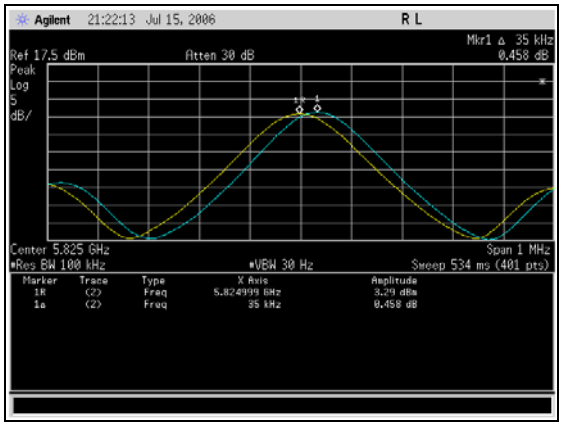
Plot 68. High Channel, 30°C



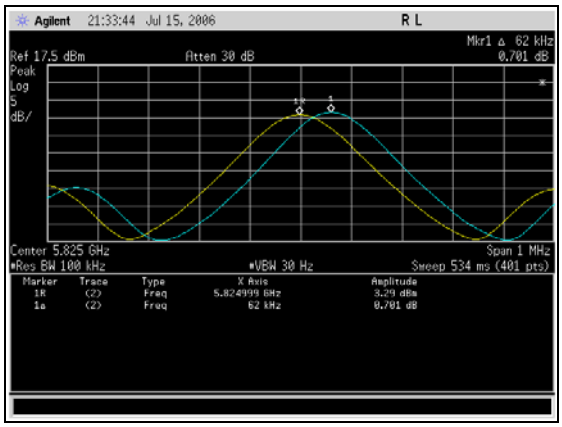
Plot 69. High Channel, 40°C



Plot 70. High Channel, 50°C



Plot 71. High Channel, 60°C



Plot 72. High Channel, 70°C

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(g): Temperature Stability

Photograph 6. Temperature Stability Test Setup

IV. Test Equipment

Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ANSI/NCSL Z540-1-1994 and ANSI/ISO/IEC 17025:2000.

Test Name: Conducted Emissions					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4302	EMI Receiver	Hewlett Packard	8546A	10/20/2005	10/20/2006
1T4212	LISN	Solar	9252-50-R-24-BNC	12/06/2005	12/06/2006
1T4461	Weather Station	Fisher	11-661-7D	11/08/2005	11/08/2006
1T4146	Transient Limiter	Hewlett Packard	11947A	N/A	N/A
1T4404	Test Room 1	N/A	N/A	N/A	N/A
1T4351	EMC Analyzer	Agilent	E7405A	10/04/2005	10/04/2006
1T4079	LISN	Solar	8012-50-R-24-BNC	03/21/2006	03/21/2007
1T2947	LISN	Solar	8028-50-TS-24-BNC	10/14/2005	10/14/2006
1T2948	LISN	Solar	8028-50-TS-24-BNC	10/14/2005	10/14/2006
Test Name: Radiated Emissions					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4462	Thermo-Hygrometer	Fisher Scientific	11-661-7D	11/08/2004	11/08/2006
1T4480	Military Chamber 20 x 20 x 12	ETS Lindgren	Series 80	See note	
1T2511	ANTENNA; HORN	EMCO	3115	07/13/2006	07/13/2007
1T4414	Microwave Pre-Amplifier	AH Systems	PAM-0118	See note	
US42070103	PSA series Spectrum Analyzer	Agilent	E4448A	01/12/2006	01/12/2007
1T4288	SPECTRUM ANALYZER	Hewlett Packard	8563A	01/12/2006	01/12/2007
1T4323	HARMONIC MIXER	Hewlett Packard	11970K	See note	
Test Name: 26 dB Bandwith					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4351	EMC Analyzer	Agilent	E7405A	10/04/2005	10/04/2006
Test Name: Peak Power Output					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4503	Shielded Room	UNIVERSAL SHIELDING CORP	N/A	06/01/2006	06/01/2007
US42070103	PSA series Spectrum Analyzer	Agilent	E4448A	01/12/2006	01/12/2007
Test Name: RF Exposure					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4351	EMC Analyzer	Agilent	E7405A	10/04/2005	10/04/2006
Test Name: Spurious Emissions					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4351	EMC Analyzer	Agilent	E7405A	10/04/2005	10/04/2006
Test Name: Peak Power Spectral Density					
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4351	EMC Analyzer	Agilent	E7405A	10/04/2005	10/04/2006

Test Name: Temperature Stability					:
MET Asset #	**Equipment**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
3T6440	DIGITAL MULTIMETER	TEKTRONIX	TX3	11/2/2005	11/2/2006
1T4505	TEMPERATURE CHAMBER	TEST EQUITY	115	08/16/2006	08/16/2007
1T4351	SPECTRUM ANALYZER	AGILENT	E7405A	10/04/2005	10/04/2006
1T4503	SHIELDED ROOM	UNIVERSAL SHIELDING CORP	N/A	06/01/2006	06/01/2007

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

V. Certification & User's Manual Information

Certification & User's Manual Information

A. Certification Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart I — Marketing of Radio frequency devices:

§ 2.801 Radio-frequency device defined.

As used in this part, a radio-frequency device is any device which in its operation is capable of Emitting radio-frequency energy by radiation, conduction, or other means. Radio- frequency devices include, but are not limited to:

(a) The various types of radio communication transmitting devices described throughout this chapter.

(b) The incidental, unintentional and intentional radiators defined in Part 15 of this chapter.

(c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.

(d) Any part or component thereof which in use emits radio-frequency energy by radiation, conduction, or other means.

§ 2.803 Marketing of radio frequency devices prior to equipment authorization.

(a) Except as provided elsewhere in this chapter, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless:

(1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by §2.925 and other relevant sections in this chapter; or

(2) In the case of a device that is not required to have a grant of equipment authorization issued by the Commission, but which must comply with the specified technical standards prior to use, such device also complies with all applicable administrative (including verification of the equipment or authorization under a Declaration of Conformity, where required), technical, labeling and identification requirements specified in this chapter.

(d) Notwithstanding the provisions of paragraph (a) of this section, the offer for sale solely to business, commercial, industrial, scientific or medical users (but not an offer for sale to other parties or to end users located in a residential environment) of a radio frequency device that is in the conceptual, developmental, design or pre-production stage is permitted prior to equipment authorization or, for devices not subject to the equipment authorization requirements, prior to a determination of compliance with the applicable technical requirements *provided* that the prospective buyer is advised in writing at the time of the offer for sale that the equipment is subject to the FCC rules and that the equipment will comply with the appropriate rules before delivery to the buyer or to centers of distribution.

(e)(1) Notwithstanding the provisions of paragraph (a) of this section, prior to equipment authorization or determination of compliance with the applicable technical requirements any radio frequency device may be operated, but not marketed, for the following purposes and under the following conditions:

(i) Compliance testing;

(ii) Demonstrations at a trade show provided the notice contained in paragraph (c) of this section is displayed in a conspicuous location on, or immediately adjacent to, the device;

(iii) Demonstrations at an exhibition conducted at a business, commercial, industrial, scientific or medical location, but excluding locations in a residential environment, provided the notice contained in paragraphs (c) or (d) of this section, as appropriate, is displayed in a conspicuous location on, or immediately adjacent to, the device;

(iv) Evaluation of product performance and determination of customer acceptability, provided such operation takes place at the manufacturer's facilities during developmental, design or pre-production states; or

(v) Evaluation of product performance and determination of customer acceptability where customer acceptability of a radio frequency device cannot be determined at the manufacturer's facilities because of size or unique capability of the device, provided the device is operated at a business, commercial, industrial, scientific or medical user's site, but not at a residential site, during the development, design or pre-production stages.

(e)(2) For the purpose of paragraphs (e)(1)(iv) and (e)(1)(v) of this section, the term *manufacturer's facilities* includes the facilities of the party responsible for compliance with the regulations and the manufacturer's premises, as well as the facilities of other entities working under the authorization of the responsible party in connection with the development and manufacture, but not the marketing, of the equipment.

(f) For radio frequency devices subject to verification and sold solely to business, commercial, industrial, scientific and medical users (excluding products sold to other parties or for operation in a residential environment), parties responsible for verification of the devices shall have the option of ensuring compliance with the applicable technical specifications of this chapter at each end user's location after installation, provided that the purchase or lease agreement includes a proviso that such a determination of compliance be made and is the responsibility of the party responsible for verification of the equipment.

Certification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart J — Equipment Authorization Procedures:

§ 2.901 Basis and Purpose

(a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated.[1] *In addition to the technical standards provided, the rules governing the service may require that such equipment be verified by the manufacturer or importer*, be authorized under a Declaration of Conformity, or receive an equipment authorization from the Commission by one of the following procedures: certification or registration.

(b) The following sections describe the verification procedure, the procedure for a Declaration of Conformity, and the procedures to be followed in obtaining certification from the Commission and the conditions attendant to such a grant.

§ 2.907 Certification.

(a) Certification is an equipment authorization issued by the Commission, based on representation and test data submitted by the applicant.

(b) Certification attaches to all units subsequently marketed by the grantee which are identical (see Section 2.908) to the sample tested except for permissive changes or other variations authorized by the Commission pursuant to Section 2.1043.

[1] In this case, the equipment is subject to the rules of Part 15. More specifically, the equipment falls under Subpart B (of Part 15), which deals with unintentional radiators.

Certification & User's Manual Information

§ 2.948 Description of measurement facilities.

(a) Each party making measurements of equipment that is subject to an equipment authorization under Part 15 or Part 18 of this chapter, regardless of whether the measurements are filed with the Commission or kept on file by the party responsible for compliance of equipment marketed within the U.S. or its possessions, shall compile a description of the measurement facilities employed.

(1) If the measured equipment is subject to the verification procedure, the description of the measurement facilities shall be retained by the party responsible for verification of the equipment.

(i) If the equipment is verified through measurements performed by an independent laboratory, it is acceptable for the party responsible for verification of the equipment to rely upon the description of the measurement facilities retained by or placed on file with the Commission by that laboratory. In this situation, the party responsible for the verification of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.

(ii) If the equipment is verified based on measurements performed at the installation site of the equipment, no specific site calibration data is required. It is acceptable to retain the description of the measurement facilities at the site at which the measurements were performed.

(2) If the equipment is to be authorized by the Commission under the certification procedure, the description of the measurement facilities shall be filed with the Commission's Laboratory in Columbia, Maryland. The data describing the measurement facilities need only be filed once but must be updated as changes are made to the measurement facilities or as otherwise described in this section. At least every three years, the organization responsible for filing the data with the Commission shall certify that the data on file is current.

Certification & User's Manual Information

Label and User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart A — General:

§ 15.19 Labeling requirements.

(a) In addition to the requirements in Part 2 of this chapter, a device subject to certification or verification shall be labeled as follows:

(1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under Part 73 of this chapter, land mobile operation under Part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

(2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with Part 15 of the FCC Rules for use with cable television service.

(3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

§ 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Verification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart B — Unintentional Radiators:

§ 15.105 Information to the user.

(a) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

> Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
>
> – Reorient or relocate the receiving antenna.
>
> – Increase the separation between the equipment and receiver.
>
> – Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
>
> – Consult the dealer or an experienced radio/TV technician for help.

VI. Exhibits

Exhibit A, Hopping Capability Requirements

Exhibit B, Non-Coordination Requirements

End of Report

