



Flom Test Labs
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268
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<http://www.flomlabs.com>
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Date: June 12, 2008

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Vertu
Equipment: RM-266V
FCC ID: P7QRM-266V
FCC Rules: 15.247

Gentlemen:

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)
HSB/mdw

Flom Test Labs
3356 N. San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

p0860008, d0860021 Rev 1.0

List Of Exhibits
(FCC Certification (Transmitters) - Revised 9/28/98)

Applicant: Vertu

FCC ID: P7QRM-266V

By Applicant:

1. Letter Of Authorization
2. Identification Drawings
 - Id Label
 - Location Info
 - Attestation Statement(S)
 - Location of Compliance Statement
3. Documentation: 2.1033(B)
 - (3) User Manual(S)
 - (4) Operational Description
 - (5) Block Diagram
 - (5) Schematic Diagram
 - (7) External Photographs
 - Internal Photographs
 - Parts List
 - Active Devices

By F.T.L. Inc.

- A. Testimonial & Statement of Certification
- B. Statement of Qualifications



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Test Report

for

FCC ID: P7QRM-266V

Model: RM-266V

to

Federal Communications Commission

Rule Part(s) 15.247

Date Of Report: June 12, 2008

On the Behalf of the Applicant:

Vertu
Beacon Hill Road
Church Crookham, Hampshire GU52 8DY UK

Attention of:

Mark Pope, Certification and Compliance Manager
+44 1252 611135; FAX: -611302
Mobile: +44 7774 8158594
mark.pope@vertu.com

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)
HSB/mdw

Revision History

Revision	Date	Revised By	Reason for revision
1.0	June 12, 2008	M.Wyman	Original Document

The applicant has been cautioned as to the following:

15.21 Information to User.

The users manual or instruction manual for an intentional 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.

15.27(a) Special Accessories.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

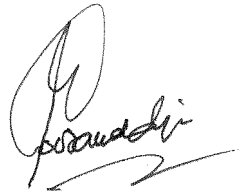
Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Testimonial And Statement Of Certification

This is to certify that:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Sincerely yours,



Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)
HSB/mdw

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Required information per ISO 17025-2005, paragraph 5.10.2:

a) **Test Report**

- b) Laboratory: Flom Test Lab, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044A-1) Chandler, AZ 85225
- c) Report Number: d0860021
- d) Client: Vertu
- e) Identification: RM-266V
- Description: Phone is Quad Band GSM 850/900/1800/1900 - (GSM 850/1900 only apply in USA)
Dual Band WCDMA 850/2100 (WCDMA 850 only applies in USA)
WiFi 2.4GHz
BT 2.4GHz
- f) EUT Condition: Not required unless specified in individual tests.
- g) Report Date: June 12, 2008
EUT Received:
- h, j, k): As indicated in individual tests.
- i) Sampling method: No sampling procedure used.
- l) Uncertainty: In accordance with FTL internal quality manual.
- m) Supervised by:
- n) Results: The results presented in this report relate only to the item tested.
- o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

List Of General Information Required For Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to

15.247

Sub-Part 2.1033

(c)(1):

Name and Address of Applicant: Vertu

(c)(2): **FCC ID:** P7QRM-266V

Model Number: RM-266V

(c)(3): **Instruction Manual(s):**

Please See Attached Exhibits

(c)(4): **Type of Emission:** 256K0GXW

(c)(5): **FREQUENCY RANGE, MHz:** 2412 – 2462 (DTS) and 2400-2483.5 (FHSS)

(c)(6): **Power Rating, W:** Data provided in additional report
 _____ Switchable _____ Variable X N/A

(c)(7): **Maximum Power Rating, W:** 2.0

15.203: Antenna Requirement:

 X The antenna is permanently attached to the EUT
 _____ The antenna uses a unique coupling
 _____ The EUT must be professionally installed
 _____ The antenna requirement does not apply

Accessories used during testing:

Type	Quantity	Manufacturer	Model	Serial No.	FCC ID
Battery	1	Vertu	BL-5CV	N/S	N/ID
AC Charger	1	Vertu	AC-7UV	N/S	N/ID
DC Charger	1	Vertu	DC-7V	N/S	N/ID

Subpart 2.1033 (continued)**(c)(8): Circuit Diagram/Circuit Description:**

Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please See Attached Exhibits

(c)(9): Label Information:

Please See Attached Exhibits

(c)(10): Photographs:

Please See Attached Exhibits

(c)(11): Digital Modulation Description:

☐ Attached Exhibits

☒ N/A

(c)(12): Test And Measurement Data:

Follows

Sub-part
2.1033(b):

Test And Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2 and the following individual Parts:

15.247 Operation within bands 902-928, 2400-2483.5, 5725-5850 MHz

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-2003, FCC DTS Guide March 23, 2005, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Measurement results, unless otherwise noted, are worst-case measurements.

A2LA

“A2LA has accredited Flom Test Labs, Inc. Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 ‘General Requirements for the Competence of Testing and Calibration Laboratories’ and any additional program requirements in the identified field of testing.”

Please refer to www.a2la.org for current scope of accreditation.

Certificate number: 2152.01



IC O.A.T.S. Number: 2044A-1

Test Results Summary

Specification	Test Name	Pass, Fail, N/A	Comments
15.247(b)	Peak Output Power	N/A	Provided in a separate report
15.247(d)	Conducted Spurious Emissions	N/A	Provided in a separate report
15.247(d), 15.209(a), 15.205	Radiated Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Emissions At Band Edges	Pass	
15.247(a)(2)	Occupied Bandwidth	Pass	
15.247(e)	Transmitter Power Spectral Density	N/A	Provided in a separate report
15.207	A/C Powerline Conducted Emissions	N/A	Provided in a separate report

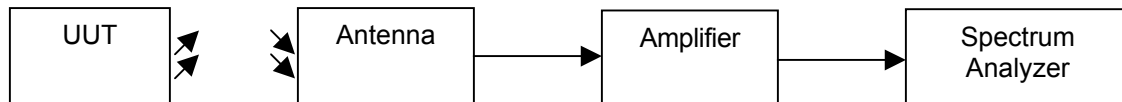
Name of Test: Radiated Spurious Emissions
Specification: 15.247(d), 15.209(a), 15.205
Spec. Limit: See Table
Test Equipment Utilized i00028, i00029, i00103

Test Date:

Test Procedure

The UUT was tested in a semi-anechoic chamber set 3m from the receiving antenna. A spectrum analyzer was used to verify that the UUT met the requirements for Radiated Spurious Emissions. The antenna and cable correction factors were summed with the amplifier gain and input into the spectrum analyzer as an offset to ensure accurate readings. The spectrum for each tuned frequency was examined to the 10th harmonic.

Test Setup



Detector Settings	RBW	VBW	Span
Peak	1 MHz	1 MHz	as necessary
Average	1 MHz	10 Hz	0 Hz

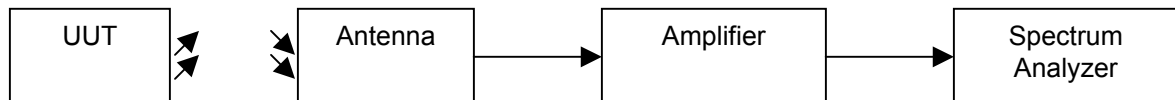
Note: I tuned the analyzer through the 10th harmonic for the low mid and high test emissions and found no observable spurious emissions.

Name of Test: Emissions At Band Edges
Specification: 15.247(d), 15.209(a), 15.205
Limit: -20 dBc and for restricted band 54 dBuV/m average and 74 dBuV/m peak
Test Equipment Utilized i00028, i00290, i00103 **Test Date:**

Test Procedure

The UUT was tested in a semi-anechoic chamber set 3m from the receiving transducer. A spectrum analyzer was used to verify that the UUT met the requirements for band edge with both peak and average measurements. The cable and transducer correction factors were input into the analyzer as a reference level offset to ensure accurate readings were obtained.

Test Setup



The measured peak reference power for the signals at 2412 and 2462 are as follows:

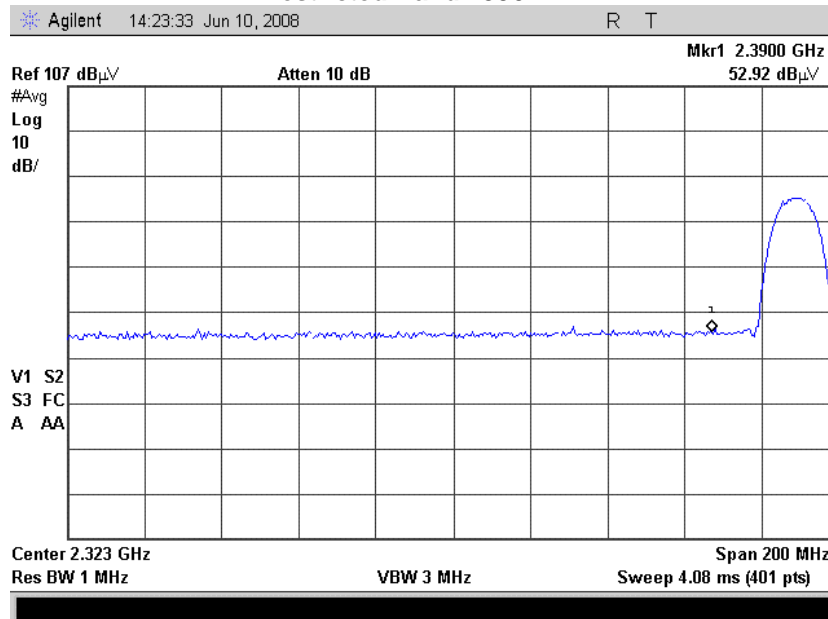
Band Edge Emissions Summary (DTS)

Tuned Freq (MHz)	Peak radiated power, (dBuV/m)	Monitored Level (dBuV/m)	Detector	Limit	Result
2400.00	74.73	52.92	Peak	-20 dBc	Pass
2483.50	79.22	52.14	Peak	-20 dBc	Pass

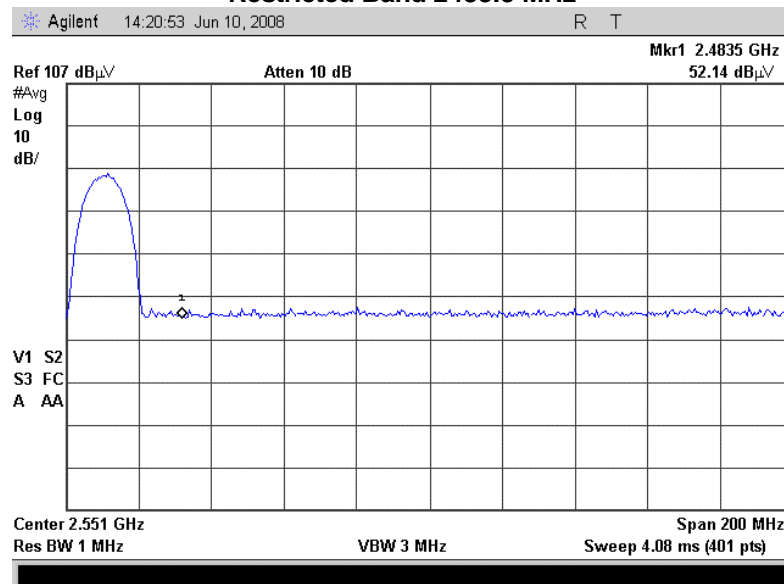
Restricted Band Emissions Summary (DTS)

Tuned Freq (MHz)	Emission Freq (MHz)	Monitored Level (dBuV/m)	Detector	Limit (dBuV/m)	Result
2400.00	2390.00	52.92	Avg.	54	Pass
2483.50	2483.50	52.14	Avg.	54	Pass

Band Edge 2400MHz and Restricted Band 2390 MHz



Band Edge and Restricted Band 2483.5 MHz



Restricted band spurious was checked against the table in 15.209 and no observable spurious emissions were seen.

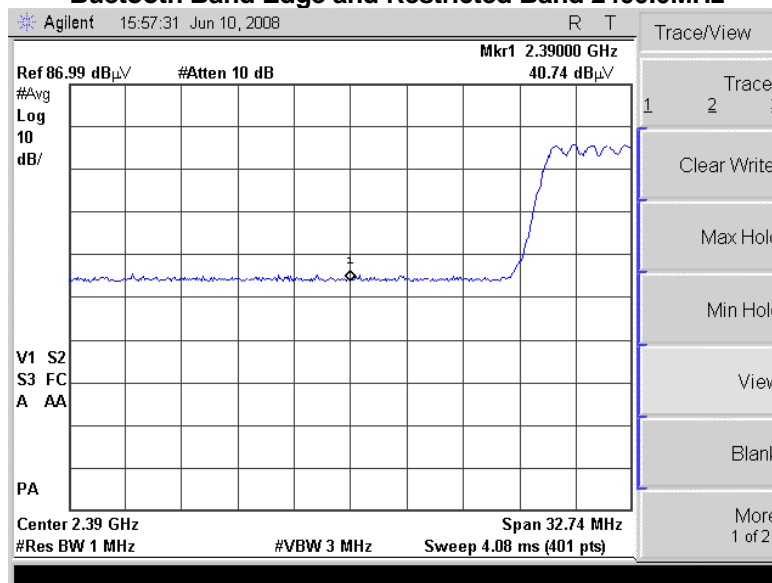
Band Edge Emissions Summary (FHSS)

Tuned Freq (MHz)	Peak radiated power, (dBuV/m)	Monitored Level, (dBuV/m)	Detector	Limit	Result
2400.00	69.14	40.74	Peak	-20 dBc	Pass
2483.50	68.90	40.80	Peak	-20 dBc	Pass

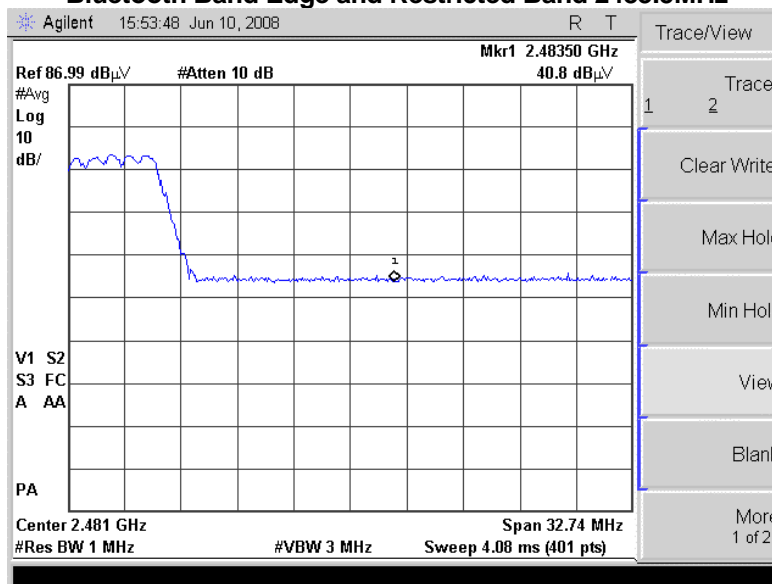
Restricted Band Emissions Summary (FHSS)

Tuned Freq (MHz)	Emission Freq (MHz)	Monitored Level (dBuV/m)	Detector	Limit (dBuV/m)	Result
2400.00	2390.00	40.74	Avg.	54	Pass
2483.50	2483.50	40.80	Avg.	54	Pass

Bluetooth Band Edge and Restricted Band 2400.0MHz



Bluetooth Band Edge and Restricted Band 2483.5MHz



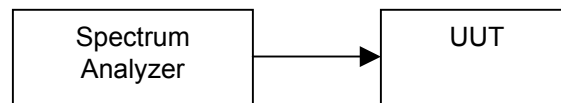
Name of Test: Occupied Bandwidth
Specification: 15.247(a)(2)
Limit: BW \geq 500 KHz
Test Equipment Utilized i00329

Test Date:

Test Procedure

The UUT was connected directly to a spectrum analyzer. The Span was set wide enough to capture the entire transmit spectrum and the resolution bandwidth was set to at least 1% of the span. The analyzer was set to max hold and when the entire spectrum was captured the 6dB and 99% bandwidths were measured to verify the bandwidth met the specification.

Test Setup



Note: The occupied bandwidth plot includes the 6dB band width as well as the 99% band width (26.7dB) points which are in tabular form below.

6dB Occupied Bandwidth Summary

Frequency MHz	Recorded Measurement	Specification Limit	Result
2412	11.3MHz	\geq 500 KHz	Pass
2437	11.0MHz	\geq 500 KHz	Pass
2462	10.9MHz	\geq 500 KHz	Pass

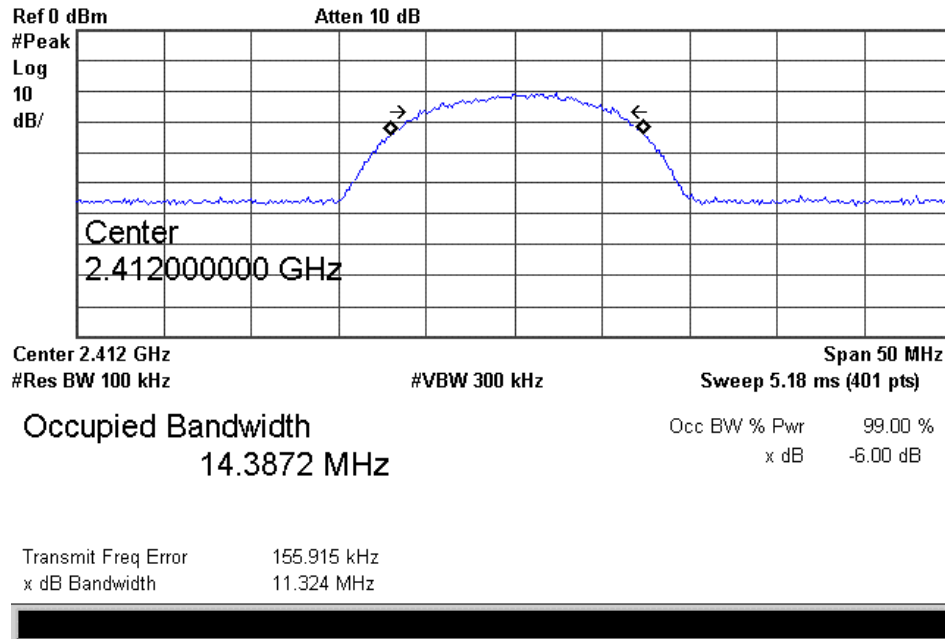
99% Occupied Bandwidth Summary

Frequency MHz	Recorded Measurement
2412	14.38MHz
2437	14.15MHz
2462	14.34MHz

6dB Bandwidth 2.412GHz

Agilent 15:21:44 Jun 10, 2008

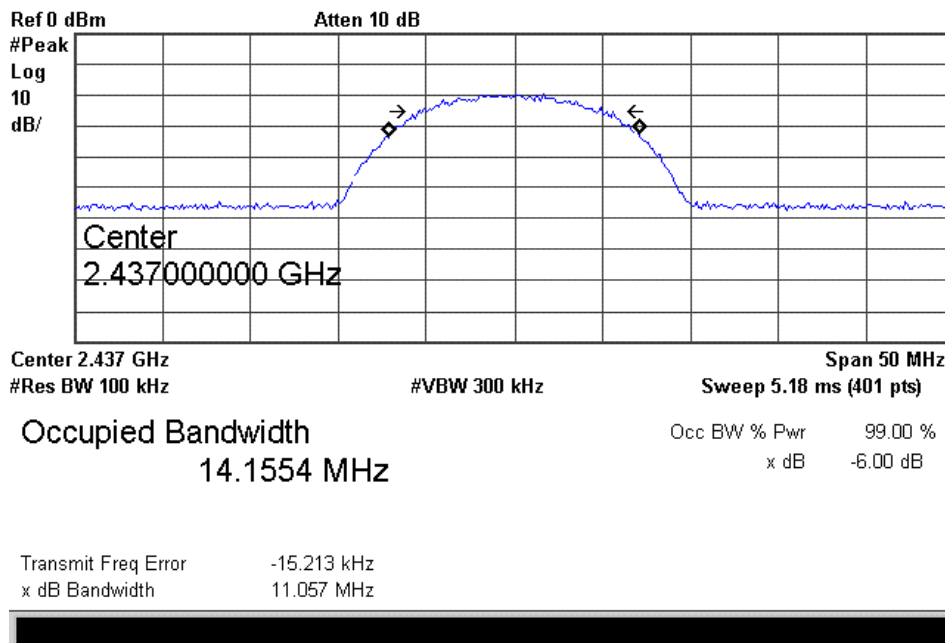
R T



6dB Bandwidth 2.437GHz

Agilent 15:16:44 Jun 10, 2008

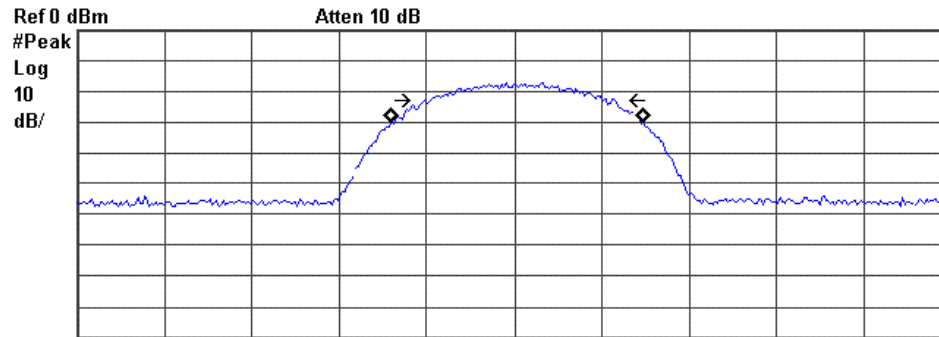
R T



6dB Bandwidth 2.462GHz

Agilent 15:10:21 Jun 10, 2008

R T



Center 2.462 GHz

Span 50 MHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 5.18 ms (401 pts)

Occupied Bandwidth
14.3452 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error 181.047 kHz
x dB Bandwidth 10.894 MHz

Test Equipment Utilized

Description	MFG	Model Number	FTL Asset Number	Last Cal Date	Cal Due Date
RF Pre-Amplifier	HP	8449	i00028	1/23/07	1/23/09
Spectrum Analyzer	HP	8563E	i00029	5/5/08	5/5/09
Spectrum Analyzer	HP	8566B	i00049	8/18/07	8/18/08
Spectrum Analyzer	Agilent	4407B	i00331	10/31/07	10/3/108
Horn Antenna	EMCO	3115	i00103	9/5/06	9/5/08
Power Meter	HP	E4418B	i00228	9/6/07	9/6/08
Power sensor	HP	8481A	i00317	9/6/07	9/6/08
Spectrum Analyzer	HP	8566B	i00329	5/5/08	5/5/09

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT