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Date: April 10, 2009

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

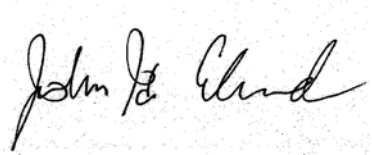
Applicant: MantraCourt
Equipment: RAD24i, RAD24e
FCC ID: VHARAD24
FCC Rules: 15.247

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,



J Erhard, Engineering Manager

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

List Of Exhibits

(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: MantraCourt

FCC ID: VHARAD24

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 Compliance Testing:

A. Testimonial & Statement of Certification

B. Statement of Qualifications

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Test Report

for

FCC ID: VHARAD24

Model: RAD24i, RAD24e

to

Federal Communications Commission

Rule Part(s) 15.247

Date Of Report: April 10, 2009

On the Behalf of the Applicant: MantraCourt
The Drive, Farringdon
Exeter, Devon EX5 2JB
United Kingdom

Attention of: Brett James
+44(0) 1395 232020; Fax: +44(0) 1395 233190
E-mail: brett@mantracourt.co.uk

Supervised By: J Erhard, Engineering Manager

Test Report Revision History

Revision	Date	Revised By	Reason for revision
1.0	April 10, 2009	J Erhard	Original Document
2.0	September 18, 2009	K Springer	Updated model numbers

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.

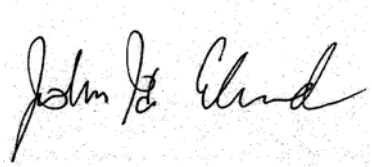
Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply 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.



Certifying Engineer: J Erhard, Engineering Manager

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

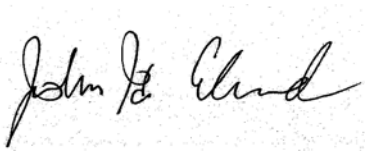
Table Of Contents

Required information per ISO 17025-2005, paragraph 5.10.2:

a) **Test Report**

b) Laboratory: (FCC: 31040/SIT) (Canada: IC 2044A-1)	Compliance Testing 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d0940006
d) Client:	MantraCourt
e) Identification:	RAD24i, RAD24e
Description:	Digital Transmission System
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date:	April 10, 2009
h, j, k):	As indicated in individual tests.
i) Sampling method:	No sampling procedure used.
l) Uncertainty:	In accordance with CT internal quality manual.

m) Supervised by:



J Erhard, Engineering Manager

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: MantraCourt

(c)(2): **FCC ID**: VHARAD24

Model Number: RAD24i, RAD24e

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

Please See Attached Exhibits

(c)(4): **Type of Emission**: DTS

(c)(5): **FREQUENCY RANGE, MHz**: 2405 – 2480

(c)(6): **Power Rating, W**: 0.0000126 W

____ Switchable ____ Variable _X_ N/A

(c)(7): **Maximum Allowable Power** 1W

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

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
_x_ 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 Compliance Testing in 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

ACCREDITED
TESTING CERT# 2152.01

FCC OATS Reg. #933597

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

Test Results Summary

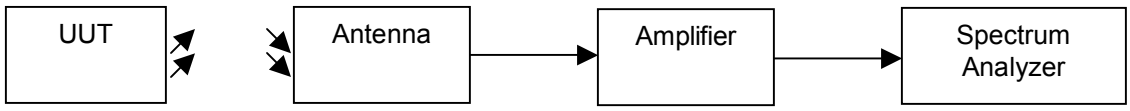
Specification	Test Name	Pass, Fail, N/A	Comments
15.247(b)	Peak Output Power (Radiated)	Pass	
15.247(d), 15.209(a), 15.205	Radiated Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Emissions At Band Edges	Pass	
15.247(a)(2)	Occupied Bandwidth	Pass	

Name of Test: Peak Output Power (Radiated)
Specification: 15.247(b) **Engineer: J Erhard**
Test Equipment Utilized i00028, i00029, i00103 **Test Date: 4/10/2009**

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.

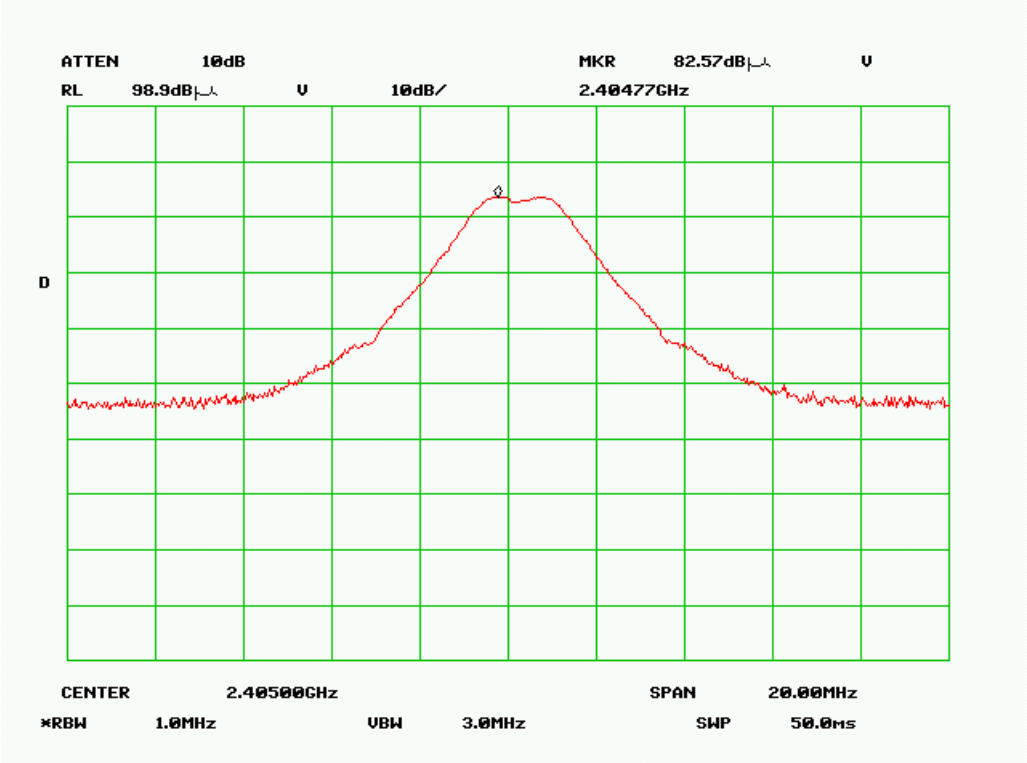
Test Setup



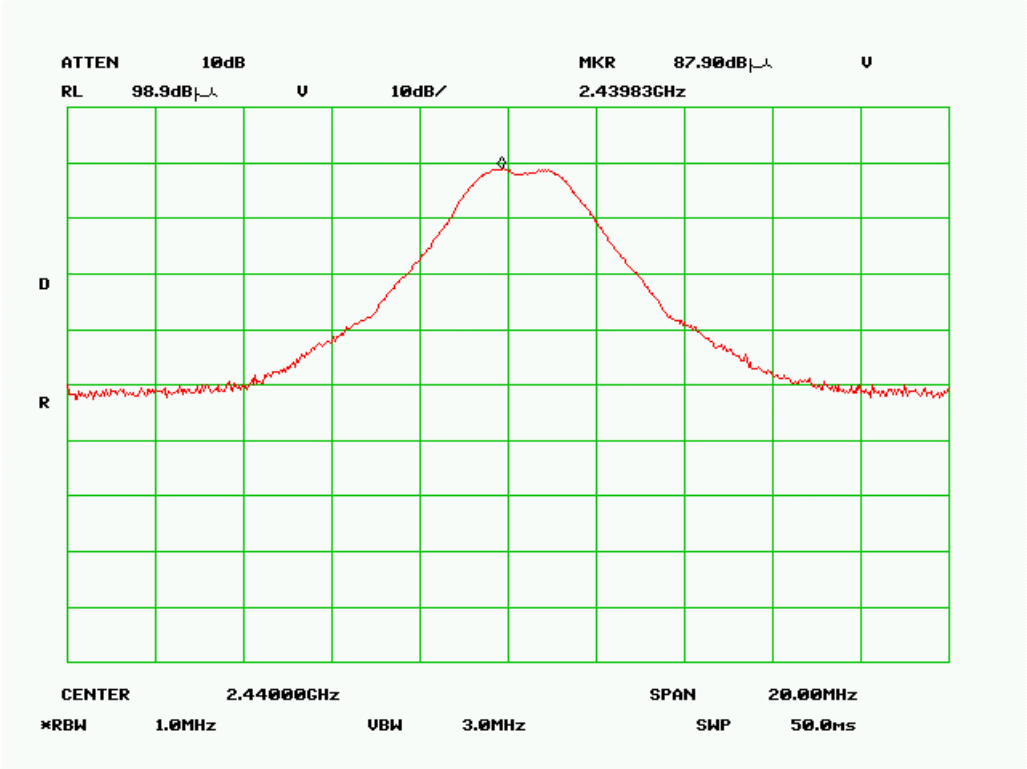
Transmitter Peak Output Power

Tuned Frequency MHz	Recorded Measurement	Specification Limit	Result
2405	3.55 µW	1 W	Pass
2440	12.6 µW	1 W	Pass
2480	3.98 µW	1 W	Pass

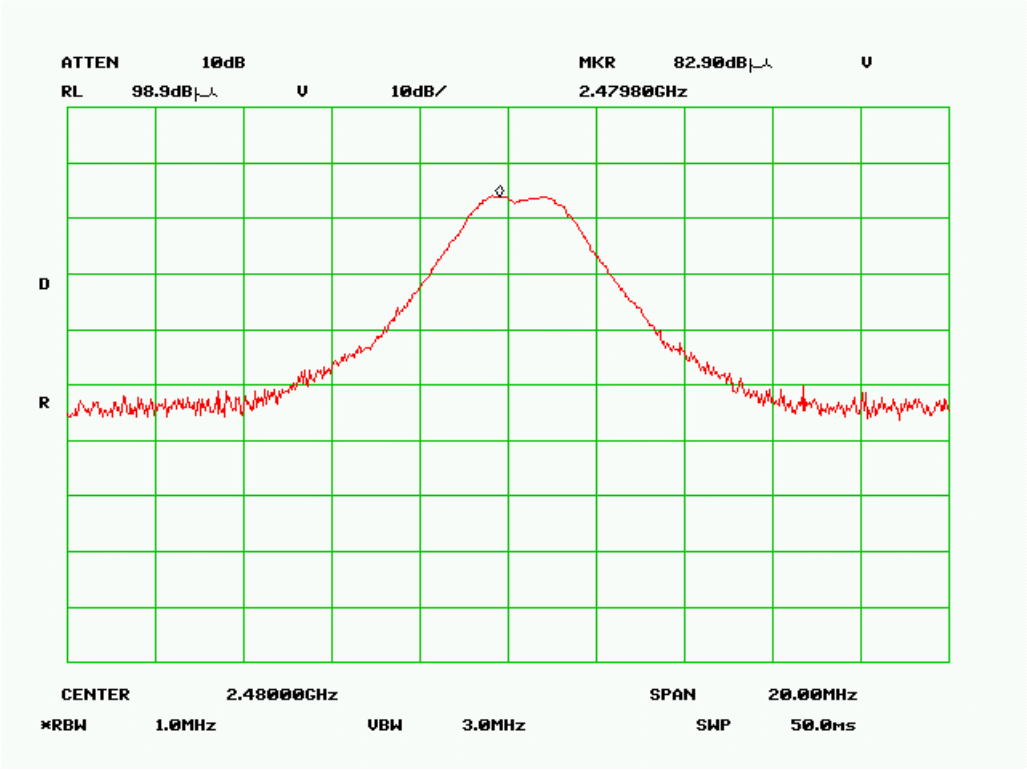
2405 MHz



2440 MHz



2480 MHz

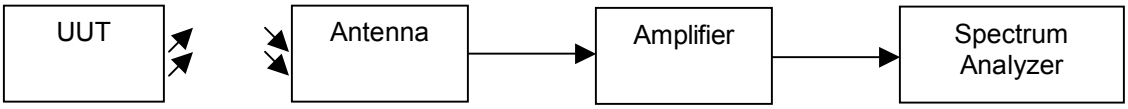


Name of Test: Radiated Spurious Emissions
Specification: 15.247(d), 15.209(a), 15.205 **Engineer: J Erhard**
Test Equipment Utilized i00028, i00029, i00103 **Test Date: 4/10/2009**

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

Radiated Spurious Emissions

Tuned Freq (MHz)	Emission Freq (MHz)	Peak Monitored Level (dBuV/m)	Peak Limit (dBuV/m)	Result
2405	4810	49.07	74.0	Pass
2405	7215	49.38	74.0	Pass
2405	9620	50.95	74.0	Pass
2440	4880	46.90	74.0	Pass
2440	7320	51.40	74.0	Pass
2440	9760	47.32	74.0	Pass
2480	4960	43.90	74.0	Pass
2480	7440	43.90	74.0	Pass
2480	9920	44.40	74.0	Pass

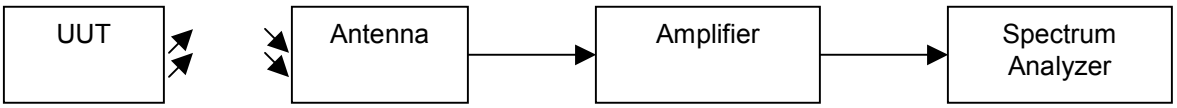
No other emissions were detectable. All emissions were greater than –20 dBc. All peak emissions were below the average limit therefore no additional testing is required to show compliance.

Name of Test: Emissions At Band Edges
Specification: 15.247(d), 15.209(a), 15.205 **Engineer: J Erhard**
Test Equipment Utilized i00028, i00029, i00103 **Test Date: 4/10/2009**

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



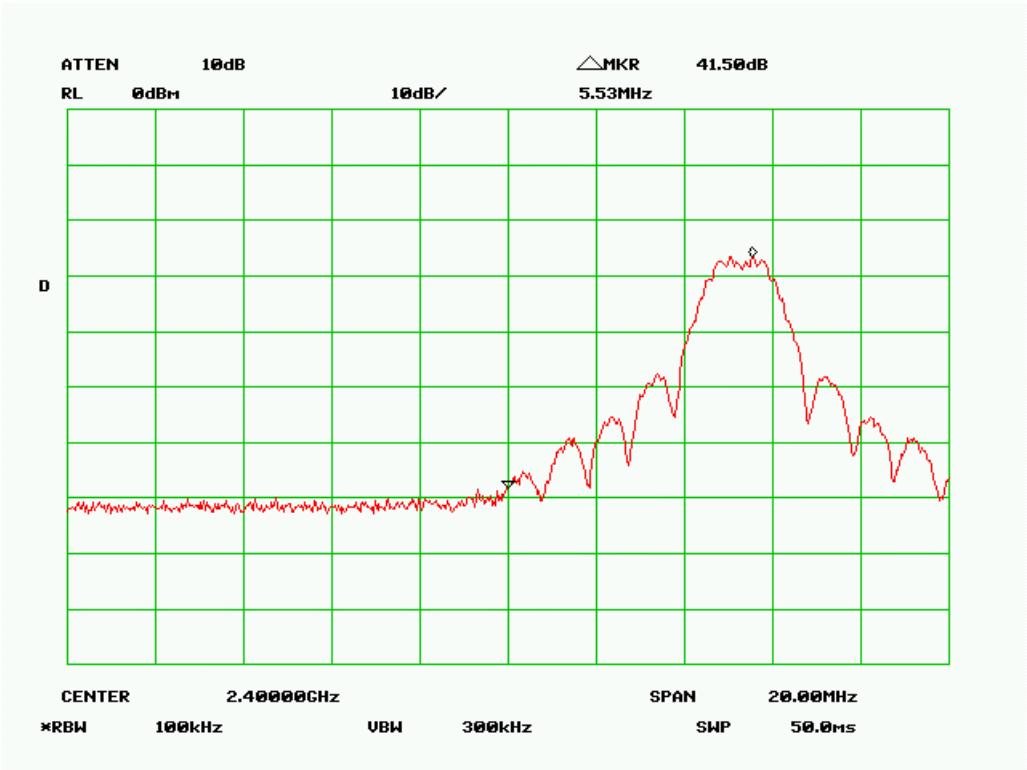
Band Edge Emissions Summary

Tuned Freq (MHz)	Emission Freq (MHz)	Monitored Level	Detector	Limit	Result
2405	2400	41.5 dBc	Peak	-20 dBc	Pass
2480	2483.5	34.0 dBc	Peak	-20 dBc	Pass

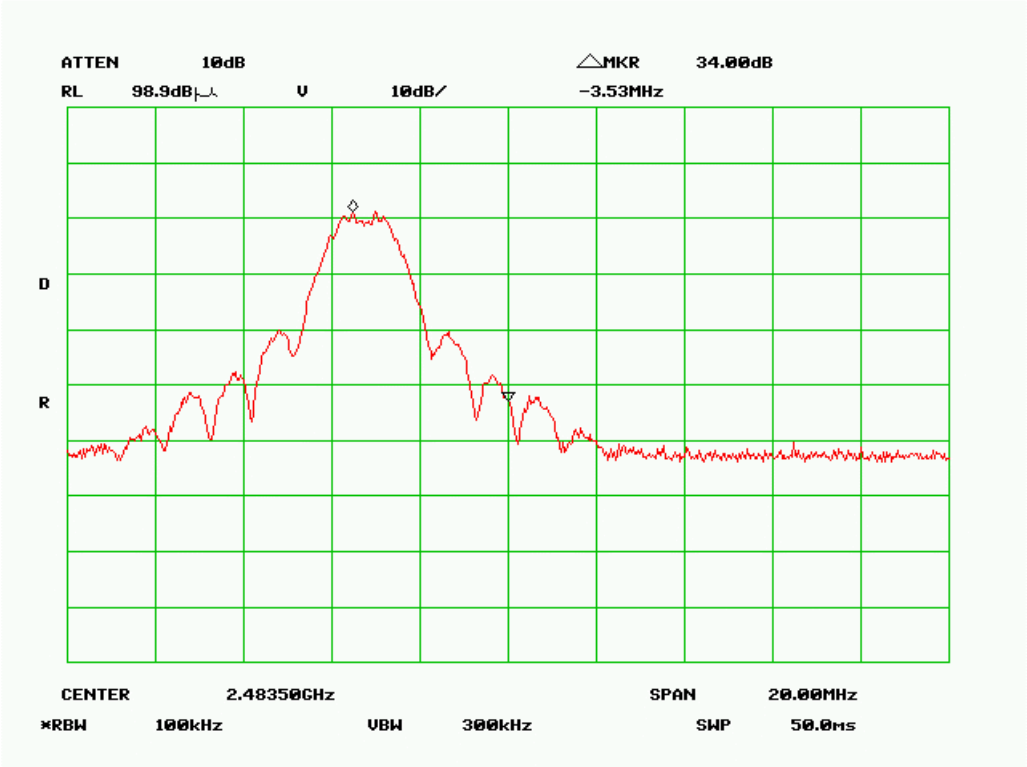
Restricted Band Emissions Summary

Tuned Freq (MHz)	Emission Freq (MHz)	Monitored Level (dBuV/m)	Detector	Limit (dBuV/m)	Result
2405	2400	46.33	Peak	74	Pass
2405	2400	33.83	Average	54	Pass
2480	2483.5	57.90	Peak	74	Pass
2480	2483.5	46.90	Average	54	Pass

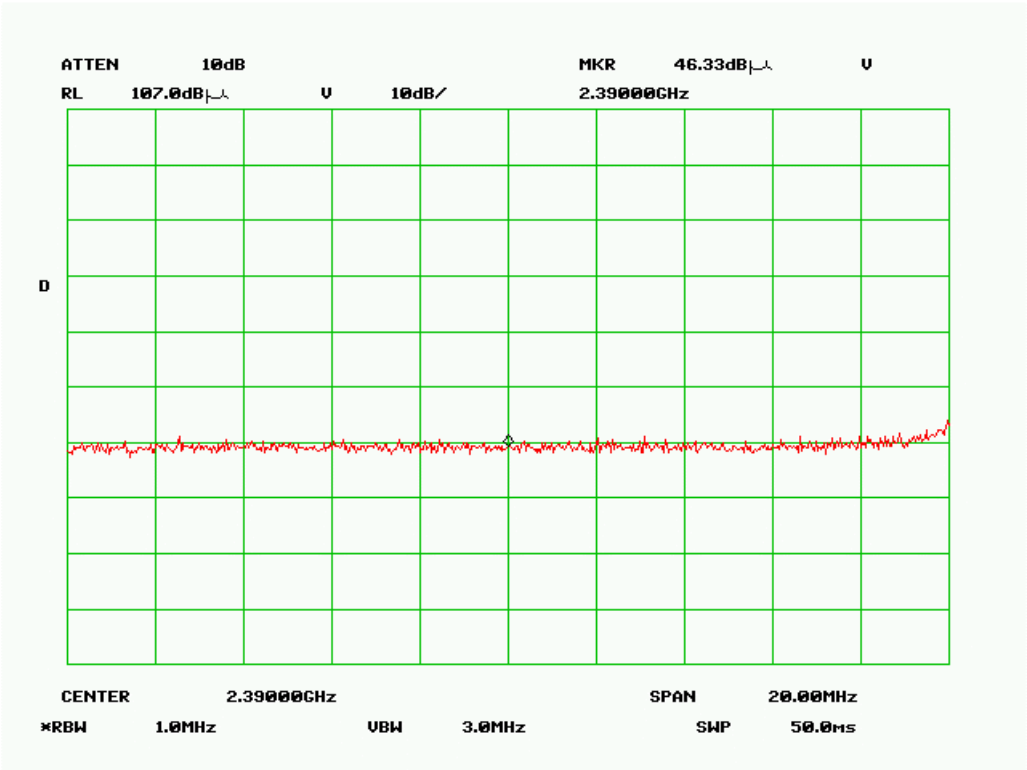
Band Edge 2400 MHz



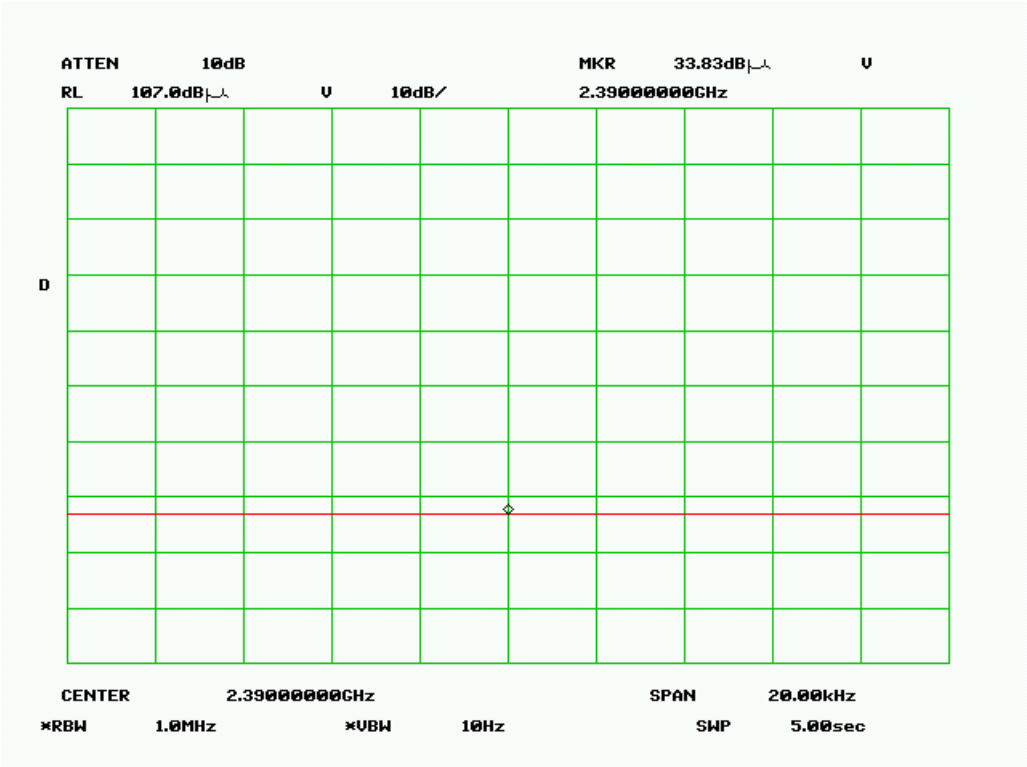
Band Edge 2483.5 MHz



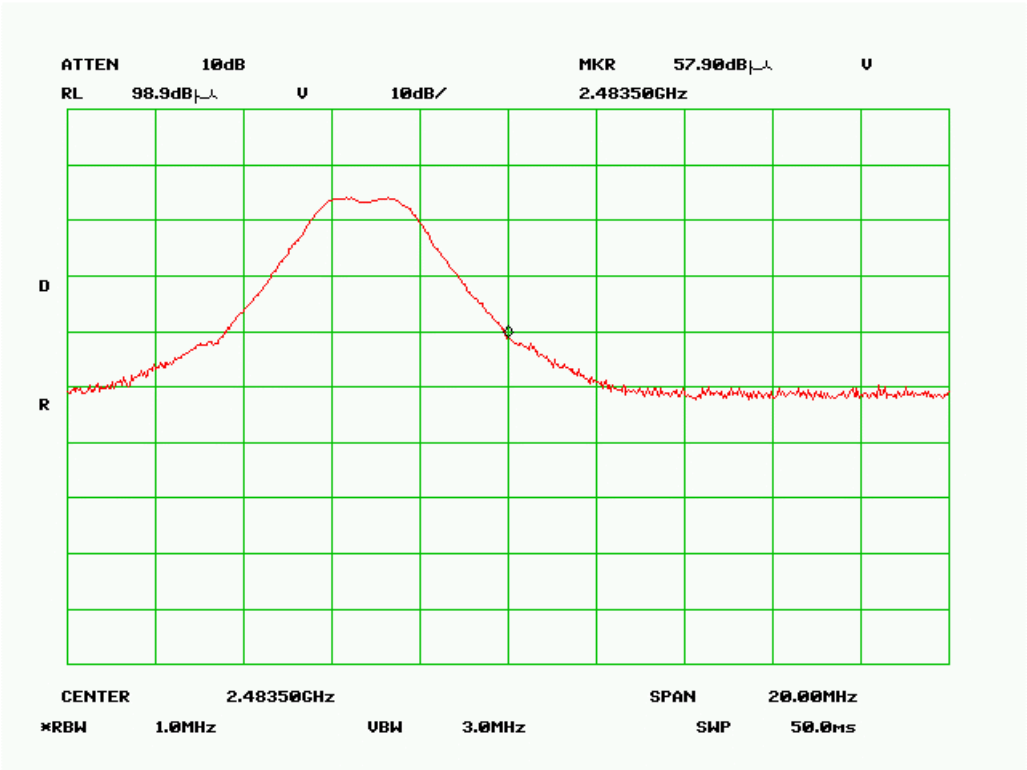
Restricted Band 2390 Peak MHz



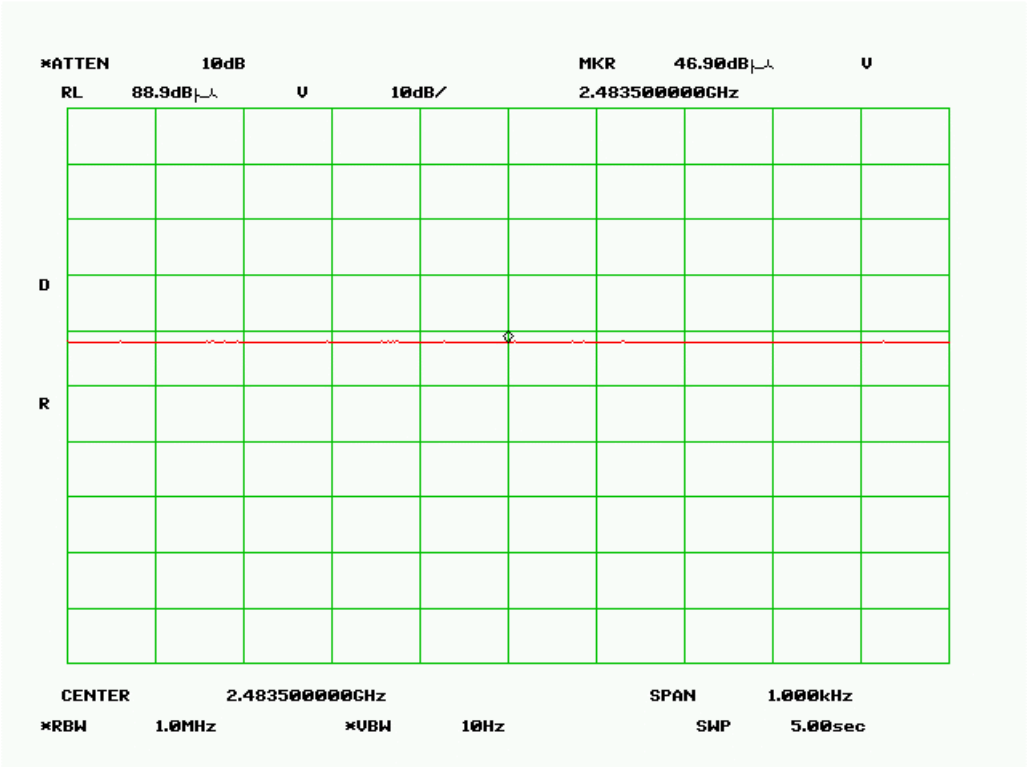
Restricted Band 2390 Average MHz



Restricted Band 2483.5 Peak MHz



Restricted Band 2483.5 Average MHz

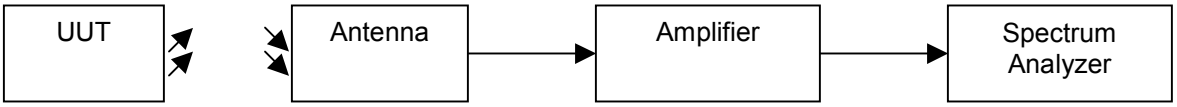


Name of Test: Occupied Bandwidth
Specification: 15.247(a)(2) **Engineer: J Erhard**
Test Equipment Utilized i00028, i00029, i00103 **Test Date: 4/10/2009**

Test Procedure

The UUT was tested in a semi-anechoic chamber set 3m from the receiving transducer. A spectrum analyzer was used to measure the occupied bandwidth. 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



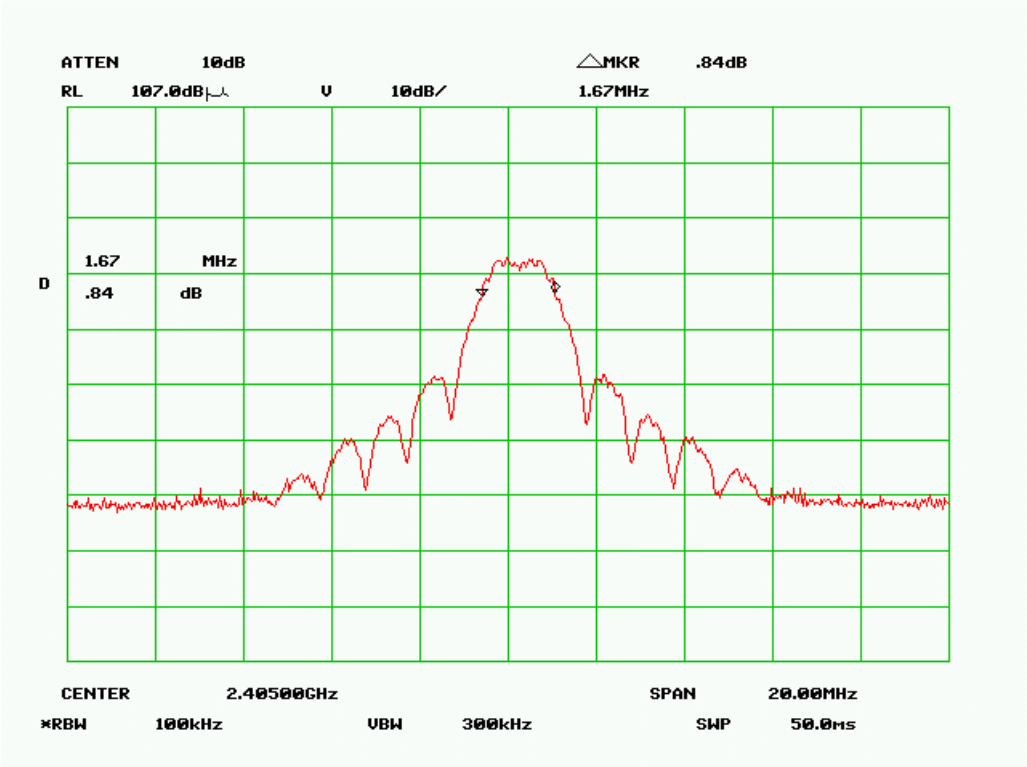
Occupied Bandwidth Summary

Frequency MHz	Recorded Measurement	Specification Limit	Result
2405	1.67 MHz	≥ 500 KHz	Pass
2440	1.67 MHz	≥ 500 KHz	Pass
2480	1.73 MHz	≥ 500 KHz	Pass

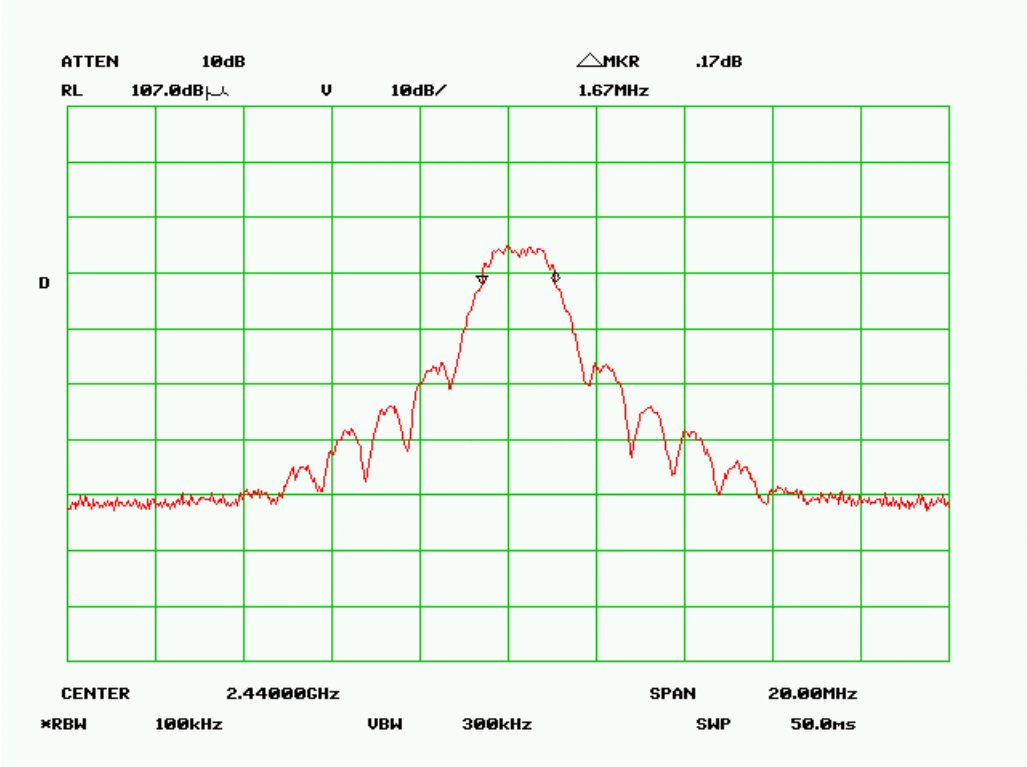
99% Bandwidth Summary

Frequency MHz	Recorded Measurement	Result
2405	4.63 MHz	Pass
2440	4.70 MHz	Pass
2480	4.47 MHz	Pass

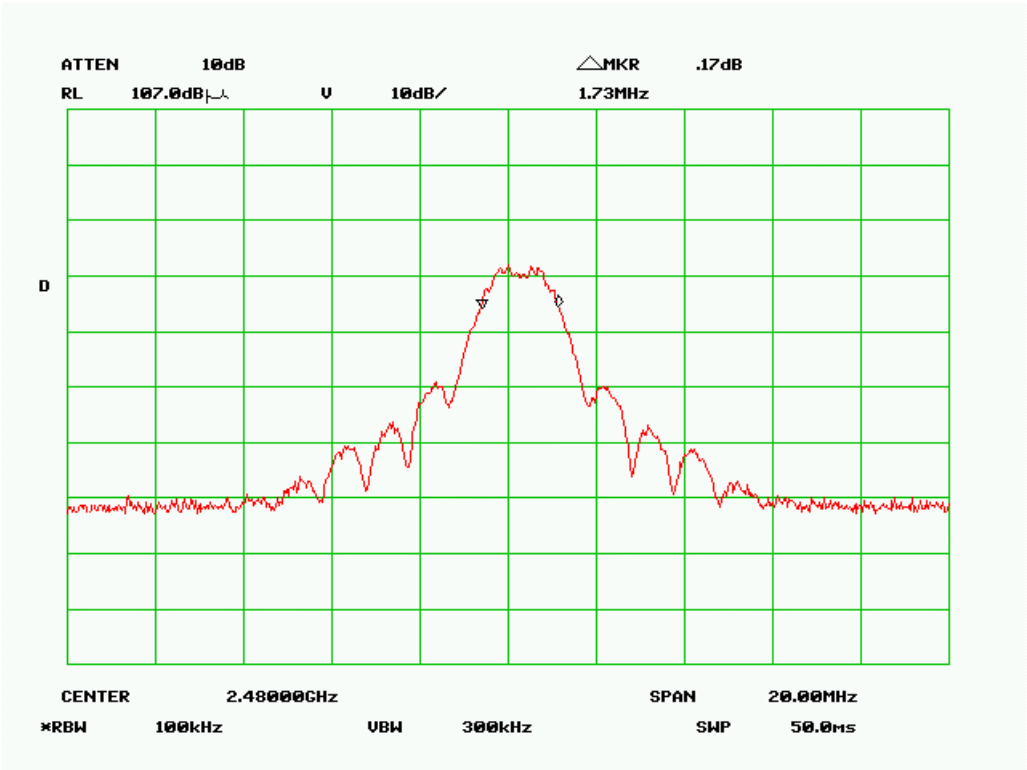
6dB Bandwidth 2405 MHz



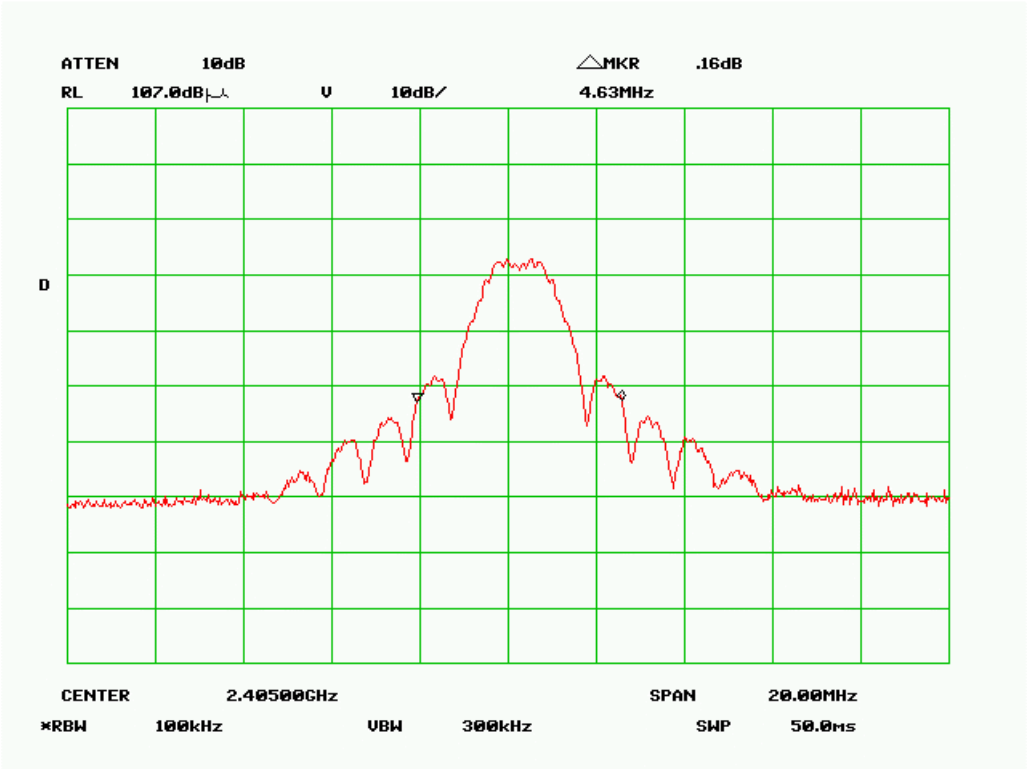
6dB Bandwidth 2440 MHz



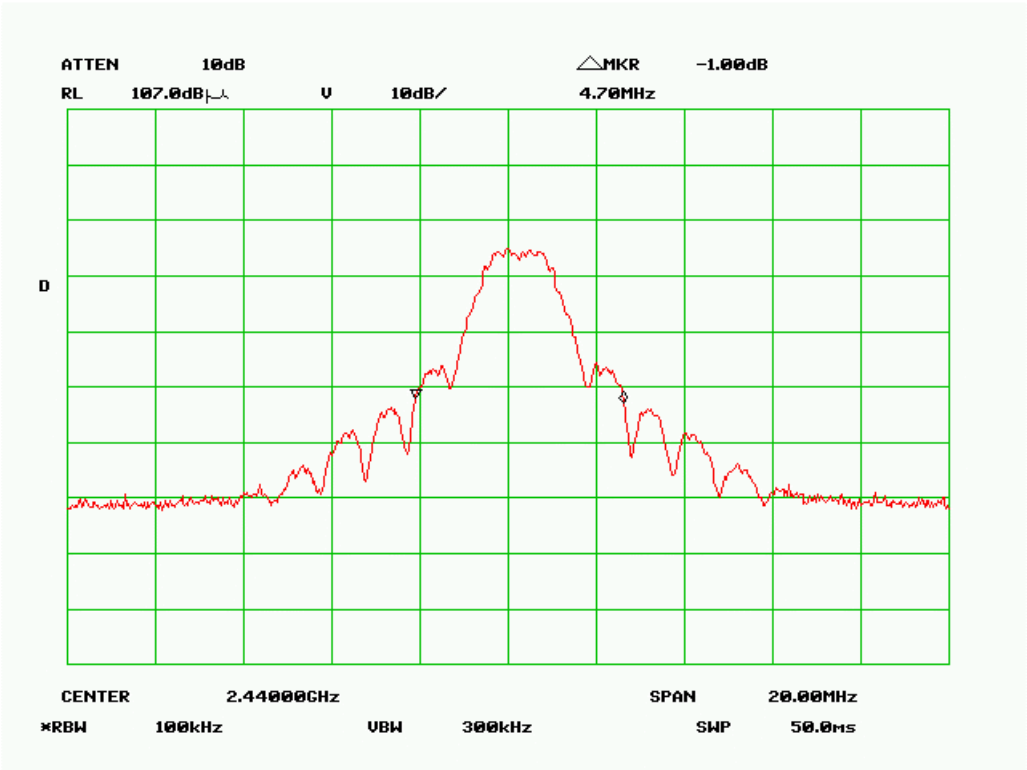
6dB Bandwidth 2480 MHz



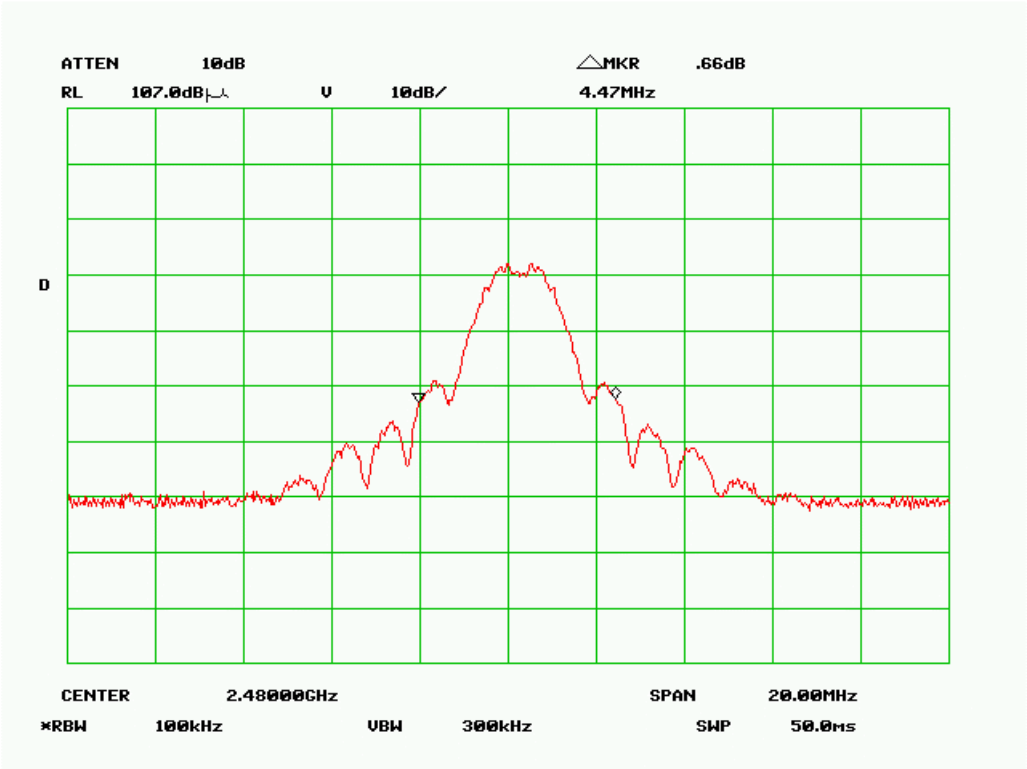
99% Bandwidth 2405 MHz



99% Bandwidth 2440 MHz



99% Bandwidth 2480 MHz



Test Equipment Utilized

Description	MFG	Model Number	FTL Asset Number	Last Cal Date	Cal Due Date
RF Pre-Amplifier	HP	8449	i00028	NCR	Verified
Spectrum Analyzer	HP	8563E	i00029	5/5/08	5/5/09
Horn Antenna	EMCO	3115	i00103	11/25/08	11/25/10

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