

MEASUREMENT AND TECHNICAL REPORT

RESPIRATORY TECHNOLOGY
13670 Danielson Street, Suite F
Poway, CA 92064

DATE: 18 August 2005

This Report Concerns:	<input type="checkbox"/> Original Grant: X	<input type="checkbox"/> Class II Change:
Equipment Type:	DX Transmitter and DX Recorder	
Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?	<input type="checkbox"/> Yes: <input type="checkbox"/> Defer until:	<input type="checkbox"/> No: X
Company Name agrees to notify the Commission by: of the intended date of announcement of the product so that the grant can be issued on that date.	N/A	
Transition Rules Request per 15.37?	<input type="checkbox"/> Yes:	<input type="checkbox"/> No: X*
(*) FCC Part 15, Paragraph(s) 15.109(a), 15.247(a), 15.247(b), 15.247(c), and 15.247(e)		
Report Prepared by:	TÜV AMERICA, INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 Fax: 858 546 0364	

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1.0 GENERAL INFORMATION

1.1 Product Description

None

1.2 Related Submittal Grant

None

1.3 Tested System Details

The FCC ID's for all equipment, plus descriptions of all cables used in the tested system are:

None

1.4 Test Methodology

Purpose of Test: To demonstrate compliance with the following tests.

Test Summary					
Test Description	Paragraph Number	Summary of Results			Pass/Fail
		Low Channel	Mid Channel	High Channel	
Bandwidth	15.247(a)		1.605 MHz		Pass
Peak Output Power	15.247(b)		-14.64 dBm		Pass
Band Edge	15.247(c)		-91.75 dBm		Pass
RF Conducted Spurious	15.247(c)		None detected at a level greater than 20 dB below the limit.		Pass
Peak Power Spectral Density	15.247(e)		-28.84 dBm		Pass
Radiated Emissions (30 MHz to 1 GHz)	15.109(a)		26.5 dB _µ V/m @ 398.14 MHz		Pass
Radiated Spurious Emissions – Restricted Bands (1GHz to 25GHz) (peak)	15.109(a)		None detected at a level greater than 20 dB below the limit.		Pass

Testing was performed according to the procedures in FCC/ANSI C63.4 and CSA 108.8-M1983. ;

1.5 Test Facility

The open area test site and conducted measurement data were tested by:

TÜV AMERICA, INC
10040 Mesa Rim Road
San Diego, CA 92121-2912
Phone: 858 678 1400
Fax: 858 546 0364

The Test Site Data and performance comply with ANSI C63.4 and are registered with the FCC, 7435 Oakland Mills Road, Columbia Maryland 21046. All Measurement Data is acquired according to the content of FCC Measurement Procedure and ANSI C63.4, unless supplemented with additional requirements as noted in the test report.

2.0 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was initially tested for FCC emissions in the following configuration:

See Test Setup Photos Exhibit

2.2 EUT Exercise Software

None

2.3 Special Accessories

None

2.4 Equipment Modifications

None

2.5 Configuration of Test System

See Test Setup Photos Exhibit

3.0 BANDWIDTH EQUIPMENT/DATA
PEAK OUTPUT POWER EQUIPMENT/DATA
BAND EDGE EQUIPMENT/DATA
CONDUCTED SPURIOUS EQUIPMENT/DATA
PEAK POWER SPECTRAL DENSITY EQUIPMENT/DATA
RADIATED SPURIOUS EQUIPMENT/DATA

Test Conditions: **BANDWIDTH:** FCC Part 15.247(a)
PEAK OUTPUT POWER: FCC Part 15.247(b)
BAND EDGE: FCC Part 15.247(c)
CONDUCTED SPURIOUS: FCC Part 15.247(c)
PEAK POWER SPECTRAL DENSITY: FCC Part 15.247(e)
RADIATED SPURIOUS: FCC Parts 15.109(a)

The following measurements were performed at the San Diego Testing Facility:

- **Test not applicable**

- - SR-5, Shielded Room, 16' x 28' x 15', Metal, Semi-Anechoic Chamber
- - Canyon #1 (3-, 10-, and 30-Meter Open Area Test Site), Carroll Canyon, San Diego
- - Roof (Small Open Area Test Site)

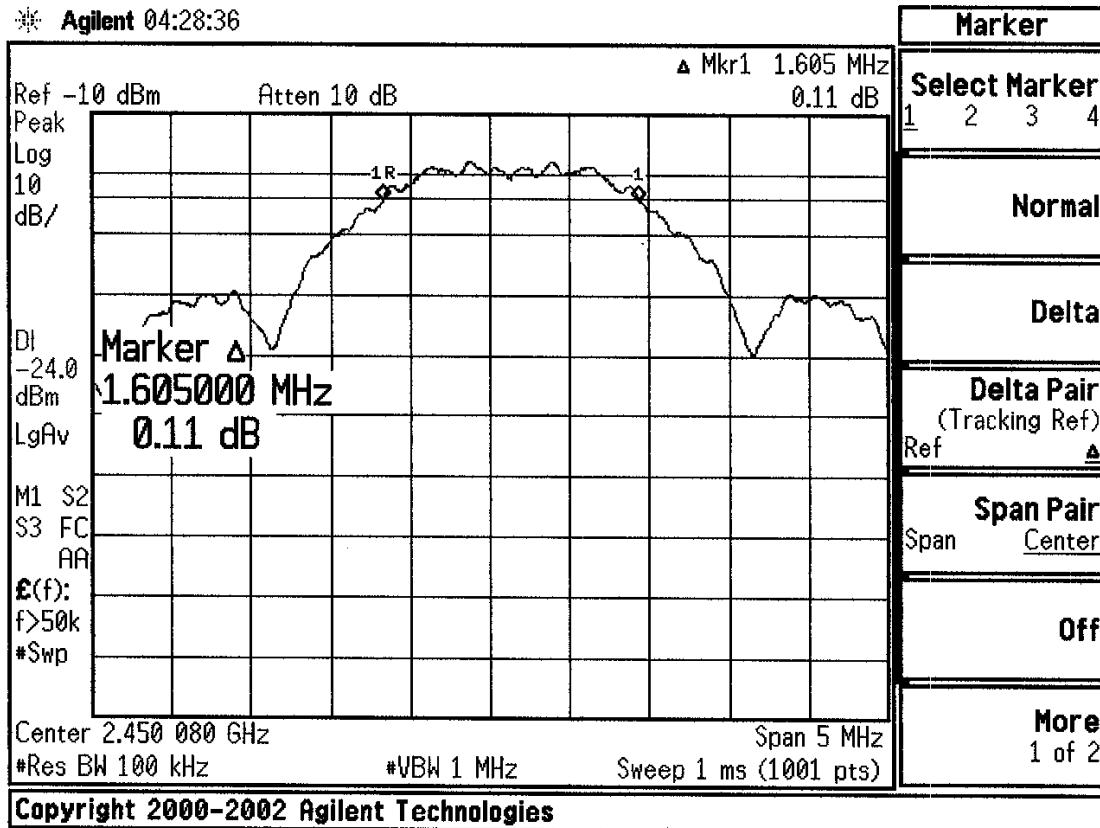
Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
E4440A	6814	Spectrum Analyzer	Hewlett Packard	MY42510441	12/04
E3611A	6455	DC Power Supply	Hewlett Packard	KR73012529	VBU*
LPB 2520/A	738	Antenna, Bilog	Antenna Research	1169	02/05
ESVS30	6723	EMI Test Receiver	Rhode & Schwarz	830350/006	03/05
3115	251	Double Ridge Guide Antenna	EMCO	2495	03/05

Remarks: One year calibration cycle for all test equipment and sites. (*) Verified Before Use.

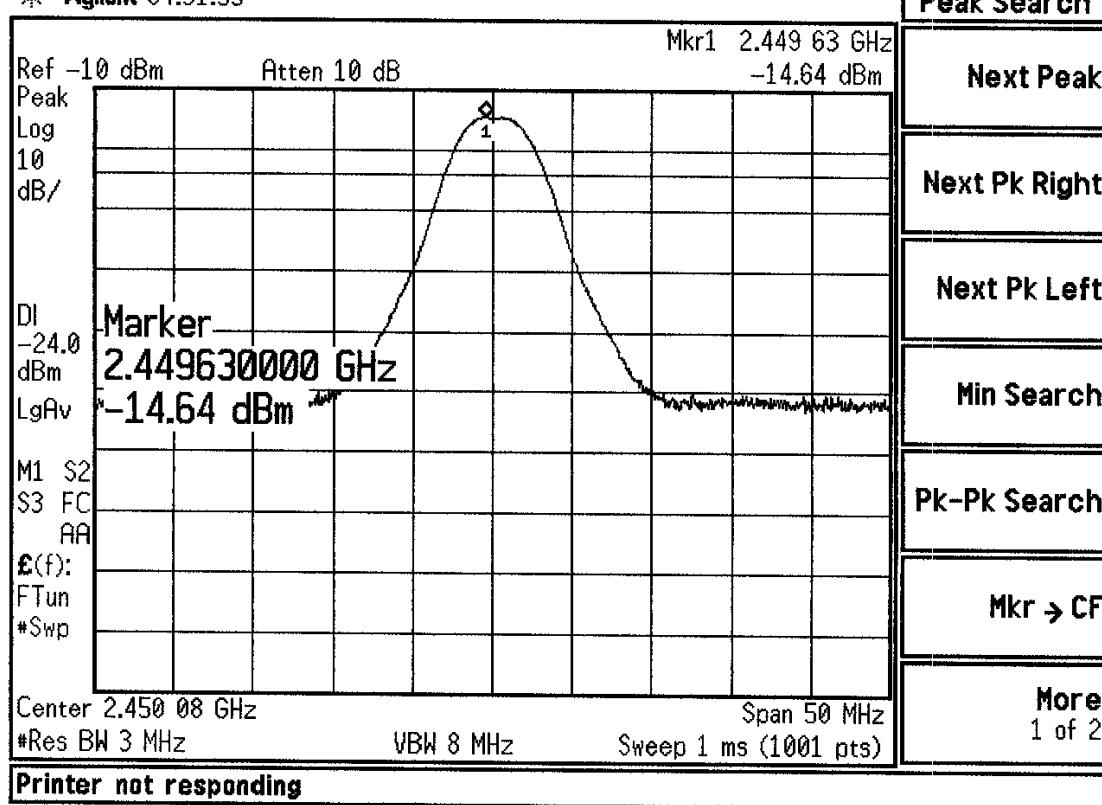
FCC Part 15.247(a) - BANDWIDTH

Agilent 04:28:36



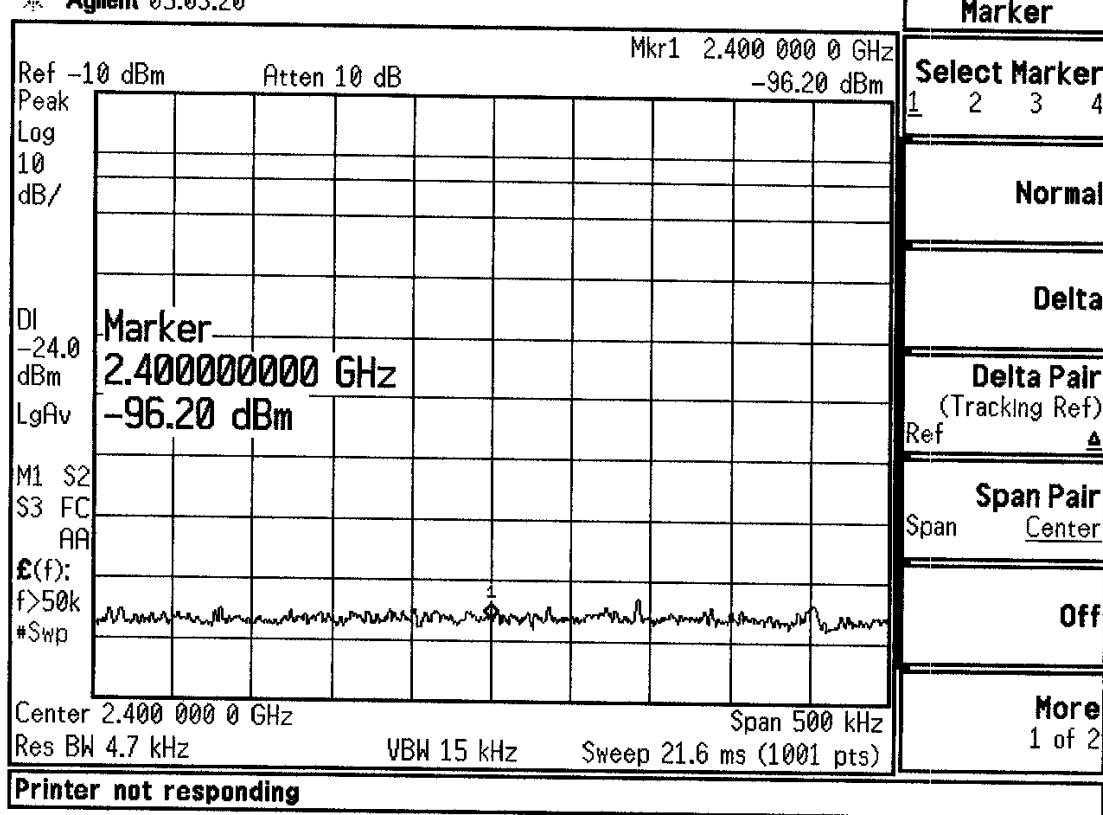
FCC Part 15.247(b) - PEAK OUTPUT POWER

* Agilent 04:31:55



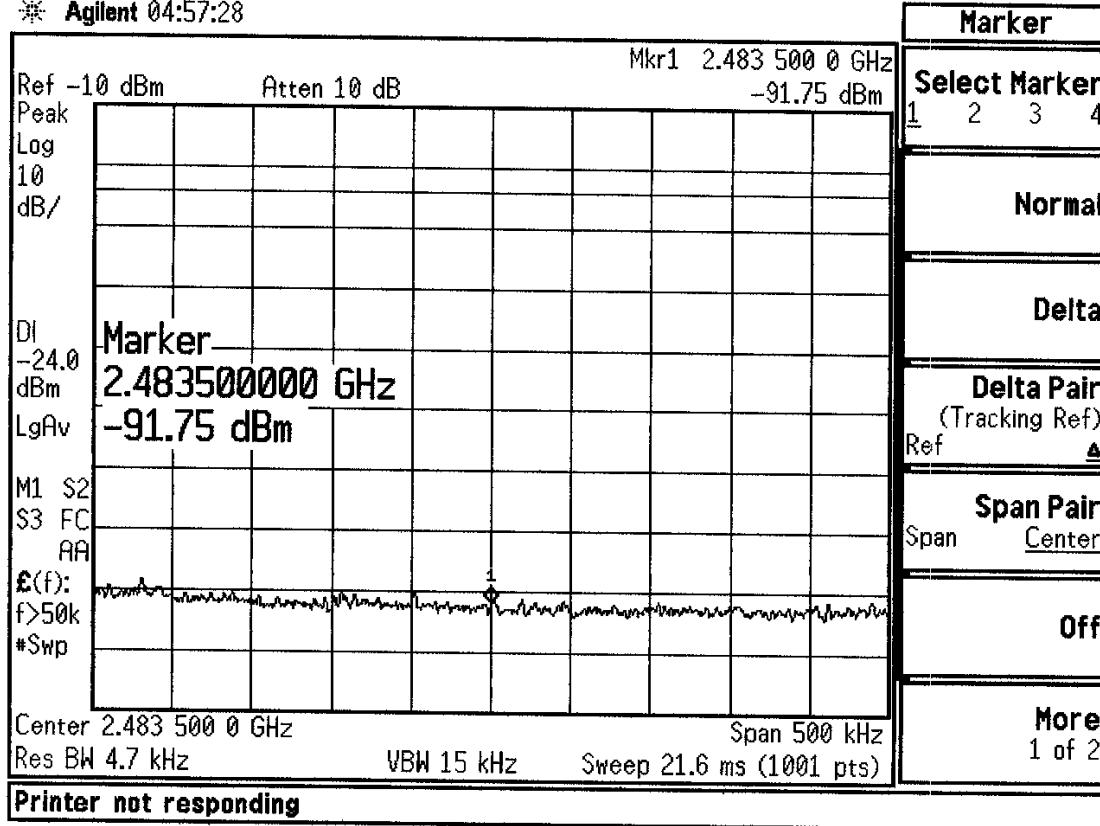
FCC Part 15.247(c) - BAND EDGE

* Agilent 05:03:20



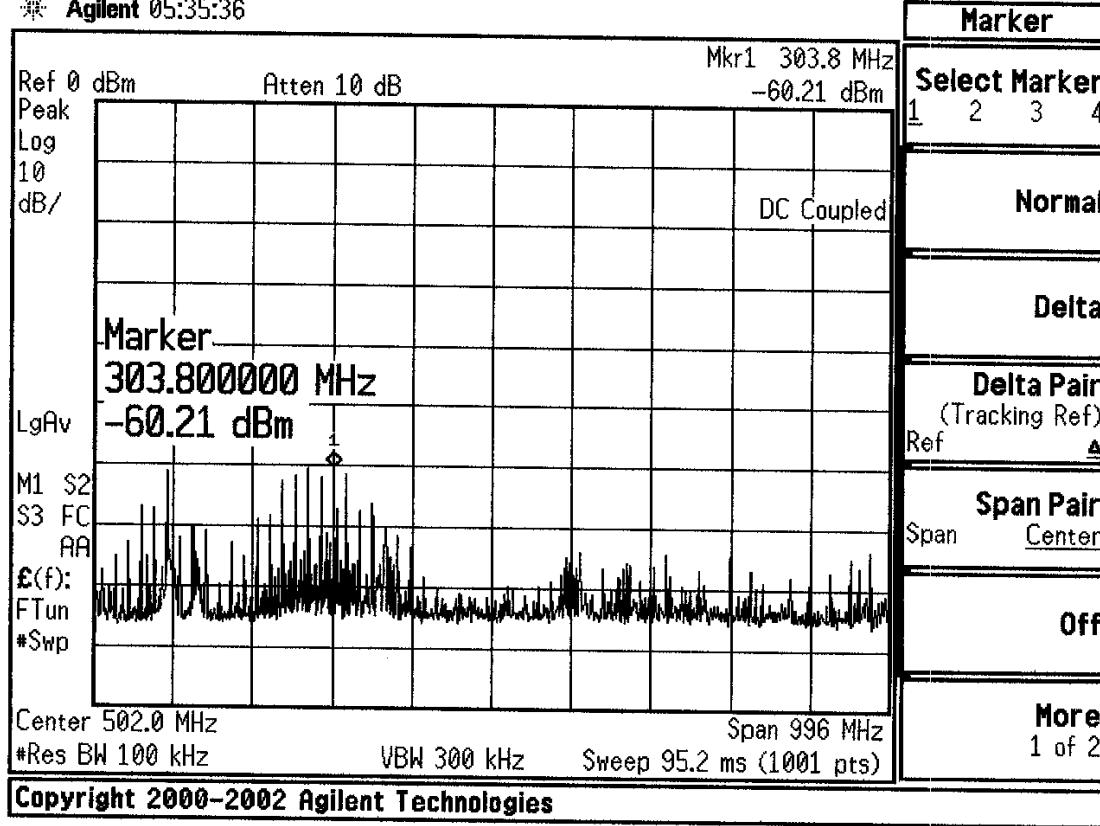
FCC Part 15.247(c) - BAND EDGE

* Agilent 04:57:28



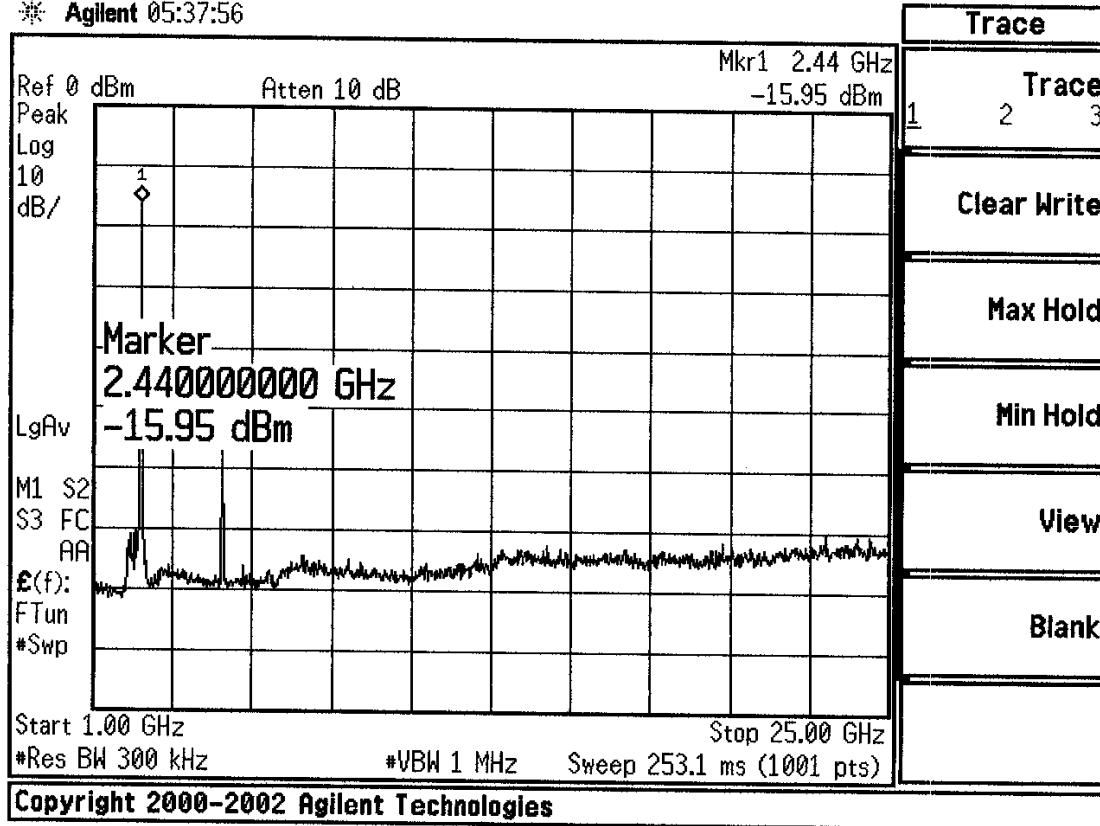
FCC Part 15.247(c) - CONDUCTED SPURIOUS EMISSIONS

* Agilent 05:35:36



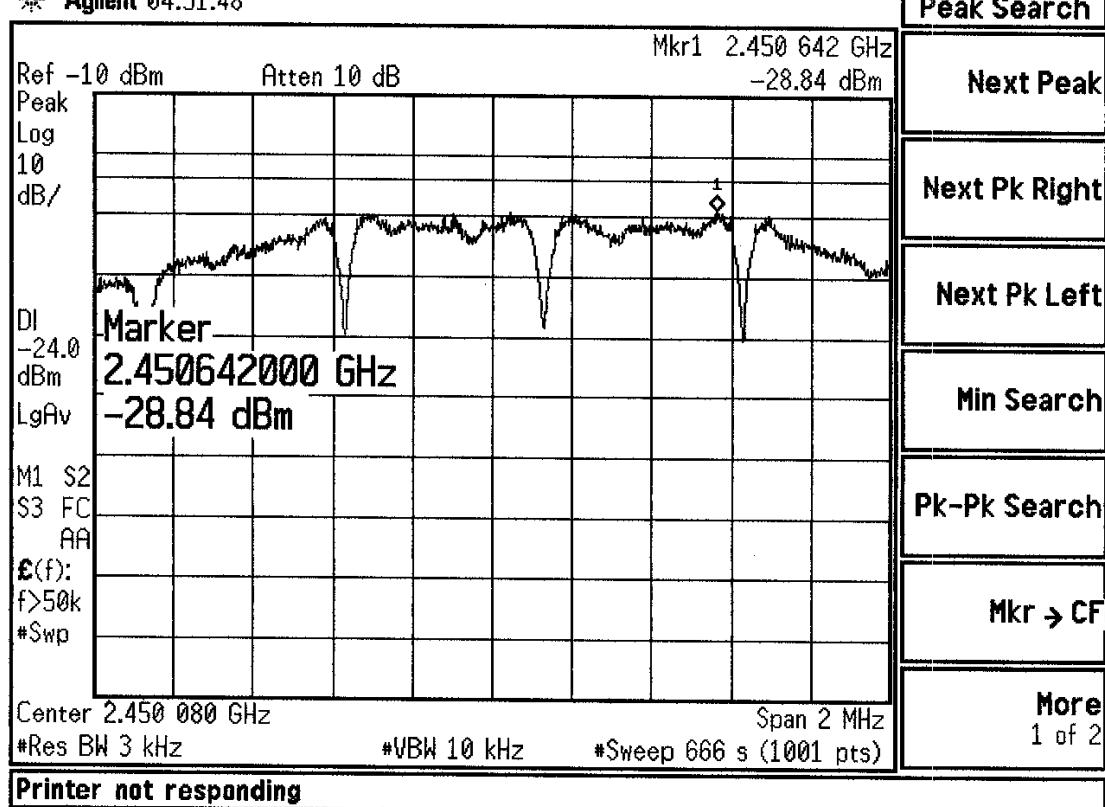
FCC Part 15.247(c) - CONDUCTED SPURIOUS EMISSIONS

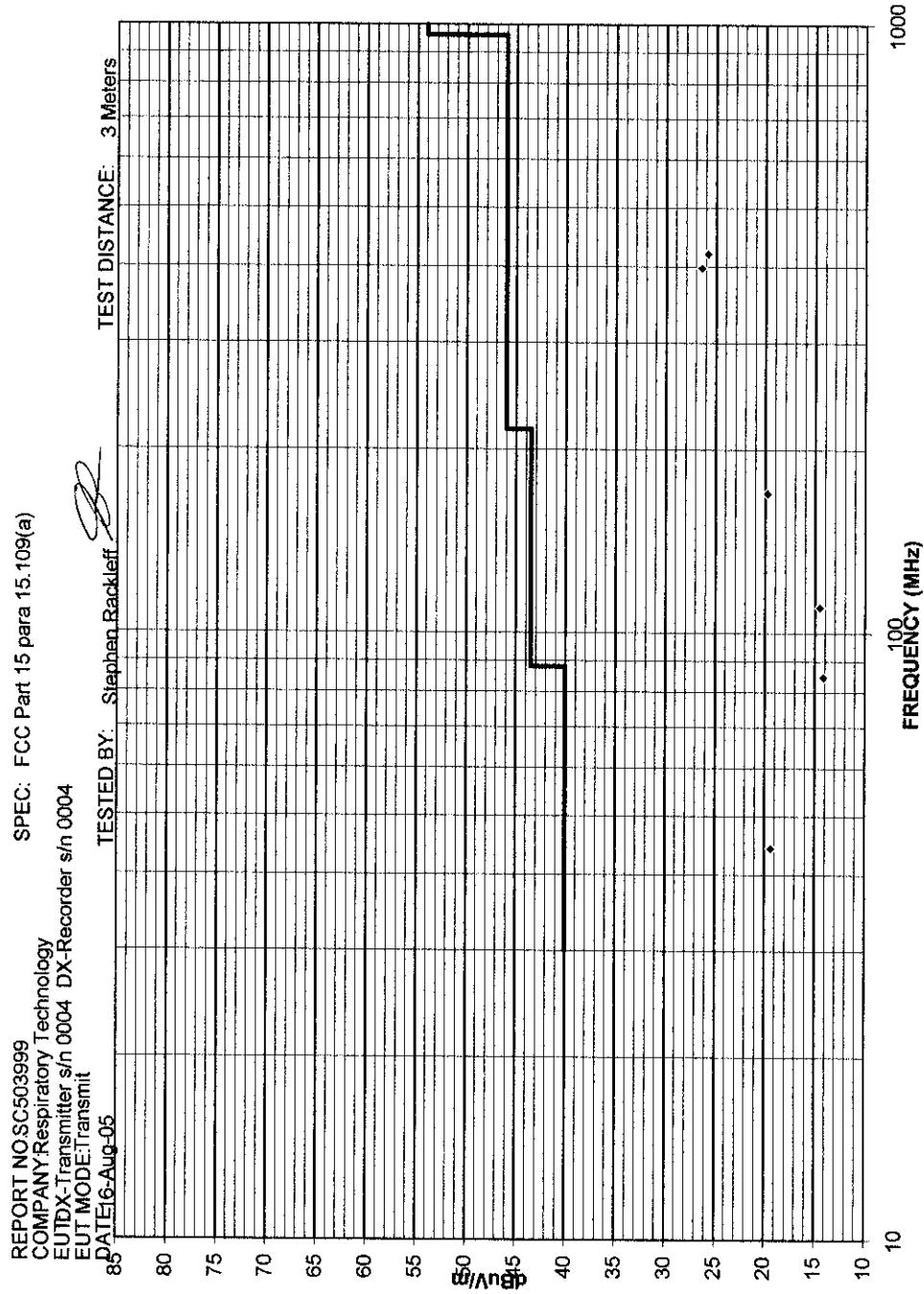
* Agilent 05:37:56



FCC Part 15.247(e) - PEAK POWER SPECTRAL DENSITY

* Agilent 04:51:48





REPORT No: SC503999

SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Respiratory Technology

TEST DIST: 3 Meters

E U T: DX-Transmitter s/n 0004 DX-Recorder s/n 0004

TEST SITE: 1

EUT MODE: Transmit

BICONICAL 738

DATE: 16-Aug-05

TESTED BY: Stephen Rackleff

LOG PERIODIC 738

NOTES: Quasi-Peak with 120 KHz measurement bandwidth

RCVB: 6723

Battery

Temperature: 20 Relative Humidity: 54%

REPORT No: SC503999 TESTER: Stephen Rackleff SPEC: FCC Part 15 para 15.109(a)

TESTER: Stephen Rackleff

SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Respiratory Technology

TEST DIST: 3 Meters

E U T: DX-Transmitter s/n0004 DX-recorder s/n0004

TEST SITE:

EUT MODE: Transmit

BICONICAL: 738

DATE: August 16, 2005

LOG: 738

NOTES:

OTHER:

above 1GHz: RBW & VBW 1 MHz for Rk; RBW 1MHz and VBW 100-5- AVG

above 1GHz: RBW & VBW 1 MHz for PK, RBW 1MHz and VBW 10Hz for AVG
 below 1GHz: RBW & VBW 100 kHz for PK; RBW 100 kHz and VBW 10 Hz for AVG

CE = Antenna Factor + Cable Loss - Preamplifier Gain + Preselector Loss

CF = Antenna Factor + Cable Loss - Preamplifier Gain + Preselector Loss

NO OTHER EMISSIONS WERE DETECTED UP TO 25 GHz (10X FUNDAMENTAL). v.beta1a

4.0 ATTESTATION STATEMENT

GENERAL REMARKS:

SUMMARY:

All tests were performed per CFR 47, Part(s) 15.109(a), 15.247(a), 15.247(b), 15.247(c), and 15.247(e)

■ - Performed

The Equipment Under Test

■ - **Fulfills** the requirements of CFR 47, Part(s) 15.109(a), 15.247(a), 15.247(b), 15.247(c), and 15.247(e)

Testing Start Date: 11 August 2005

Testing End Date: 16 August 2005

- TÜV AMERICA, INC. -

Review Engineer:



David Gray
(Engineer in Charge)

Test Engineer:



Stephen Rackleff
(EMC Engineer)