



Electromagnetic Compatibility

## **EMC Report**

For


**Description: Sensor Network Adapter**

**Model: 2400E WITH 2 DIFFERENT ANTENNAS**

**Applicant: Daintree Networks, Inc.**

The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TÜV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TÜV Rheinland, NVLAP or any agency of the United States Government.

**TUV Rheinland of North America, Inc., North American Headquarters, 12 Commerce Road, Newtown, CT 06470 - Tel (203)426-0888 - Fax (203)426-4009**

Test Report Number: 30561247.001 Daintree 2400E.doc		Test Report Summary		
Prübericht Nr.:				
<b>Applicant:</b> Daintree Networks, Inc. Auftraggeber: 111 N. Market Street, Suite 615 San Jose, CA 95113		Tel: (408) 351-3646 Fax: (408) 351-3330 pcobb@daintree.net		Peter Cobb
<b>Type of Equipment:</b> Sensor Network Adapter Gegenstand der Prüfung:				
<b>Model Number:</b> 2400E Bezeichnung:		<b>Trademark:</b> Ursprungszeichen:		
<b>Standards:</b> See details below Prüfgrundlage:		<b>Date of Testing:</b> May 18 <sup>th</sup> -28 <sup>th</sup> , 2005		
Standard Number	Description	Severity Level or Limit	Minimum Acceptable Performance Criteria	Summary Result
<b>FCC Part 15.249</b>	<b>Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz and 24.0-24.25 GHz</b>	<b>See Below</b>	<b>See Below</b>	<b>See Below</b>
Section 15.249 (a)	Field Strength emissions within Frequency Band	Fundamental 50µV/m, Harmonic 500µV/m	NA	<b>Complied</b>
Section 15.249 (b)	Test Conditions	As per section 15.249 (b), 1), 2), 3)	NA	<b>Complied</b>
Section 15.249 (c)	Test Distance	Field strength measurement done at 3m distance	NA	<b>Complied</b>
Section 15.249 (d)	Radiated Emissions outside the Frequency Band	Complies with FCC Part 15.209	NA	<b>Complied</b>
Section 15.249 (e)	Maximum permitted Average	Not exceed the maximum permitted average limit by more than 20dB above 1000MHz	NA	<b>Complied</b>
Section 15.207 (a)	Conducted Emissions	As per section 15.207 (a)	NA	<b>Complied</b>
Section 15.209 (b)	Radiated Emissions	As per section 15.209(a)	NA	<b>Complied</b>
The tests performed were as requested by the grantee in order to verify that changes made to product do not change the results of tests previously performed and reported for certification purposes. For this purpose, only the tests shown were carried out.				
<b>All data covered in this report is covered by the NVLAP accreditation.</b>				
<b>Place of Test:</b> TUV Rheinland of North America, Prüfort 12 Commerce Road, Newtown, CT 06470 USA E-mail: info-new@tuv.com Web: Phone: (203) 426-0888 http://www.tuv.com Fax: (203) 429-4009		 <b>FOR THE SCOPE OF ACCREDITATION UNDER NVLAP LAB CODE 200111-0</b>		
<b>Test Result:</b> Unit presented for testing complied with criteria shown above. Additional information is contained in the following pages. Prüfergebnis:				
<b>Tested By:</b> Dieter Baldamus Der Sachverständige:		<b>Checked By:</b> Bruce Fagley Geprüft:		
15June2005 <b>Date, Signature</b> Datum, Unterschrift		15June2005 <b>Date, Signature</b> Datum, Unterschrift		

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## 2. Measuring Equipment Used

Description	Asset or Serial Number	Calibrated	Cal. Period
California Instruments 5001iX	HK53766	06/04	1 yr.
EMCO 3115	9402-4227	02/04	1 yr.
EMCO 3109	9310-2754	03/05	1 yr.
EMCO 3146	2548	02/05	1 yr.
NLSK 8126A LISN	8126277	01/05	1 yr.
HP 8546A	3325A00134	08/04	1 yr.

### 2.1 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

### 2.2 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

### 2.3 Measurement Uncertainty

<input type="checkbox"/>	The estimated combined standard uncertainty for ESD immunity measurements is $\pm 4.1\%$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for radiated immunity measurements is $\pm 2.7\text{dB}$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for EFT fast transient immunity measurements is $\pm 5.8\%$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for surge immunity measurements is $\pm 8.0\%$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for conducted immunity measurements is $\pm 1.5\text{dB}$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for power frequency magnetic field immunity measurements is $\pm 0.58\%$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for voltage variation and interruption measurements is $\pm 4.3\%$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for damped oscillatory wave immunity measurements is $\pm 8.7\%$ .
<input checked="" type="checkbox"/>	The estimated combined standard uncertainty for radiated emissions measurements is $\pm 1.6\text{ dB}$ .
<input checked="" type="checkbox"/>	The estimated combined standard uncertainty for conducted emissions measurements is $\pm 1.2\text{dB}$ .
<input type="checkbox"/>	The estimated combined standard uncertainty for harmonic current and flicker measurements is $\pm 11.6\%$ .

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## **2.4 Location of original data**

The original copies of all test data taken during actual testing were either contained within the body of this report or were attached at Appendix B. The originals were delivered to the applicant. A copy has been retained in the TUV Rheinland file for certification follow-up purposes.

## **2.5 Status of facility used for testing**

The TUV Rheinland of North America EMC test facility located at 12 Commerce Road, Newtown, CT, USA is listed on the US Federal Communications Commission list of facilities approved to perform measurements and has been audited and found acceptable by TUV Rheinland GmbH, Cologne, Germany, a competent body in the European Union.

# **3. Description of Equipment Tested**

## **3.1 General Description of Equipment**

The Daintree Networks Sensor Network Adapter is a data capture accessory for the Sensor Network Analyzer. It acts as an observation point enabling the use of Daintree's Sensor Network Analyzer software in live IEEE 802.15.4™ and ZigBee™ network environments. The adapter provides both Ethernet and USB interfaces.

# **4. Test Conditions**

All emissions tests were performed using the procedures of ANSI C63.4: 2003 including methods for signal maximizations and EUT configuration. The photos included with the report show the EUT in its maximized configuration.



## APPENDIX A: TEST DATA

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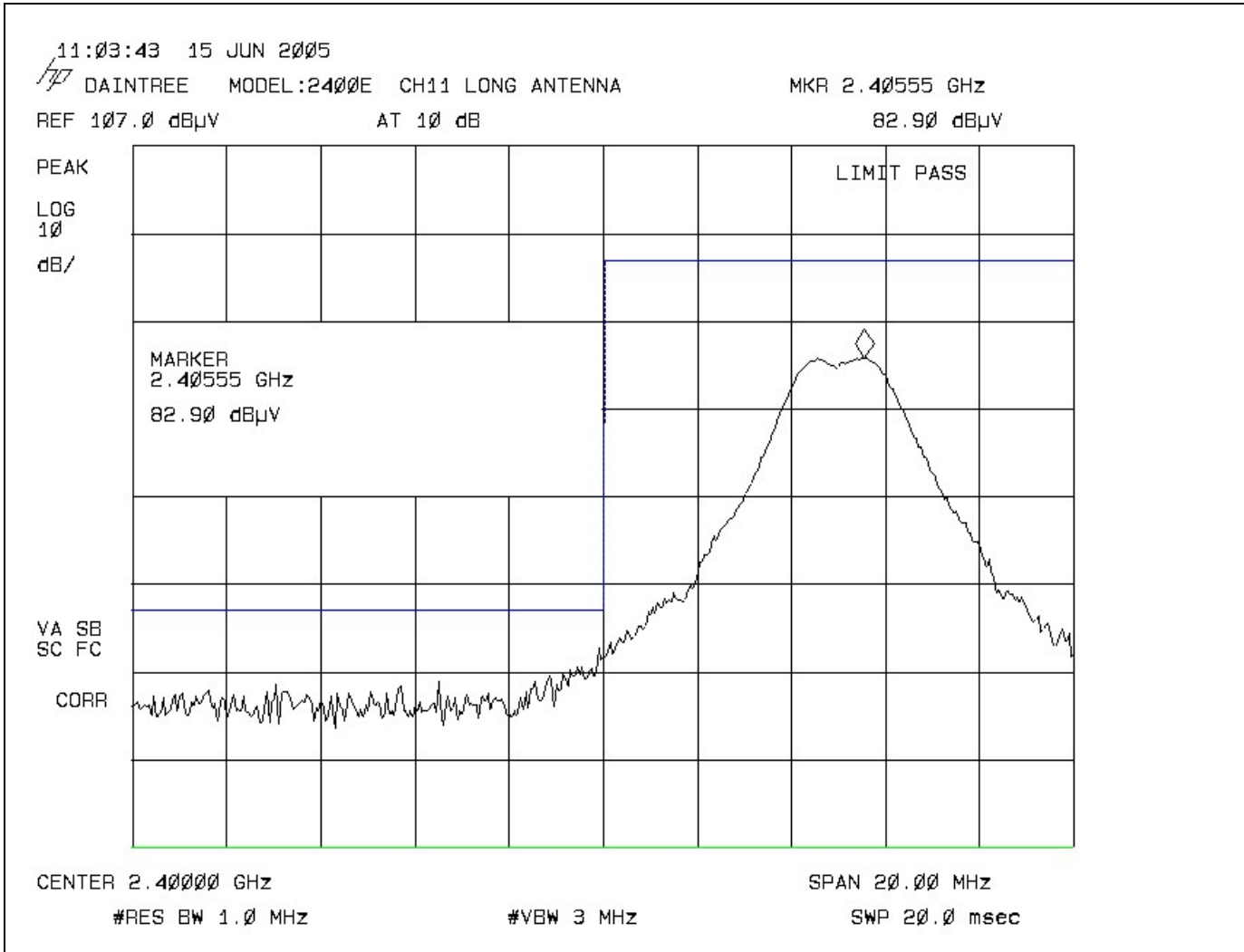
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## Input Voltage Variation:

The evaluation of the results was investigated using input power variations from 85% to 115% of nominal voltage.

No variation on the emission levels were observed as a result of the input power variation.

NOTES: Fundamental Emissions FCC Part 15.249 (a)  
 2400MHz-2483.5MHz  
 50mV/m Fundamental (94dBµV/m)  
 CH 11 (lower channel)



**ANTENNA/COUPLER:**

- |                                       |   |   |  |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> 9124 Bicon   | <input type="checkbox"/> 3109 Bicon           | <input type="checkbox"/> CBL6140 X-Wing | <input type="checkbox"/> NNB-4/63TL LISN |
| <input type="checkbox"/> 3146 Log Per | <input checked="" type="checkbox"/> 3115 Horn | <input type="checkbox"/> MDS-21 Clamp   | <input type="checkbox"/> NNB-4/200X LISN |
| <input type="checkbox"/> 3106 Horn    | <input type="checkbox"/> CBL6112B Bilog       | <input type="checkbox"/> NSLK 8126 LISN | <input type="checkbox"/> Other _____     |

**MEAS TYPE:**

- Radiated Prescan
- Radiated Final
- Conducted
- Disturbance Power
- Other \_\_\_\_\_

**POLARIZATION:**

- Vertical
- Horizontal
- Line
- Neutral
- NA

**DISTANCE:**

- 3 Meter
- 10 Meter
- \_\_\_\_\_ Meter
- NA

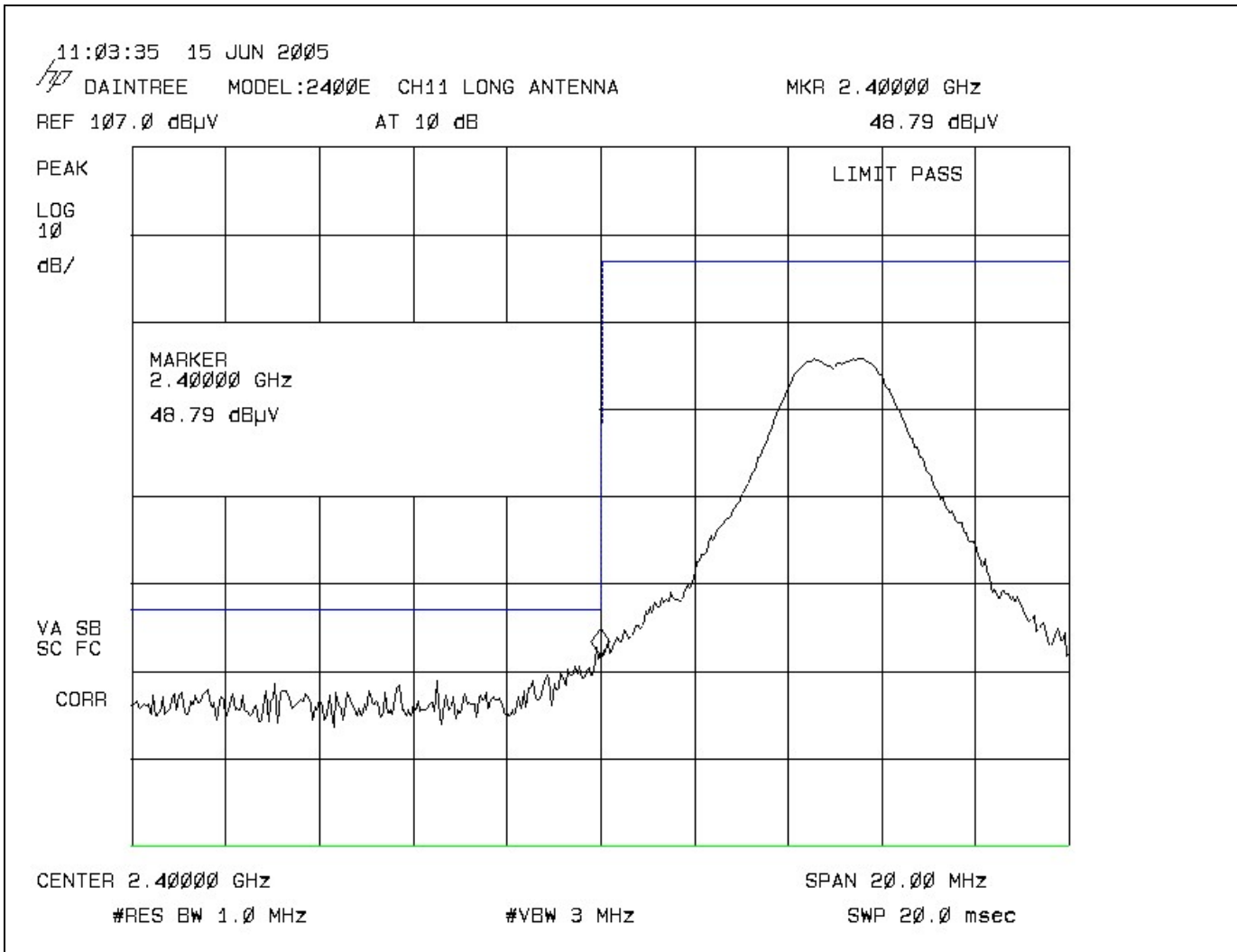
**LOCATION:**

- OATS
- Semi-Anechoic
- Shielded Room
- Factory Floor
- Other \_\_\_\_\_

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NOTES: Fundamental Emissions FCC Part 15.249 (a)  
 Band-Edge Measurement  
 2400MHz-2483.5MHz  
 50mV/m Fundamental (94dBµV/m)  
 CH 11 (lower channel)



- ANTENNA/COUPLER:**
- 9124 Bicon
  - 3109 Bicon
  - CBL6140 X-Wing
  - NNB-4/63TL LISN
  - 3146 Log Per
  - 3115 Horn
  - MDS-21 Clamp
  - NNB-4/200X LISN
  - 3106 Horn
  - CBL6112B Bilog
  - NSLK 8126 LISN
  - Other\_\_\_\_\_

- MEAS TYPE:**
- Radiated Prescan
  - Radiated Final
  - Conducted
  - Disturbance Power
  - Other\_\_\_\_\_

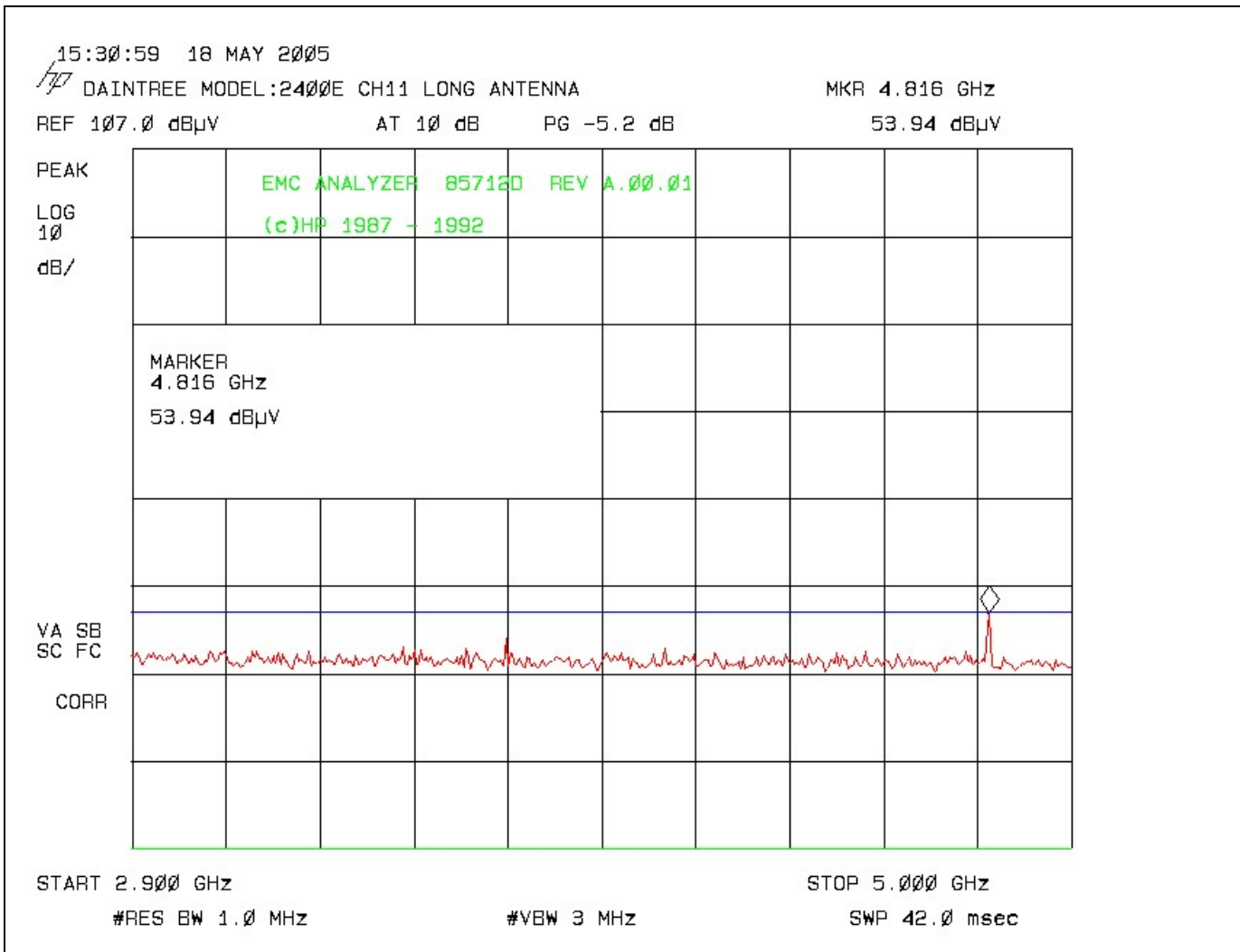
- POLARIZATION:**
- Vertical
  - Horizontal
  - Line
  - Neutral
  - NA

- DISTANCE:**
- 3 Meter
  - 10 Meter
  - \_\_\_\_\_ Meter
  - NA

- LOCATION:**
- OATS
  - Semi-Anechoic
  - Shielded Room
  - Factory Floor
  - Other\_\_\_\_\_

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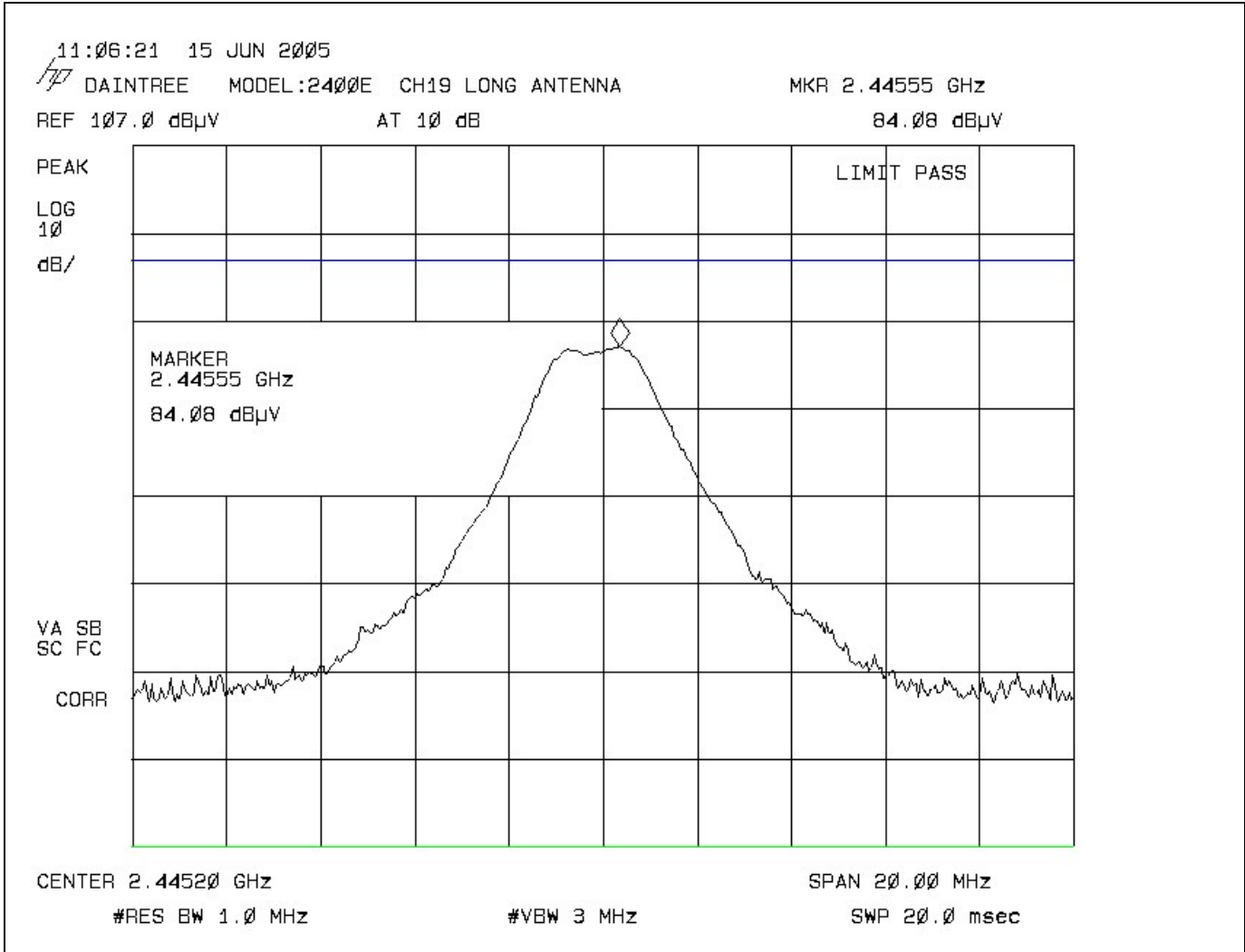
NOTES: Fundamental Emissions FCC Part 15.249 (a)  
2400MHz-2483.5MHz  
500µV/m harmonic (54dBµV/m)  
CH 11 (lower channel)



<b>ANTENNA/COUPLER:</b>			
<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other _____
<b>MEAS TYPE:</b>	<b>POLARIZATION:</b>	<b>DISTANCE:</b>	<b>LOCATION:</b>
<input type="checkbox"/> Radiated Prescan	<input checked="" type="checkbox"/> Vertical	<input checked="" type="checkbox"/> 3 Meter	<input type="checkbox"/> OATS
<input checked="" type="checkbox"/> Radiated Final	<input checked="" type="checkbox"/> Horizontal	<input type="checkbox"/> 10 Meter	<input checked="" type="checkbox"/> Semi-Anechoic
<input type="checkbox"/> Conducted	<input type="checkbox"/> Line	<input type="checkbox"/> _____ Meter	<input type="checkbox"/> Shielded Room
<input type="checkbox"/> Disturbance Power	<input type="checkbox"/> Neutral	<input type="checkbox"/> NA	<input type="checkbox"/> Factory Floor
<input type="checkbox"/> Other _____	<input type="checkbox"/> NA		<input type="checkbox"/> Other _____

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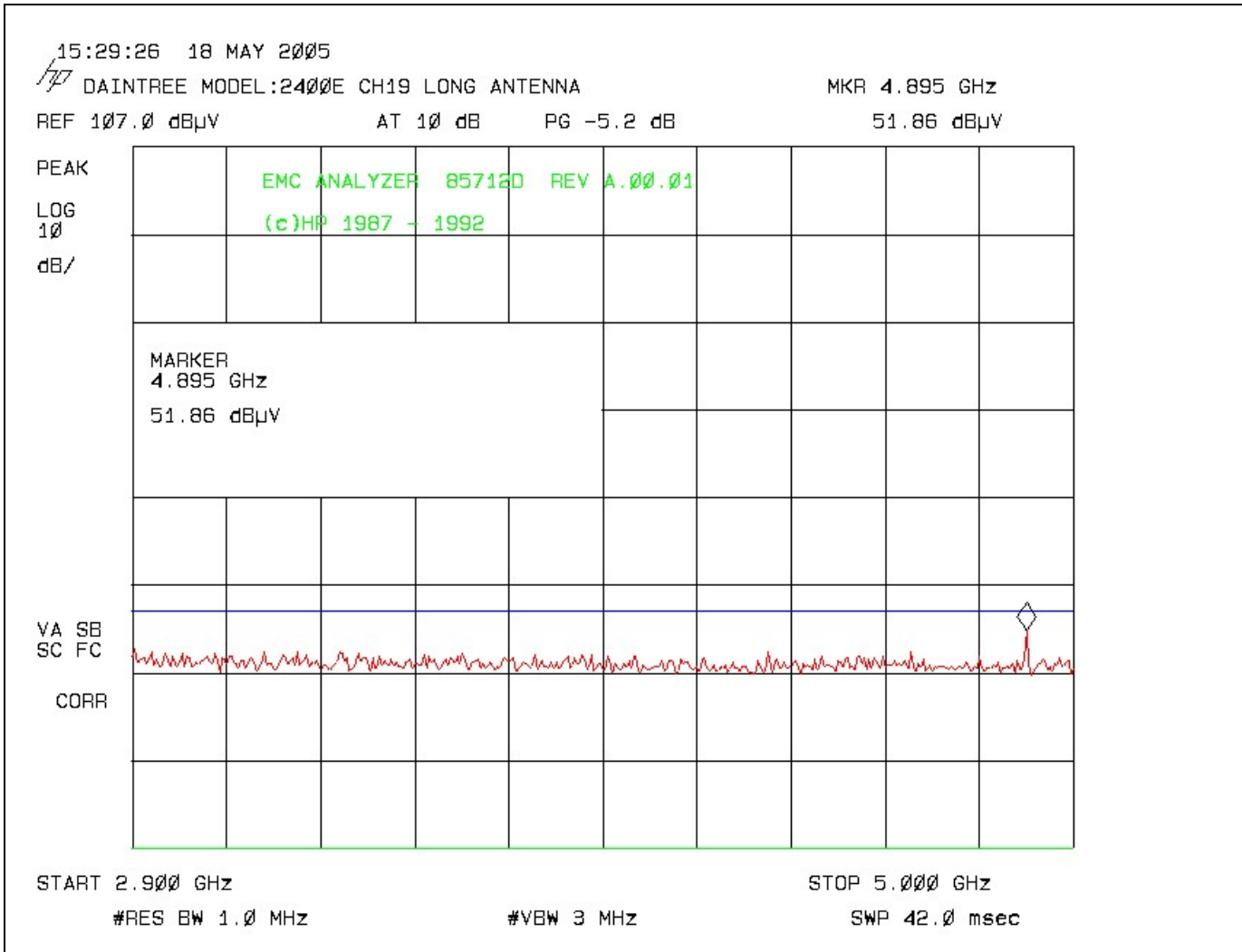
NOTES: Fundamental Emissions FCC Part 15.249 (a)  
2400MHz-2483.5MHz  
50mV/m Fundamental (94dBµV/m)  
CH 19 (middle channel)



<b>ANTENNA/COUPLER:</b>			
<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other _____
<b>MEAS TYPE:</b>	<b>POLARIZATION:</b>	<b>DISTANCE:</b>	<b>LOCATION:</b>
<input type="checkbox"/> Radiated Prescan	<input checked="" type="checkbox"/> Vertical	<input checked="" type="checkbox"/> 3 Meter	<input type="checkbox"/> OATS
<input checked="" type="checkbox"/> Radiated Final	<input checked="" type="checkbox"/> Horizontal	<input type="checkbox"/> 10 Meter	<input checked="" type="checkbox"/> Semi-Anechoic
<input type="checkbox"/> Conducted	<input type="checkbox"/> Line	<input type="checkbox"/> _____ Meter	<input type="checkbox"/> Shielded Room
<input type="checkbox"/> Disturbance Power	<input type="checkbox"/> Neutral	<input type="checkbox"/> NA	<input type="checkbox"/> Factory Floor
<input type="checkbox"/> Other _____	<input type="checkbox"/> NA		<input type="checkbox"/> Other _____

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2400MHz-2483.5MHz  
500µV/m harmonic (54dBµV/m)  
CH 19 (middle channel)



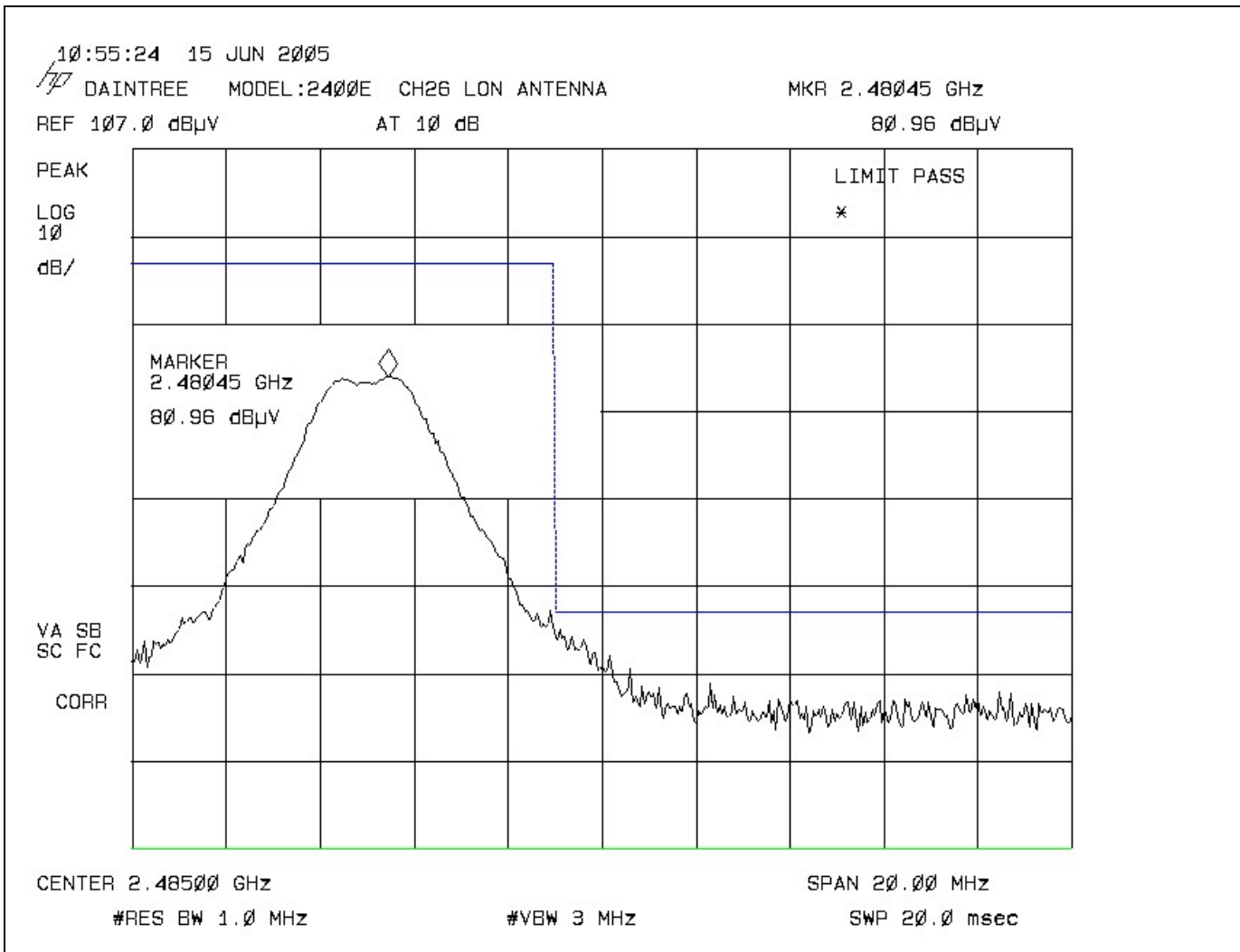
**ANTENNA/COUPLER:**

<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other _____

<b>MEAS TYPE:</b>	<b>POLARIZATION:</b>	<b>DISTANCE:</b>	<b>LOCATION:</b>
<input type="checkbox"/> Radiated Prescan	<input checked="" type="checkbox"/> Vertical	<input checked="" type="checkbox"/> 3 Meter	<input type="checkbox"/> OATS
<input checked="" type="checkbox"/> Radiated Final	<input checked="" type="checkbox"/> Horizontal	<input type="checkbox"/> 10 Meter	<input checked="" type="checkbox"/> Semi-Anechoic
<input type="checkbox"/> Conducted	<input type="checkbox"/> Line	<input type="checkbox"/> _____ Meter	<input type="checkbox"/> Shielded Room
<input type="checkbox"/> Disturbance Power	<input type="checkbox"/> Neutral	<input type="checkbox"/> NA	<input type="checkbox"/> Factory Floor
<input type="checkbox"/> Other _____	<input type="checkbox"/> NA		<input type="checkbox"/> Other _____

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NOTES: Fundamental Emissions FCC Part 15.249 (a)  
 2400MHz-2483.5MHz  
 50mV/m Fundamental (94dBµV/m)  
 CH 26 (higher channel)



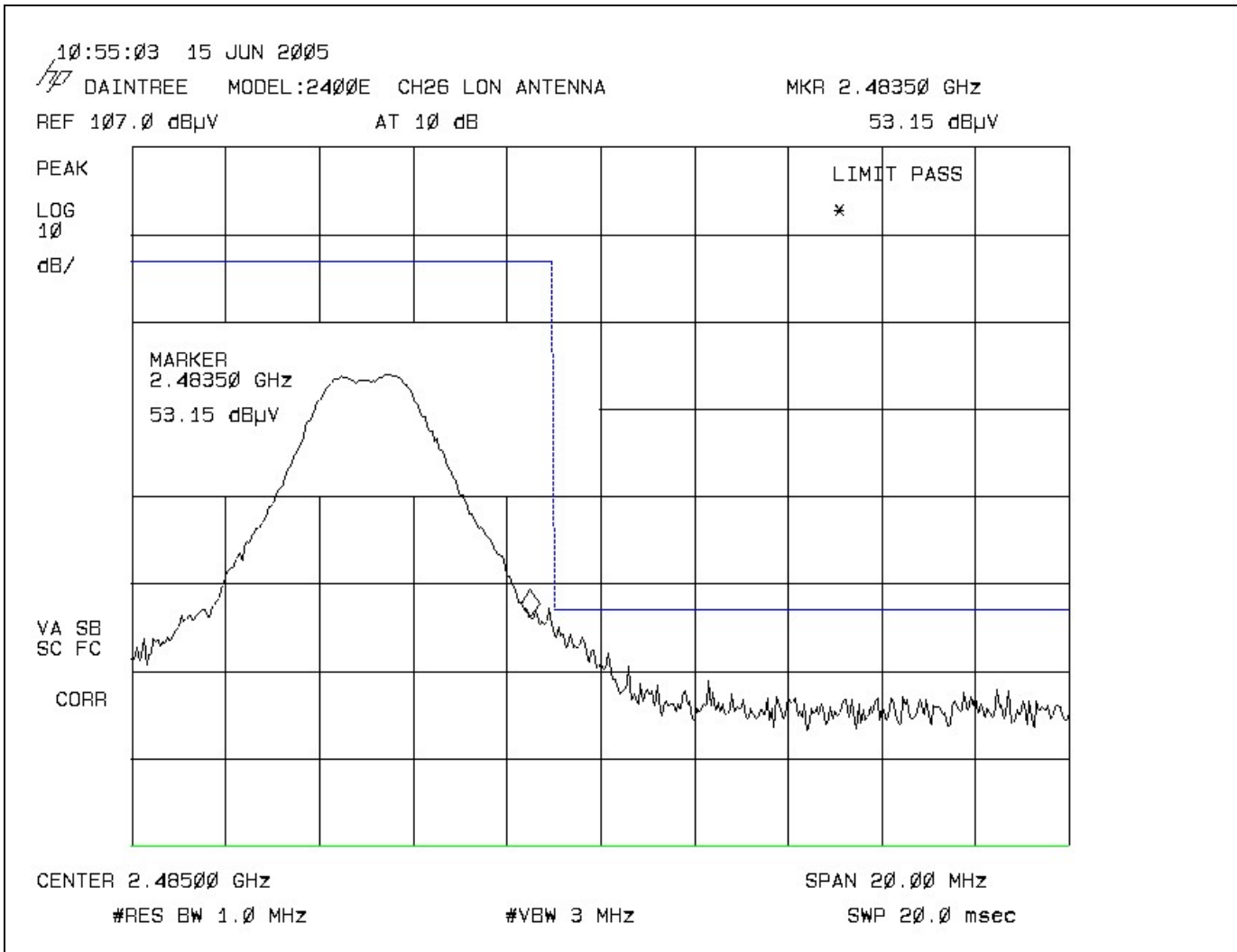
**ANTENNA/COUPLER:**

<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other _____

<p><b>MEAS TYPE:</b></p> <input type="checkbox"/> Radiated Prescan <input checked="" type="checkbox"/> Radiated Final <input type="checkbox"/> Conducted <input type="checkbox"/> Disturbance Power <input type="checkbox"/> Other _____	<p><b>POLARIZATION:</b></p> <input checked="" type="checkbox"/> Vertical <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Line <input type="checkbox"/> Neutral <input type="checkbox"/> NA	<p><b>DISTANCE:</b></p> <input checked="" type="checkbox"/> 3 Meter <input type="checkbox"/> 10 Meter <input type="checkbox"/> _____ Meter <input type="checkbox"/> NA	<p><b>LOCATION:</b></p> <input type="checkbox"/> OATS <input checked="" type="checkbox"/> Semi-Anechoic <input type="checkbox"/> Shielded Room <input type="checkbox"/> Factory Floor <input type="checkbox"/> Other _____
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50mV/m Fundamental (94dBµV/m)  
CH 26 (higher channel)



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<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other_____

**MEAS TYPE:**

Radiated Prescan  
 Radiated Final  
 Conducted  
 Disturbance Power  
 Other\_\_\_\_\_

**POLARIZATION:**

Vertical  
 Horizontal  
 Line  
 Neutral  
 NA

**DISTANCE:**

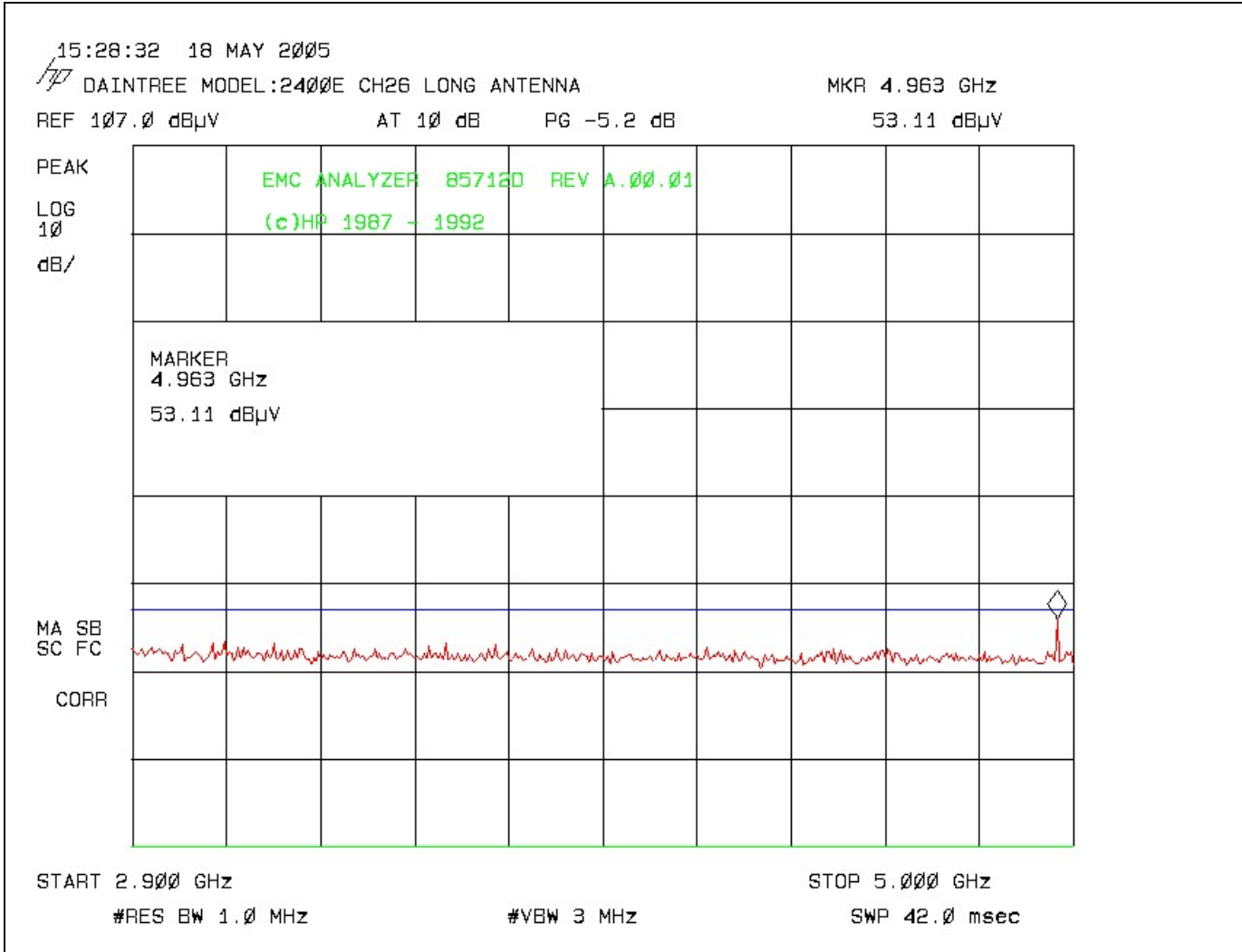
3 Meter  
 10 Meter  
 \_\_\_\_\_ Meter  
 NA

**LOCATION:**

OATS  
 Semi-Anechoic  
 Shielded Room  
 Factory Floor  
 Other\_\_\_\_\_

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 2400MHz-2483.5MHz  
 500µV/m harmonic (54dBµV/m)  
 CH 26(higher channel)



**ANTENNA/COUPLER:**

<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other _____

<p><b>MEAS TYPE:</b></p> <input type="checkbox"/> Radiated Prescan <input checked="" type="checkbox"/> Radiated Final <input type="checkbox"/> Conducted <input type="checkbox"/> Disturbance Power <input type="checkbox"/> Other _____	<p><b>POLARIZATION:</b></p> <input checked="" type="checkbox"/> Vertical <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Line <input type="checkbox"/> Neutral <input type="checkbox"/> NA	<p><b>DISTANCE:</b></p> <input checked="" type="checkbox"/> 3 Meter <input type="checkbox"/> 10 Meter <input type="checkbox"/> _____ Meter <input type="checkbox"/> NA	<p><b>LOCATION:</b></p> <input type="checkbox"/> OATS <input checked="" type="checkbox"/> Semi-Anechoic <input type="checkbox"/> Shielded Room <input type="checkbox"/> Factory Floor <input type="checkbox"/> Other _____
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<b>Emissions Measurements</b>															
<b>Standard:</b> ANSI C63.4:2003/ CFR 47 FCC Part 15.249				<b>PRESCAN or FINAL:</b> Final						<b>Date:</b> 5/25/2005					
<b>Device Tested:</b> Daintree - 2400E				<b>Distance:</b> 3.0m						<b>File:</b> 05052503.xls					
Meas #	Signal Type	Freq. (GHz)	Peak (dBµV/m)	Average (dBµV/m)	Antenna + Cable- Amplifier Correction Factor (included in measured levels)	Peak Limit	Average Limit	Peak Δ	Average Δ	Peak Result	Average Result	Polarization	Angle (degrees)	Antenna Height (meters)	Comment
1	Fundamental CH 11	2.4056	82.90	81.61	0.10	114	94	-31.10	-12.39	Complied	Complied	Vertical	180	1.00	Worst case condition
2	Band-Edge CH11	2.4000	48.79	41.08	0.10	74	54	-25.21	-12.92	Complied	Complied	Vertical	154	1.00	Worst case condition
3	2 Harmonic CH11	4.8160	53.44	44.60	6.20	74	54	-20.56	-9.40	Complied	Complied	Vertical	132	1.00	Worst case condition
4	Fundamental CH 19	2.4456	84.08	82.70	0.10	114	94	-29.92	-11.30	Complied	Complied	Vertical	150	1.00	Worst case condition
5	2 Harmonic CH 19	4.8950	51.86	42.00	6.20	74	54	-22.14	-12.00	Complied	Complied	Vertical	185	1.00	Worst case condition
6	Fundamental CH 26	2.4805	80.96	83.07	0.10	114	94	-33.04	-10.93	Complied	Complied	Vertical	175	1.00	Worst case condition
7	Band-Edge CH 26	2.4835	53.15	46.30	0.10	74	54	-20.85	-7.70	Complied	Complied	Vertical	178	1.00	Worst case condition
8	2 Harmonic CH 26	4.9630	53.11	40.94	6.20	74	54	-20.89	-13.06	Complied	Complied	Vertical	134	1.00	Worst case condition
Tested by: Dieter Baldamus															
TUV Rheinland of North America, Inc. 12 Commerce Road Newtown, CT 06470 Tel:(203) 426-0688 Fax: (203) 426-4009															
Conducted Emissions Calculation: Measured Quasi Peak Value or Average Value + Correction Factor (USN + cable) - Quasi Peak limitor Average Limit = Result (Quasi Peak Delta )															
Quasi Peak Value and Average Value in the above table already includes measured Quasi Peak and Average value plus correction factors.															

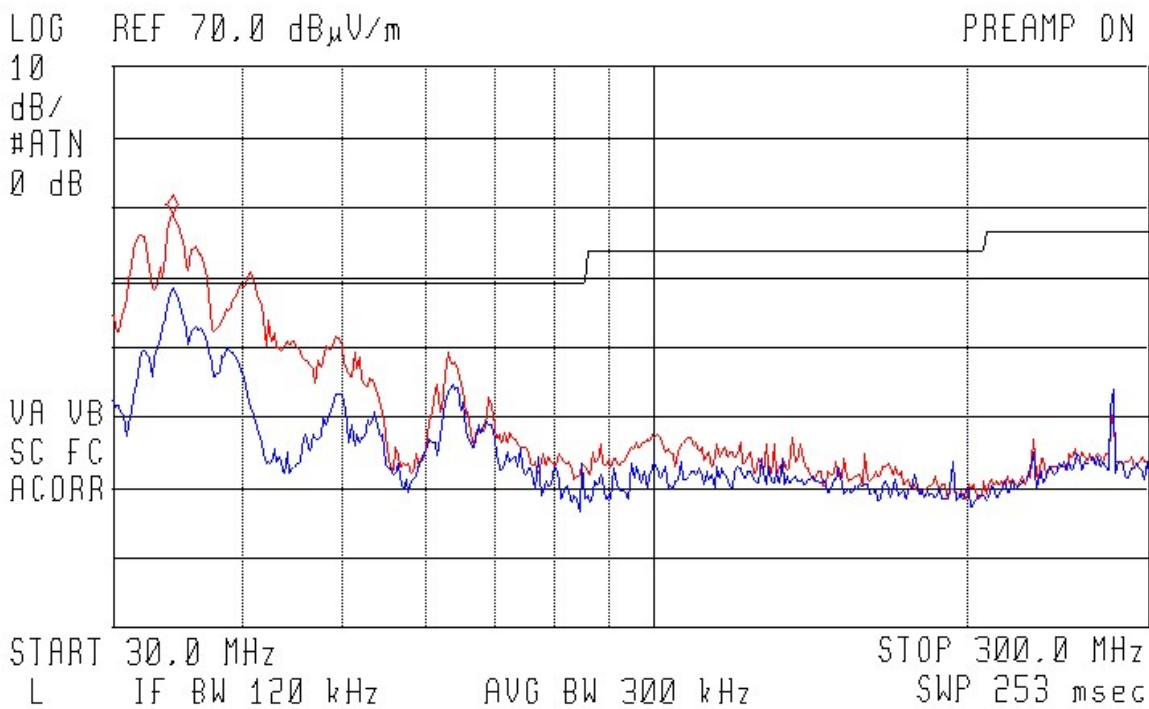
The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TUV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TUV Rheinland, NVLAP or any agency of the United States Government.



NOTES:

Radiated Spurious Emissions  
 FCC Part 15.209 (a)  
 Measurement at 3m distance

12:42:22 MAY 18, 2005  
 MFR: DAINTREE MODEL: 24000E PRESCAN  
 MARKER ACTV DET: PEAK  
 35.4 MHz MEAS DET: PEAK QP AVG  
 48.90 dB $\mu$ V/m MKR 35.4 MHz  
 48.90 dB $\mu$ V/m



**ANTENNA/COUPLER:**

- |                                       |   |   |  |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> 9124 Bicon   | <input type="checkbox"/> 3109 Bicon           | <input type="checkbox"/> CBL6140 X-Wing | <input type="checkbox"/> NNB-4/63TL LISN |
| <input type="checkbox"/> 3146 Log Per | <input checked="" type="checkbox"/> 3115 Horn | <input type="checkbox"/> MDS-21 Clamp   | <input type="checkbox"/> NNB-4/200X LISN |
| <input type="checkbox"/> 3106 Horn    | <input type="checkbox"/> CBL6112B Bilog       | <input type="checkbox"/> NSLK 8126 LISN | <input type="checkbox"/> Other_____      |

**MEAS TYPE:**

- Radiated Prescan
- Radiated Final
- Conducted
- Disturbance Power
- Other\_\_\_\_\_

**POLARIZATION:**

- Vertical
- Horizontal
- Line
- Neutral
- NA

**DISTANCE:**

- 3 Meter
- 10 Meter
- \_\_\_\_\_Meter
- NA

**LOCATION:**

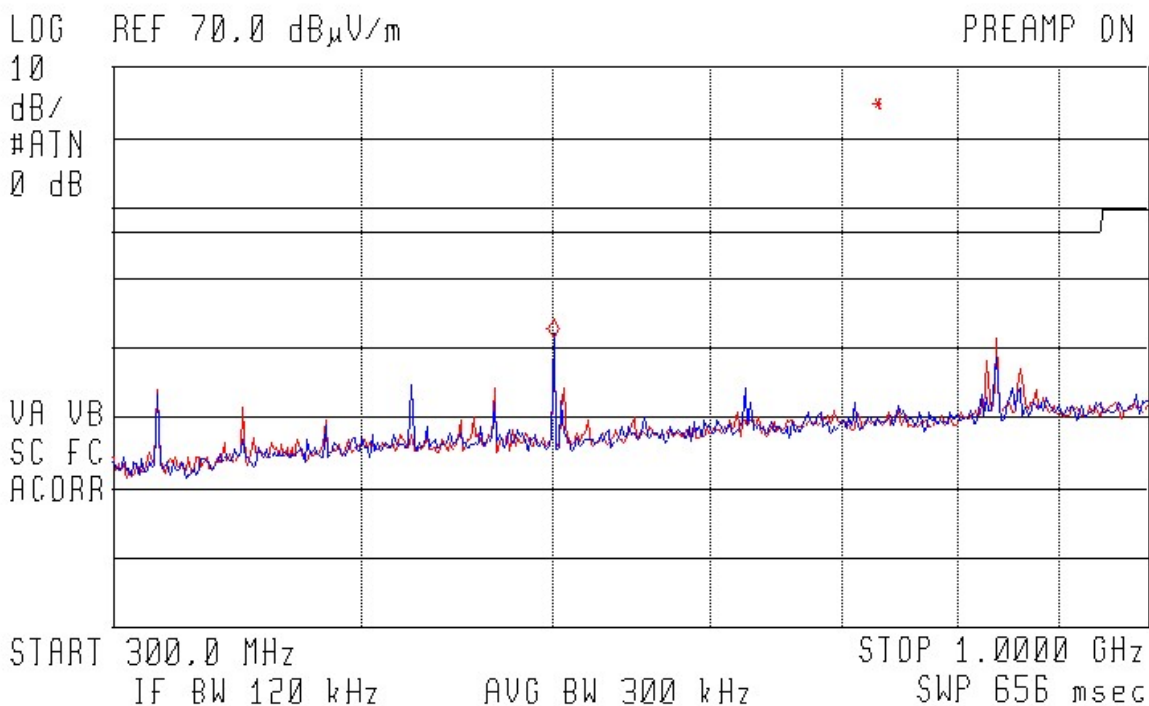
- OATS
- Semi-Anechoic
- Shielded Room
- Factory Floor
- Other\_\_\_\_\_

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NOTES:

Radiated Spurious Emissions  
FCC Part 15.209 (a)  
Measurement at 3m distance

12:46:46 MAY 18, 2005  
MFR: DAINTREE MODEL: 24000E PRESCAN  
MARKER ACTV DET: PEAK  
510.6 MHz MEAS DET: PEAK QP AVG  
31.31 dB $\mu$ V/m MKR 510.6 MHz  
31.31 dB $\mu$ V/m



**ANTENNA/COUPLER:**

- |                                       |   |   |  |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> 9124 Bicon   | <input type="checkbox"/> 3109 Bicon           | <input type="checkbox"/> CBL6140 X-Wing | <input type="checkbox"/> NNB-4/63TL LISN |
| <input type="checkbox"/> 3146 Log Per | <input checked="" type="checkbox"/> 3115 Horn | <input type="checkbox"/> MDS-21 Clamp   | <input type="checkbox"/> NNB-4/200X LISN |
| <input type="checkbox"/> 3106 Horn    | <input type="checkbox"/> CBL6112B Bilog       | <input type="checkbox"/> NSLK 8126 LISN | <input type="checkbox"/> Other _____     |

**MEAS TYPE:**

- Radiated Prescan
- Radiated Final
- Conducted
- Disturbance Power
- Other \_\_\_\_\_

**POLARIZATION:**

- Vertical
- Horizontal
- Line
- Neutral
- NA

**DISTANCE:**

- 3 Meter
- 10 Meter
- \_\_\_\_\_ Meter
- NA

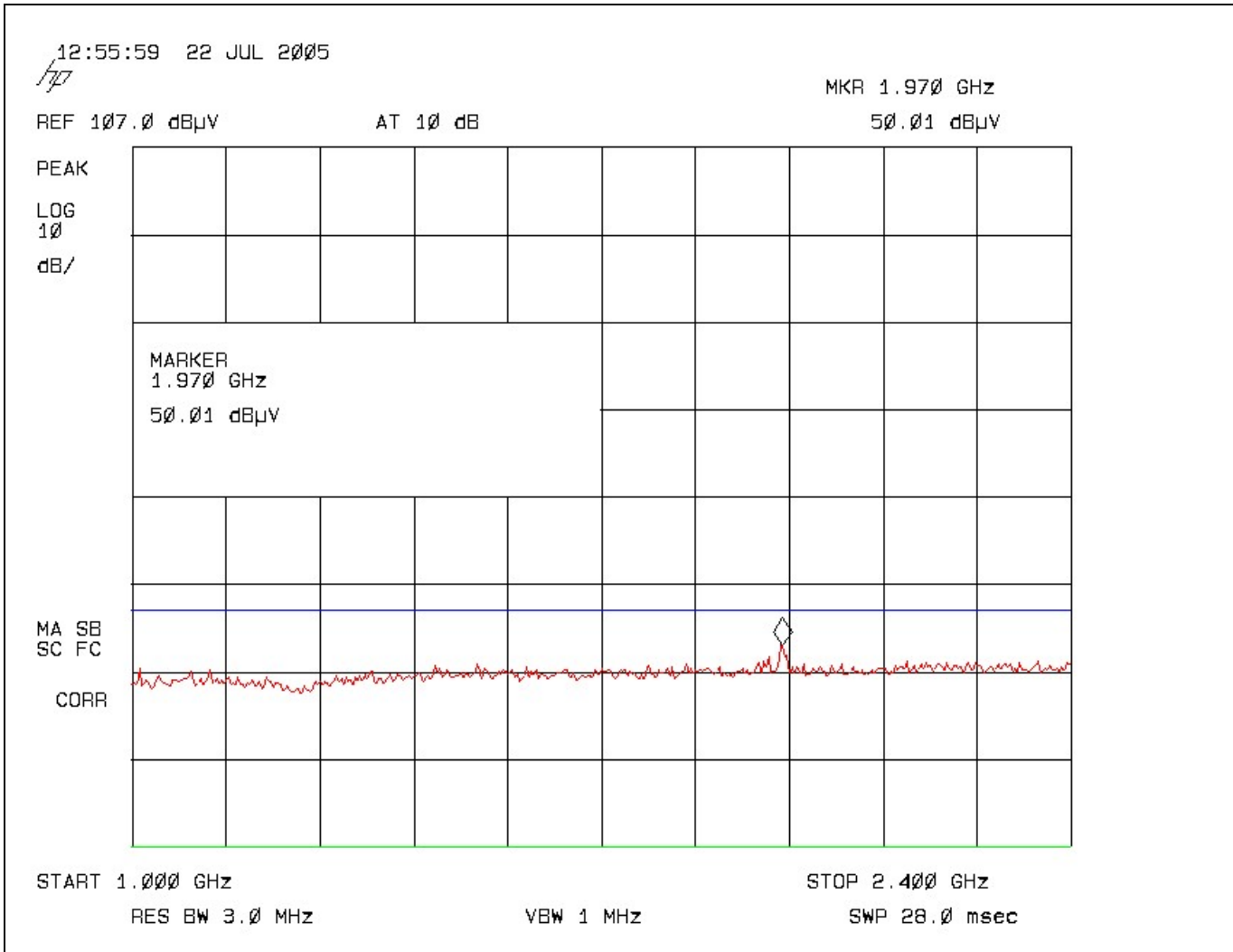
**LOCATION:**

- OATS
- Semi-Anechoic
- Shielded Room
- Factory Floor
- Other \_\_\_\_\_

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NOTES:

Radiated Spurious Emissions  
FCC Part 15.209 (a)  
Measurement at 3m distance



**ANTENNA/COUPLER:**

- |                                       |   |   |  |
|---------------------------------------|---|---|--|
| <input type="checkbox"/> 9124 Bicon   | <input type="checkbox"/> 3109 Bicon           | <input type="checkbox"/> CBL6140 X-Wing | <input type="checkbox"/> NNB-4/63TL LISN |
| <input type="checkbox"/> 3146 Log Per | <input checked="" type="checkbox"/> 3115 Horn | <input type="checkbox"/> MDS-21 Clamp   | <input type="checkbox"/> NNB-4/200X LISN |
| <input type="checkbox"/> 3106 Horn    | <input type="checkbox"/> CBL6112B Bilog       | <input type="checkbox"/> NSLK 8126 LISN | <input type="checkbox"/> Other _____     |

**MEAS TYPE:**

- Radiated Prescan
- Radiated Final
- Conducted
- Disturbance Power
- Other \_\_\_\_\_

**POLARIZATION:**

- Vertical
- Horizontal
- Line
- Neutral
- NA

**DISTANCE:**

- 3 Meter
- 10 Meter
- \_\_\_\_\_ Meter
- NA

**LOCATION:**

- OATS
- Semi-Anechoic
- Shielded Room
- Factory Floor
- Other \_\_\_\_\_

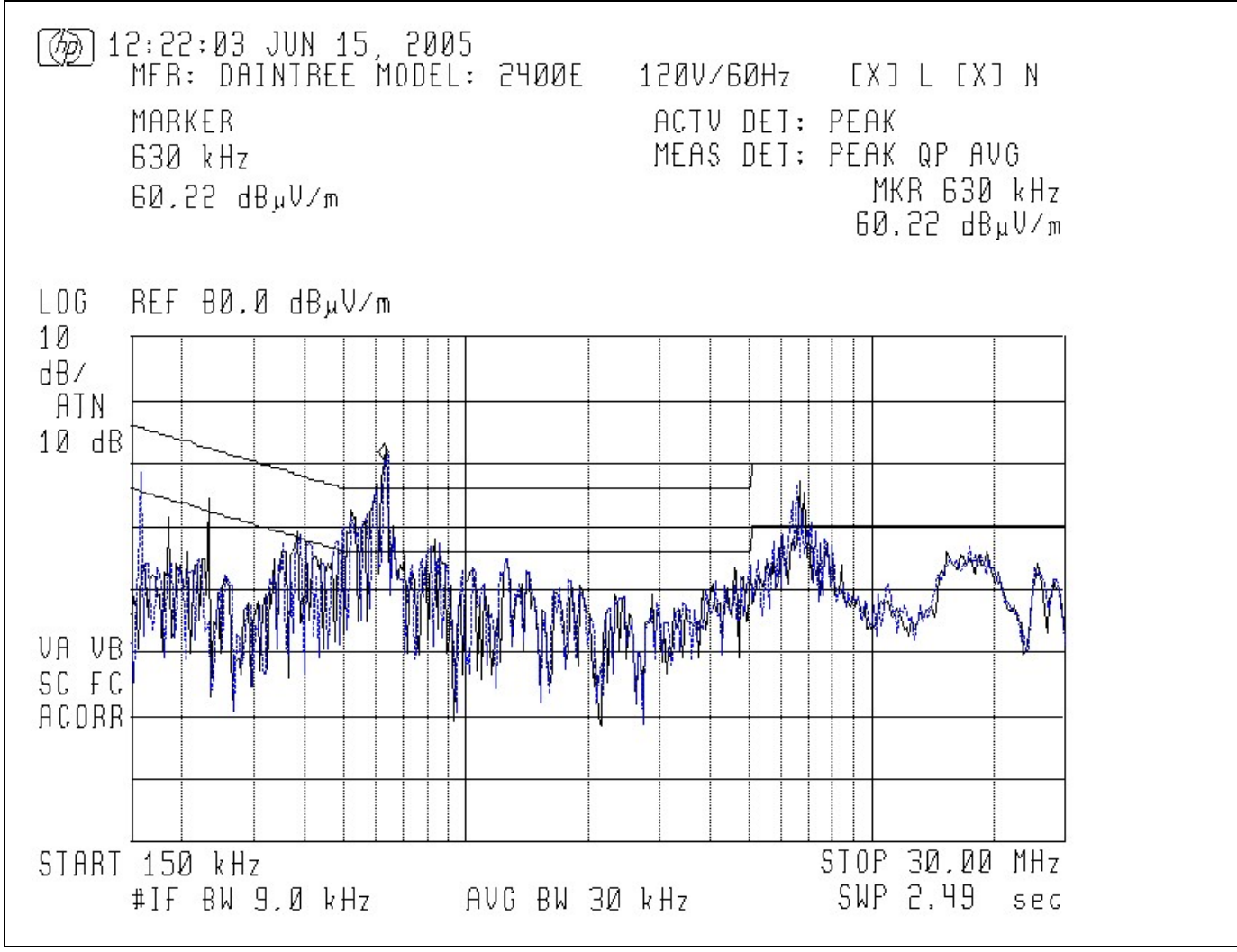
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<b>Radiated Emissions Measurements</b>												
Standard:	ANSI C63.4:2003/ CFR 47 FCC Part 15.209 (a) Class B											
Device Tested:	Daintree 2400E											
Distance:	3.0m											
Date:	5/25/2005											
File:	05052501.xls											
Meas #	Freq (MHz)	Peak	Quasi-Peak	Average	Quasi-Peak Limit	Quasi-Peak Δ	PRESCAN or FINAL:	Result	Polarization	Angle (degrees)	Antenna Height (meters)	Comment
				Measured Level								
							Antenna + Cable Correction Factor (included in measured levels)					
1	34.9229	41.02	31.45	20.75	40.00	-8.55	16.89	Complied	Horizontal	185	1.00	
2	44.0221	38.88	28.94	18.59	40.00	-11.06	12.29	Complied	Horizontal	144	1.00	
3	47.0302	45.10	32.18	13.66	40.00	-7.82	10.75	Complied	Horizontal	54	1.20	
4	78.8577	35.40	29.18	21.04	40.00	-10.82	8.15	Complied	Horizontal	68	1.50	
5	108.0567	39.22	35.38	27.15	43.50	-8.12	12.41	Complied	Horizontal	154	1.80	
6	221.2351	30.12	25.34	11.43	46.00	-20.66	10.98	Complied	Horizontal	354	1.54	
7	479.9949	28.27	24.98	21.65	46.00	-21.02	19.76	Complied	Horizontal	245	1.54	
8	35.4244	45.74	39.50	38.45	40.00	-0.50	15.95	Complied	Vertical	124	1.00	
9	37.6885	41.20	36.70	31.74	40.00	-3.30	14.85	Complied	Vertical	98	1.00	
10	41.8955	42.33	38.60	30.75	40.00	-1.40	12.70	Complied	Vertical	88	1.00	
11	51.0009	34.43	28.43	21.34	40.00	-11.57	8.24	Complied	Vertical	255	2.02	
12	66.1858	31.29	24.40	18.58	40.00	-15.60	6.32	Complied	Vertical	312	2.15	
Tested by:	Dieter Baldamus											
	TUV Rheinland of North America, Inc. 12 Commerce Road Newtown, CT 06470 Tel:(203) 426-0888 Fax: (203) 426-4009 REF00058-18 Revised 10MAR03											
Field Strength Calculation:	Measured Quasi Peak Value + Correction Factor (Antenna + cable) - Quasi Peak limit = Result (Quasi Peak Delta.)											
	Quasi Peak Value in the above table already includes measured value and correction factors.											
	Negative Result is a Pass											

The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TUV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TUV Rheinland, NVLAP or any agency of the United States Government.

NOTES: Conducted Emissions  
FCC Part 15.207 (a)  
120V/60Hz



<b>ANTENNA/COUPLER:</b>			
<input type="checkbox"/> 9124 Bicon	<input type="checkbox"/> 3109 Bicon	<input type="checkbox"/> CBL6140 X-Wing	<input type="checkbox"/> NNB-4/63TL LISN
<input type="checkbox"/> 3146 Log Per	<input checked="" type="checkbox"/> 3115 Horn	<input type="checkbox"/> MDS-21 Clamp	<input type="checkbox"/> NNB-4/200X LISN
<input type="checkbox"/> 3106 Horn	<input type="checkbox"/> CBL6112B Bilog	<input type="checkbox"/> NSLK 8126 LISN	<input type="checkbox"/> Other _____
<b>MEAS TYPE:</b>	<b>POLARIZATION:</b>	<b>DISTANCE:</b>	<b>LOCATION:</b>
<input type="checkbox"/> Radiated Prescan	<input checked="" type="checkbox"/> Vertical	<input checked="" type="checkbox"/> 3 Meter	<input type="checkbox"/> OATS
<input checked="" type="checkbox"/> Radiated Final	<input checked="" type="checkbox"/> Horizontal	<input type="checkbox"/> 10 Meter	<input checked="" type="checkbox"/> Semi-Anechoic
<input type="checkbox"/> Conducted	<input type="checkbox"/> Line	<input type="checkbox"/> _____ Meter	<input type="checkbox"/> Shielded Room
<input type="checkbox"/> Disturbance Power	<input type="checkbox"/> Neutral	<input type="checkbox"/> NA	<input type="checkbox"/> Factory Floor
<input type="checkbox"/> Other _____	<input type="checkbox"/> NA		<input type="checkbox"/> Other _____

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<b>Conducted Emissions Measurements</b>													
<b>Standard:</b>		ANSI C63.4:2003/ CFR 47 FCC Part 15.207 (a)											
<b>Device Tested:</b>		Daintree - 2400E											
<b>Date:</b>		25/05/2005											
<b>File:</b>		.xls 05052502.xls											
Signal Num	Freq MHz	Peak Amp dBuV	QP Amp dBuV	Avg Amp dBuV	QP Limit dBuV	Avg Limit dBuV	LISN and Cable Correction factor (included in measured levels) dB	Conductor	QP Δ dB	QP Result	Avg Δ dB	Average Result	Mode
1	0.5535	53.13	49.92	39.74	56.00	46.00	10.30	Line	-6.08	Complied	-6.26	Complied	
2	0.6346	60.22	55.71	44.66	56.00	46.00	10.30	Line	-0.29	Complied	-1.34	Complied	
3	0.8683	48.42	45.33	33.45	56.00	46.00	10.30	Line	-10.67	Complied	-12.55	Complied	
4	6.6504	58.86	57.03	49.44	60.00	50.00	10.30	Line	-2.97	Complied	-0.56	Complied	
5	16.2796	47.40	44.57	37.33	60.00	50.00	10.30	Line	-15.43	Complied	-12.67	Complied	
6	0.6367	60.77	55.91	42.75	56.00	46.00	10.30	Neutral	-0.09	Complied	-3.25	Complied	
7	0.8478	48.77	44.43	31.30	56.00	46.00	10.30	Neutral	-11.57	Complied	-14.70	Complied	
8	3.8808	40.13	35.98	24.94	56.00	46.00	10.30	Neutral	-20.02	Complied	-21.06	Complied	
9	6.7188	50.88	45.28	36.70	60.00	50.00	10.30	Neutral	-14.72	Complied	-13.30	Complied	
10	18.9805	47.72	45.67	36.57	60.00	50.00	10.30	Neutral	-14.33	Complied	-11.43	Complied	
Tested by:		Dieter Baldamus											
TUV Rheinland of North America, Inc.		12 Commerce Road Newtown, CT 06470 Tel:(203) 426-0888 Fax: (203) 426-4009											
Conducted Emissions Calculation:		Measured Quasi Peak Value or Average Value + Correction Factor (LISN + cable) - Quasi Peak limiter Average Limit = Result (Quasi Peak Delta.)											
		Quasi Peak Value and Average Value in the above table already includes measured Quasi Peak and Average value plus correction factors.											
		Negative Result is a Pass											

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## APPENDIX B: PHOTOGRAPHS

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**Emissions Pre-scan**

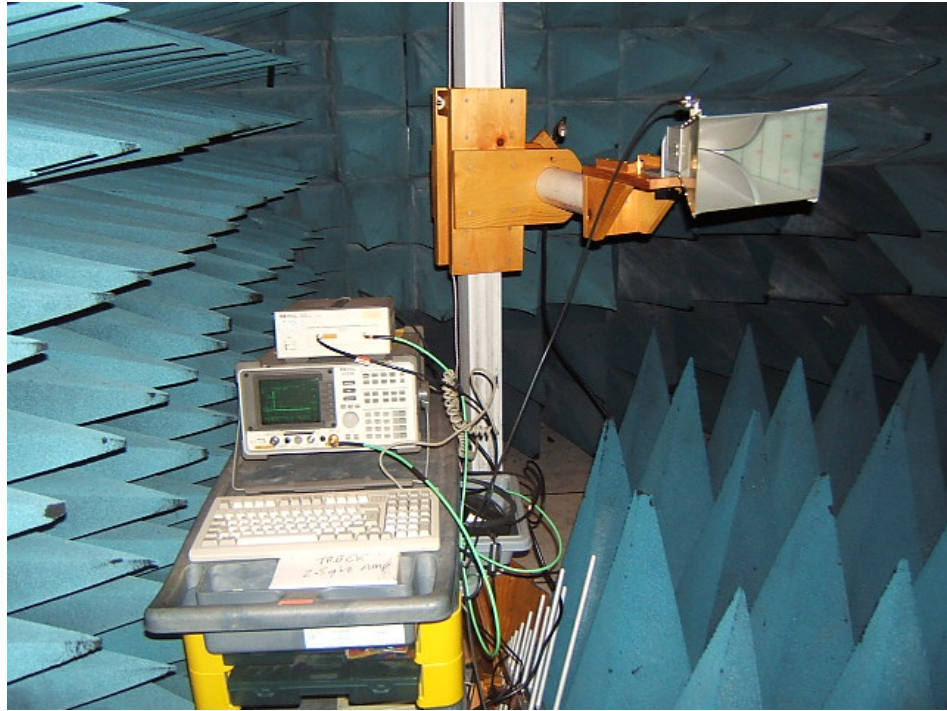
The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TUV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TUV Rheinland, NVLAP or any agency of the United States Government.

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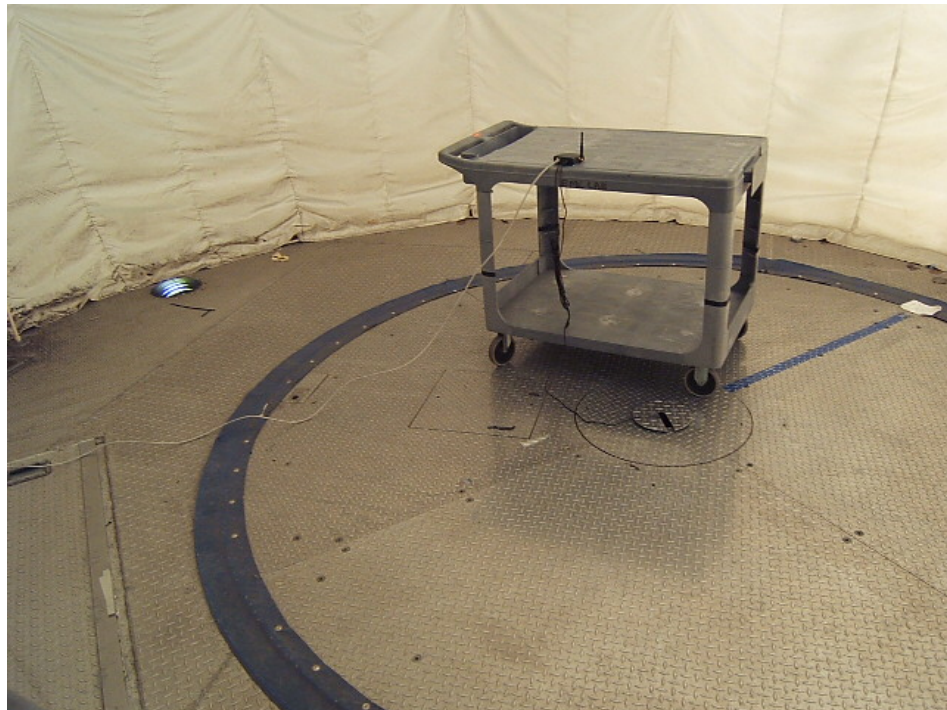
**Emissions Pre-scan**

**Test Equipment**



**Emissions Final Scan  
(OATS)**

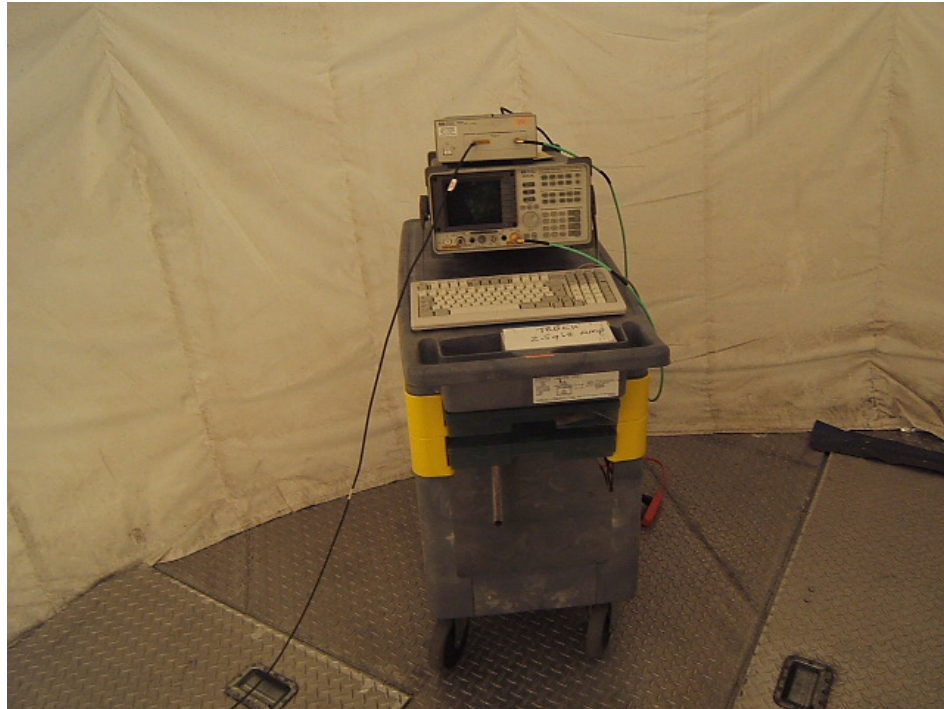
**EUT**



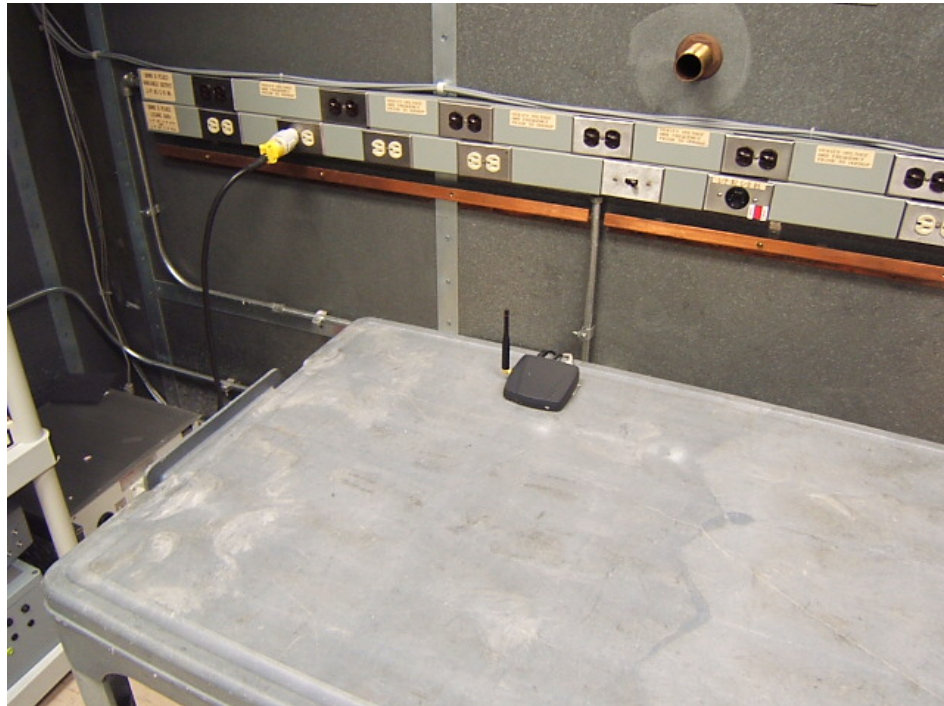
The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TUV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TUV Rheinland, NVLAP or any agency of the United States Government.

**Emissions Final Scan  
(OATS)**

**Test Equipment**



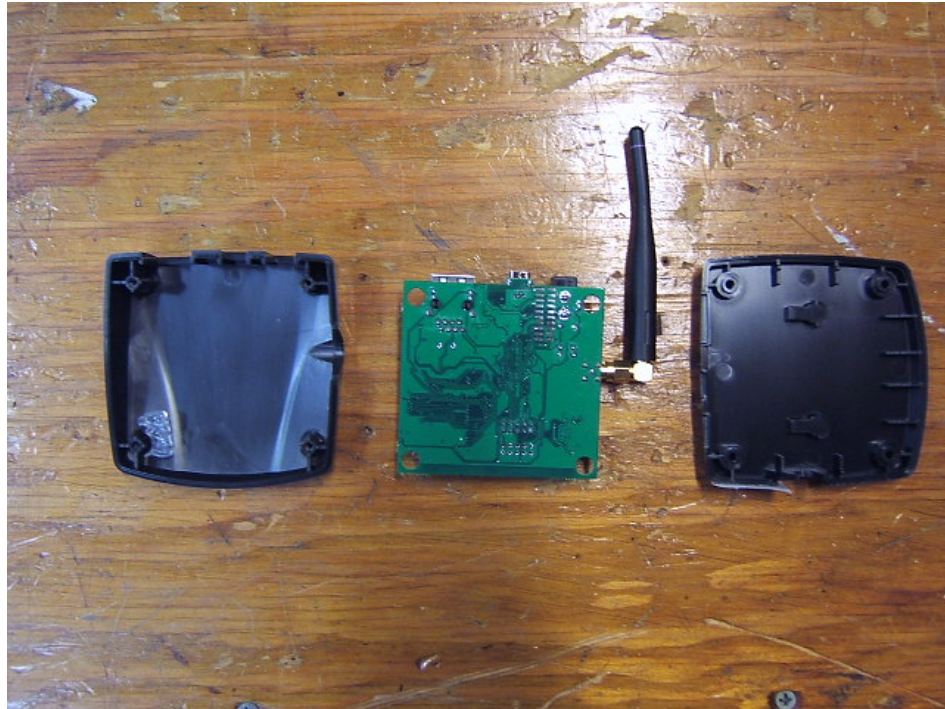
**Conducted Emissions**



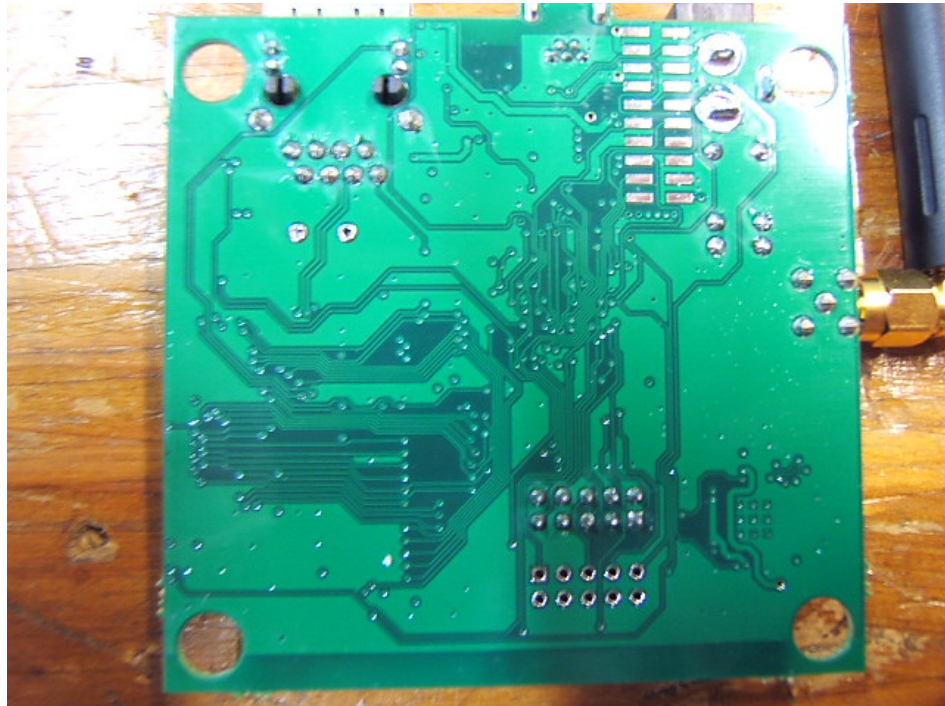
The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TUV Rheinland test mark. This report must not be used by the applicant to claim product endorsement by TUV Rheinland, NVLAP or any agency of the United States Government.



Inside view



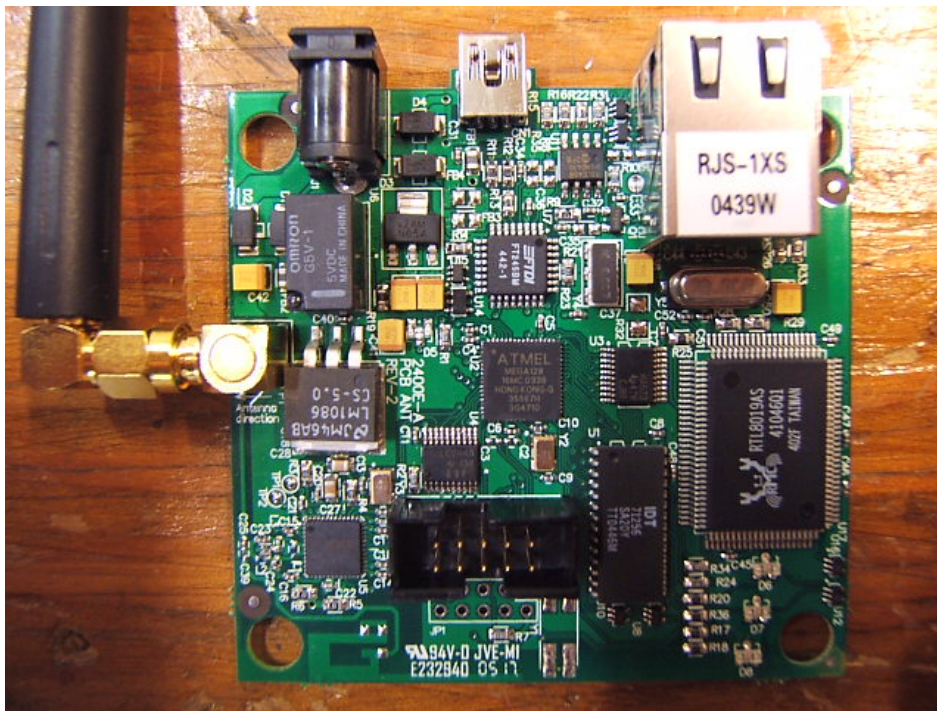
Inside view



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Inside view



Power Adapter



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TUV Rheinland of North America, Inc., North American Headquarters, 12 Commerce Road, Newtown, CT 06470 - Tel (203)426-0888 - Fax (203)426-4009