



Test Report

| | |
|---------------------|---|
| Report No | EF0579-1 |
| Client | Mercury Computer Systems 199 Riverneck Road Chelmsford, MA 01824 |
| Phone | 978-967-1872 |
| Fax | 978-256-0588 |
| FRN | 0013978101 |
| Model | INU-75 GB |
| FCC ID | TMOINU-75GB |
| Equipment Type | Spread Spectrum Transmitter |
| Equipment Code | DSS |
| Results | As detailed within this report |
| Prepared by |  Evan Gould – Test Engineer |
| Authorized by |  Michael Buchholz – EMC Manager |
| Issue Date | 10/5/05 |
| Conditions of issue | This Test Report is issued subject to the conditions stated in 'terms and conditions' section of this report. |

Curtis-Straus LLC is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.

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Summary

This test report supports an application for certification of a transmitter operating pursuant to 47 CFR 15.247. The product is the Mercury Computer Systems Inertial Navigation Unit (Model INU-75 GB). It is a frequency hopper that operates in the range 2400-2483.5MHz. It utilizes a hopping table of 79 channels between channel 0 (2402MHz) and channel 78 (2480MHz) inclusively.

Test Methodology

Radiated emissions testing is performed according to the procedures specified in ANSI C63.4 (2003). Public Notice DA 00-705 *"Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems"* was followed for testing as well. Since the BlueTooth module does not have an antenna connector, all readings were taken radiated. The unit was maximized around three orthogonal axes.

Frequency range investigated: 30MHz – 25GHz

| | | |
|-----------------------|--------------|----|
| Measurement distance: | 30 - 8000MHz | 3m |
| | 8 – 25GHz | 1m |

Statement of Conformity

The INU has been found to conform with the following parts of 47 CFR as detailed below:

| Part 2 | Part 15 | Comments |
|--------|------------------|--|
| | 15.15(b) | There are no controls that adjust the power level on this device. |
| 2.925 | 15.19 | The label is shown in the label exhibit. |
| | 15.21 | Information to the user is shown in the instruction manual exhibit. |
| | 15.27 | No special accessories are required for compliance. |
| | 15.203 | The antenna for the BlueTooth device on this product is hardwired to the module. |
| | 15.205 15.209 | The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209. |
| | 15.207 | The unit is powered by DC from a cigarette lighter. |
| | 15.247 | The unit complies with the frequency hopper requirements of 15.247 |

EUT Configuration

EUT Configuration

Work Order: F0579

Company: Mercury Computer Systems

Company Address: 199 Riverneck Road
Chelmsford, MA 01824

Contact: Lance Forman

Person Present: Jean-Baptiste Lopez

| | MN | SN | | |
|--|--------------|------------------|---------------|-----------------|
| EUT: | INU-75 GB | 1 | | |
| EUT Description: Inertial Navigation Unit | | | | |
| EUT Max Frequency: 2483MHz | | | | |
| Support Equipment: | MN | SN | | |
| Automobile adapter | M01930-1003A | 0528 | | |
| RadioShack PS | 22-507 | - | | |
| EUT Cables: | Qty | Shielded? | Length | Ferrites |
| Power | 1 | No | 1.5 m | None |
| GPS antenna | 1 | Yes | 0.1 m | None |
| Unpopulated EUT Ports: | Qty | Reason | | |
| None | | | | |
| Software / Operating Mode Description: | | | | |

The EUT was operated with two different forms of firmware. One was a diagnostic firmware which allowed the EUT to be set to any channel and to transmit continuously modulated or unmodulated. The other was the regular firmware which enable the hopping function and communicated with the tablet PC portion of the INU system.

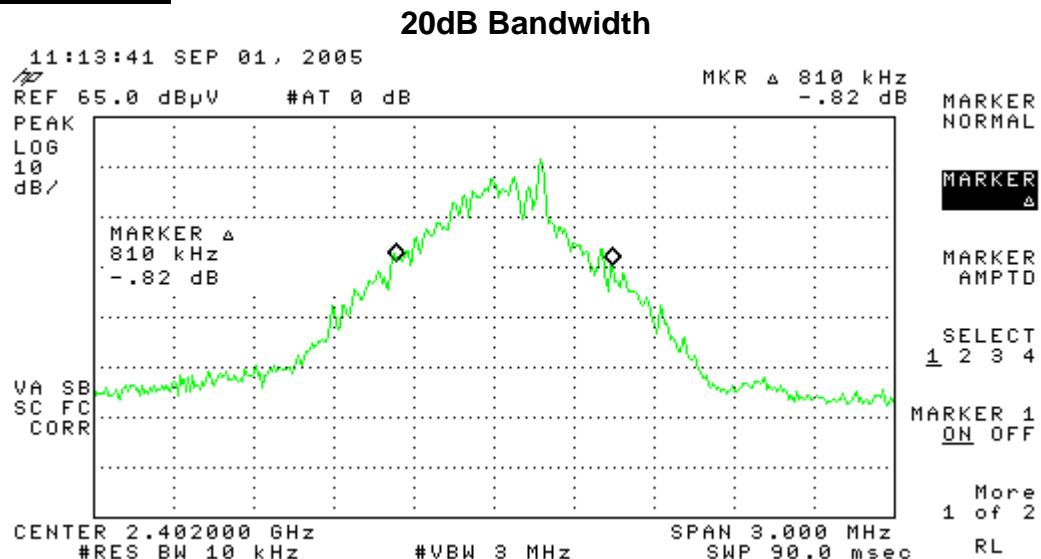


20dB Bandwidth

MEASUREMENT

The 20dB bandwidth measured was **810kHz**. This value was used as the limit for the channel separation requirement.

ANALYZER PLOT



Channel Separation

REQUIREMENT

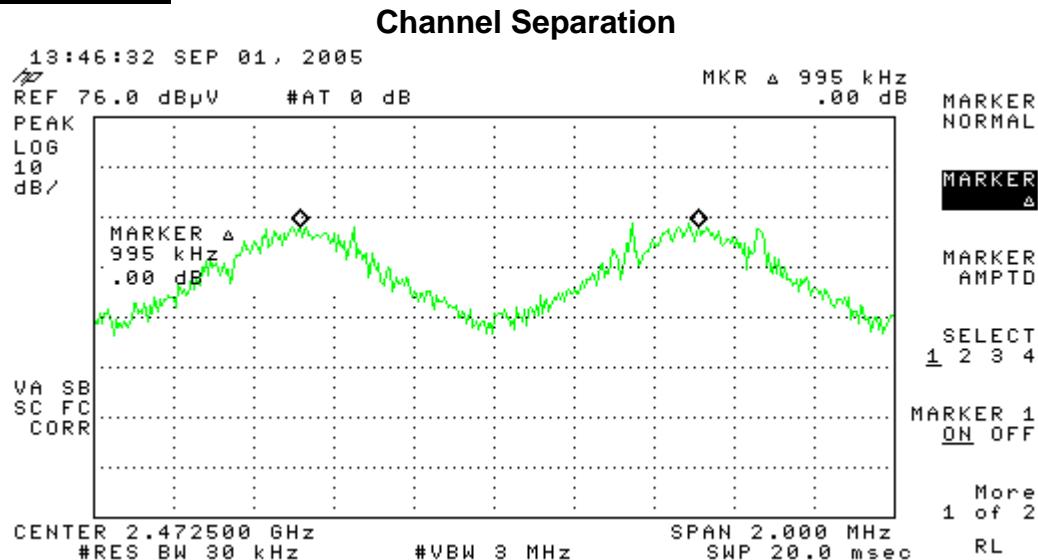
“Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.” [15.247(a)(1)]

20dB bandwidth = 810kHz

MEASUREMENT

Channel separation = 995kHz

ANALYZER PLOT



Number of Hopping Frequencies

REQUIREMENT

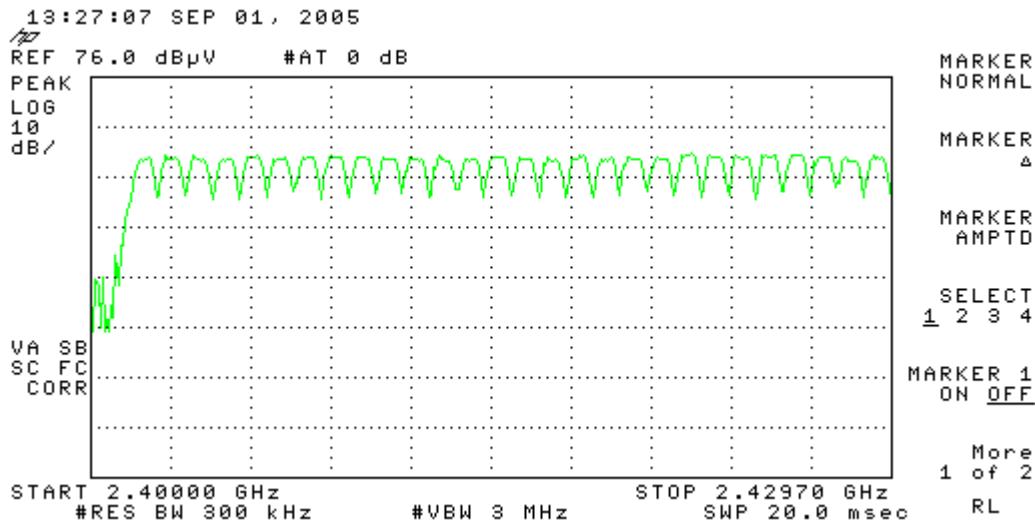
"Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 non-overlapping channels." [15.247(a)(1)(iii)]

MEASUREMENT

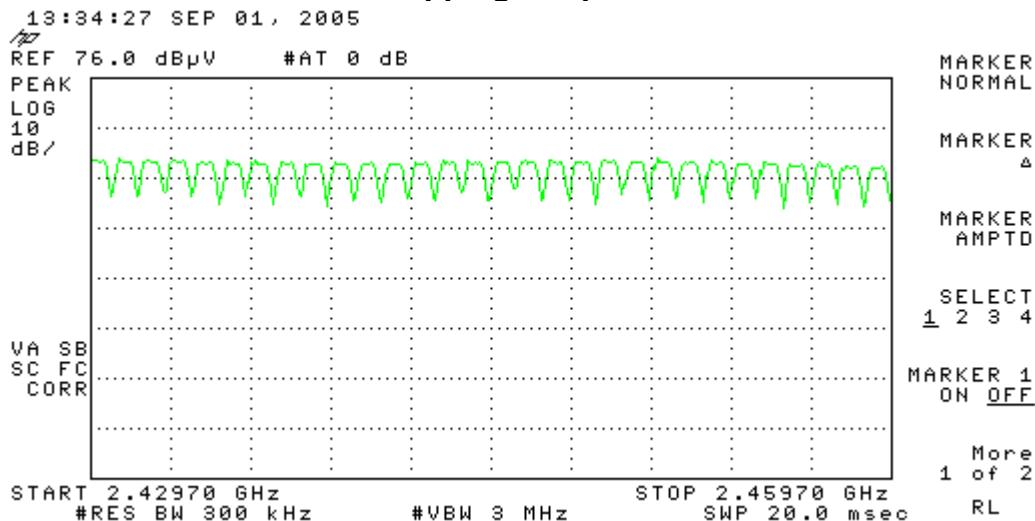
Number of Hopping Frequencies = $28 + 30 + 21 = 79$

ANALYZER PLOTS

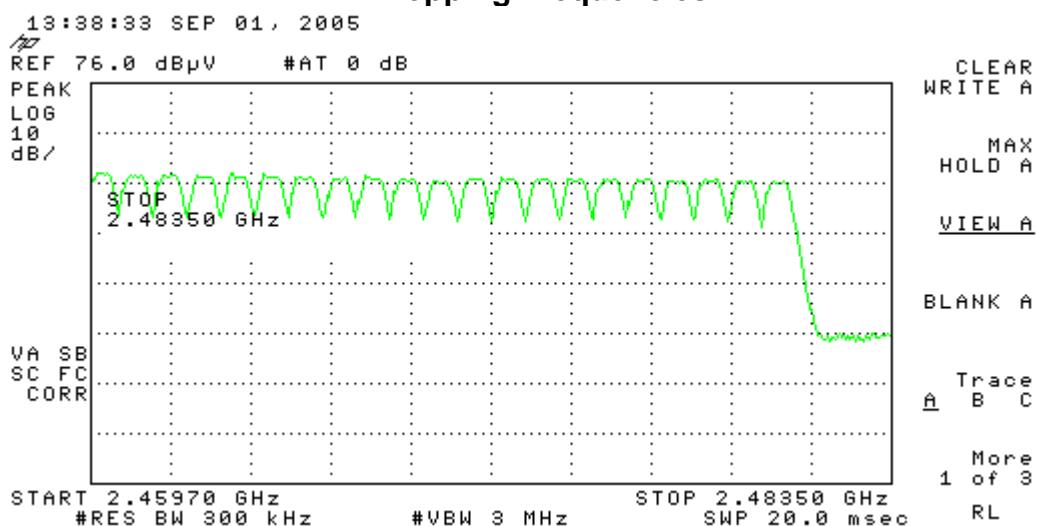
28 Hopping Frequencies



30 Hopping Frequencies



21 Hopping Frequencies



Time of Occupancy (Dwell Time)

REQUIREMENT

"The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed" [15.247(a)(1)(iii)]

Period of time = $0.4 * 79 = 31.6s$

(Number of hops were counted in a period of 15.8s and multiplied by 2)

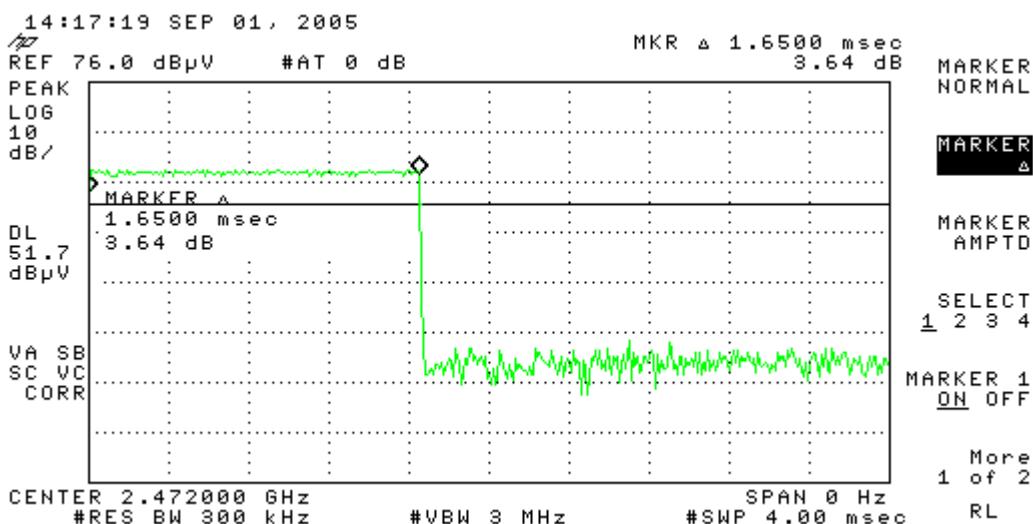
MEASUREMENTS

Individual dwell time = 0.00165s

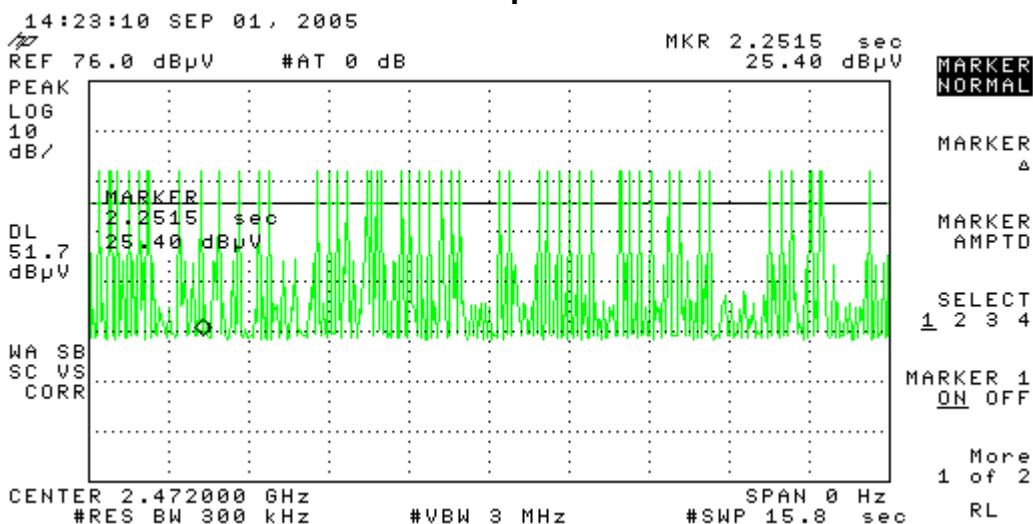
Worst case dwell time within 31.6s = $55 * 0.00165s = 0.1815s$

ANALYZER PLOTS

Individual Dwell Time



Number of Hops Within 15.8s



Peak Output Power

LIMIT

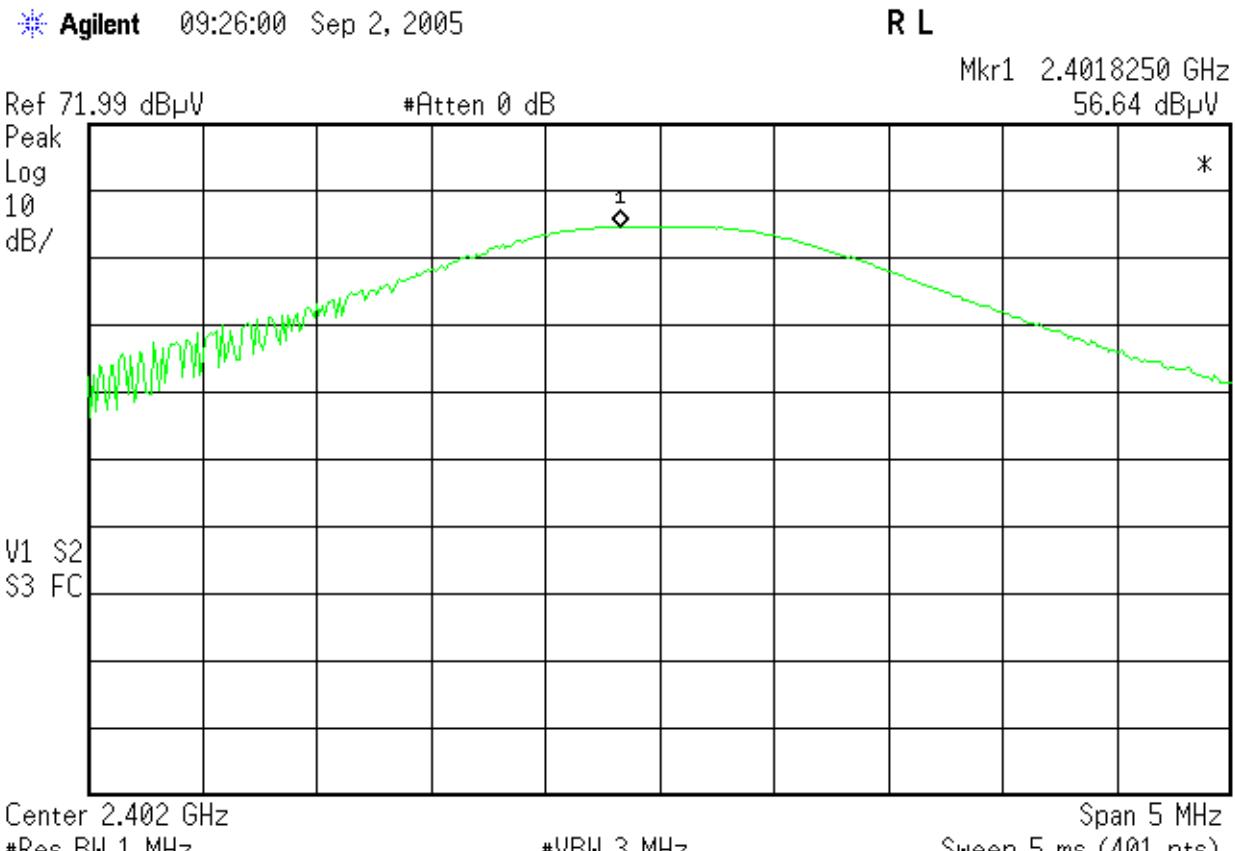
"The maximum peak output power of...systems in the 2400-2483.5 MHz band employing at least 75 hopping channels...: 1 Watt." [15.247(b)(1)]

MEASUREMENTS

| Fundamental | | | | | | | | Curtis-Straus LLC | | | | | | | |
|---|-----------------|----------------------|-----------------------------------|-------------------------------|---------------------------|---------------------------------|---------------------|---------------------|----------------------|------|--|--|--|--|--|
| Date: 02-Sep-05 | | | Company: Mercury Computer Systems | | | | | Work Order: F0579 | | | | | | | |
| Engineer: Evan Gould | | | | | | | | | | | | | | | |
| EUT Desc: VistaNav | | | | | | | | | | | | | | | |
| Frequency Range: 2400-2483.5MHz | | | | | Measurement Distance: 3 m | | | | | | | | | | |
| Notes: EIRP[dBm] = Field Strength[dBuV/m] + 20log(distance[m]) - 104.77 | | | | | | | | | | | | | | | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dB μ V) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dB μ V/m) | Adjusted EIRP (dBm) | 47 CFR 15.247(b)(1) | | | | | | | |
| Ch.0 Hpk | 2402.0 | 56.6 | 0.0 | 29.7 | 2.8 | 89.1 | -6.1 | 30.0 | -36.1 | Pass | | | | | |
| Ch.39 Hpk | 2441.0 | 57.3 | 0.0 | 29.8 | 2.9 | 90.0 | -5.2 | 30.0 | -35.2 | Pass | | | | | |
| Ch.78 Hpk | 2480.0 | 57.4 | 0.0 | 29.9 | 2.9 | 90.2 | -5.0 | 30.0 | -35.0 | Pass | | | | | |
| Table Result: Pass by -35.0 dB | | | | Worst Freq: 2480.0 MHz | | | | | | | | | | | |
| Test Site: "T" | | | Pre-Amp: none | | | Cable: EMIR-HIGH 5 | | | Analyzer: Orange | | | | | | |
| | | | | | | | | | Antenna: Orange Horn | | | | | | |

SAMPLE ANALYZER PLOT

Channel 0 Fundamental



Radiated Band Edge

LIMIT

“...radiated emissions which fall in the restricted bands, as defined in §15.209(a), must also comply with the radiated emission limits specified in §15.209(a)” [15.247(c)]

MEASUREMENTS

| Band Edge | | | | | | | Curtis-Straus LLC | | |
|--|--------------------|-------------------------|-----------------------------------|-----------------------------|-------------------------|---------------------------------------|--|----------------|-----------------------|
| Date: 02-Sep-05 | | | Company: Mercury Computer Systems | | | | Work Order: F0579 | | |
| Engineer: Evan Gould | | | | | | | | | |
| Frequency Range: 2400-2483.5MHz | | | | Measurement Distance: 3 m | | | | | |
| Notes: Marker Delta Method | | | | | | | EUT Max Freq: | | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dB μ V) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dB μ V/m) | 47 CFR 15.209 | | |
| Ch.78 Modulated Hpk | 2483.5 | 38.4 | --- | 30.0 | 2.9 | 32.2 | Limit (dB μ V/m) | Margin (dB) | Result (Pass/Fail) |
| Hopping Enabled Hpk | 2483.5 | 45.7 | 39.1 | 30.0 | 2.9 | 39.5 | 54.0 | -21.8 | Pass |
| Test Site: "T" Pre-Amp: Brown Cable: EMIR-HIGH 5 | | | | | | | Analyzer: Orange Antenna: Orange Horn | | |
| Table Result: Pass by -14.5 dB | | | | | | | Worst Freq: 2483.5 MHz | | |

ANALYZER PLOTS

Channel 78 Modulated – Marker Delta

 Agilent 10:30:55 Sep 2, 2005

R L

Mkr2 2.479825 GHz
96.12 dB μ V



Center 2.483 GHz

#URW 3 MHz

Span 10 MHz

#Res BW 100 kHz

Span 10 Hz
Sweep 4 ms (401 nts)

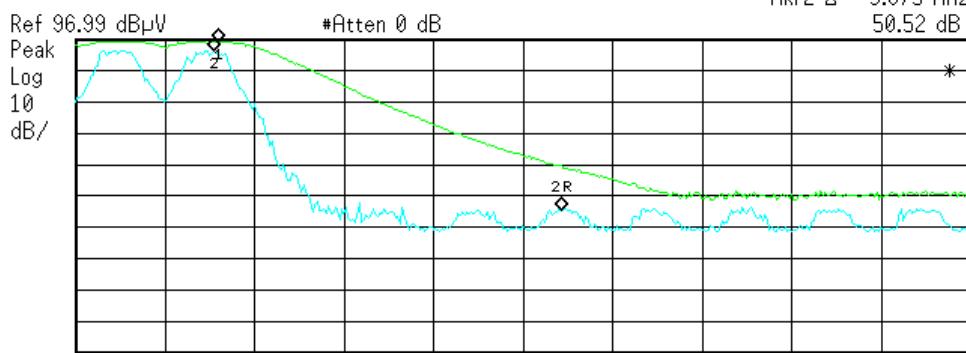
| Marker | Trace | Type | X Axis | Amplitude |
|--------|-------|------|--------------|------------------|
| 1R | (2) | Freq | 2.483500 GHz | 36.16 dB μ W |
| 1a | (2) | Freq | -3.375 MHz | 57.68 dB |
| 2 | (1) | Freq | 2.479825 GHz | 96.12 dB μ W |

Hopping Enabled – Marker Delta

 Agilent 11:09:27 Sep 2, 2005

R L

Mkr2 Δ -3.875 MHz
50.52 dB



Center 2.483 GHz

HRH 2/100

Span 10 MHz

#Res BW 100 kHz

Sweep 4 ms (401 pts)

| Marker | Trace | Type | X Axis | Amplitude |
|--------|-------|------|--------------|-------------------------|
| 1 | (1) | Freq | 2.480100 GHz | 96.15 dB _μ W |
| 2R | (2) | Freq | 2.483925 GHz | 42.49 dB _μ W |
| 2a | (2) | Freq | -3.875 MHz | 58.52 dB |



Radiated Spurious Emissions

LIMITS

“...radiated emissions which fall in the restricted bands, as defined in §15.209(a), must also comply with the radiated emission limits specified in §15.209(a)” [15.247(c)]

MEASUREMENTS

| Radiated Emissions Table | | | | | | | Curtis-Straus LLC | | |
|---|--------------------|-------------------------|--|-----------------------------|-------------------------|---------------------------------------|-------------------|-------|------|
| Date: 17-Aug-05 Engineer: Chris Reynolds | | | Company: Mercury Computer Systems EUT Desc: INU | | | Work Order: F0579 | | | |
| Frequency Range: 30-1000MHz | | | Measurement Distance: 10 m | | | | | | |
| Notes: Does not include harmonics of 40MHz | | | | | | EUT Max Freq: 2.483GHz | | | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dB μ V) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dB μ V/m) | 47 CFR 15.209 | | |
| v | 144.0 | 27.4 | 22.3 | 11.0 | 1.6 | 17.7 | 33.0 | -15.3 | Pass |
| h | 200.0 | 31.7 | 22.4 | 8.9 | 1.8 | 20.0 | 33.0 | -13.0 | Pass |
| h | 210.0 | 34.6 | 22.4 | 9.6 | 1.9 | 23.7 | 33.0 | -9.3 | Pass |
| h | 227.79 | 31.5 | 22.4 | 10.9 | 1.9 | 21.9 | 35.5 | -13.6 | Pass |
| h | 239.99 | 34.3 | 22.4 | 11.8 | 2.0 | 25.7 | 35.5 | -9.8 | Pass |
| h | 250.7 | 33.4 | 22.3 | 12.5 | 2.0 | 25.6 | 35.5 | -9.9 | Pass |
| h | 258.49 | 31.9 | 22.3 | 12.5 | 2.1 | 24.2 | 35.5 | -11.3 | Pass |
| h | 300.0 | 27.9 | 22.3 | 12.8 | 2.3 | 20.7 | 35.5 | -14.8 | Pass |
| h | 320.0 | 31.1 | 22.3 | 13.3 | 2.4 | 24.5 | 35.5 | -11.0 | Pass |
| h | 339.25 | 29.3 | 22.2 | 13.8 | 2.5 | 23.4 | 35.5 | -12.1 | Pass |
| h | 398.12 | 28.6 | 22.1 | 15.3 | 2.7 | 24.5 | 35.5 | -11.0 | Pass |
| h | 427.6 | 27.8 | 22.0 | 15.8 | 2.9 | 24.5 | 35.5 | -11.0 | Pass |
| h | 457.12 | 31.8 | 22.0 | 16.3 | 3.0 | 29.1 | 35.5 | -6.4 | Pass |
| h | 480.0 | 29.0 | 21.9 | 16.7 | 3.1 | 26.9 | 35.5 | -8.6 | Pass |
| h | 520.0 | 32.5 | 21.9 | 17.3 | 3.2 | 31.1 | 35.5 | -4.4 | Pass |
| h | 545.6 | 26.7 | 21.9 | 17.5 | 3.3 | 25.6 | 35.5 | -9.9 | Pass |
| h | 680.0 | 28.7 | 21.9 | 18.0 | 3.8 | 28.6 | 35.5 | -6.9 | Pass |
| h | 720.0 | 27.6 | 21.9 | 18.3 | 3.9 | 27.9 | 35.5 | -7.6 | Pass |
| Table Result: Pass | | | by -4.4 dB | | | Worst Freq: 520.0 MHz | | | |
| Test Site: "T" | | Pre-Amp: Blue | Cable: EMIR-04 | | | Analyzer: Green | Antenna: Green | | |

| Radiated Emissions Table | | | | | | | Curtis-Straus LLC | | |
|---|--------------------|-------------------------|---|-----------------------------|-------------------------|---------------------------------------|--------------------|-------|------|
| Date: 16-Aug-05 Engineer: Will Brown | | | Company: Mercury Computer System EUT Desc: INU | | | Work Order: F0579 | | | |
| Frequency Range: 30-1000MHz | | | Measurement Distance: 10 m | | | | | | |
| Notes: Harmonics of 40MHz | | | | | | EUT Max Freq: 2483MHz | | | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dB μ V) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dB μ V/m) | 47 CFR 15.209 | | |
| H | 440.0 | 36.5 | 22.0 | 16.6 | 2.9 | 34.0 | 35.5 | -1.5 | Pass |
| H | 280.0 | 39.2 | 22.3 | 13.4 | 2.2 | 32.5 | 35.5 | -3.0 | Pass |
| H | 240.0 | 33.2 | 22.4 | 11.4 | 2.0 | 24.2 | 35.5 | -11.3 | Pass |
| H | 320.0 | 30.4 | 22.3 | 14.0 | 2.4 | 24.5 | 35.5 | -11.0 | Pass |
| H | 360.0 | 34.5 | 22.2 | 15.2 | 2.5 | 30.0 | 35.5 | -5.5 | Pass |
| H | 400.0 | 30.6 | 22.1 | 15.4 | 2.7 | 26.6 | 35.5 | -8.9 | Pass |
| H | 480.0 | 27.7 | 21.9 | 17.8 | 3.1 | 26.7 | 35.5 | -8.8 | Pass |
| H | 520.0 | 29.3 | 21.9 | 17.7 | 3.2 | 28.3 | 35.5 | -7.2 | Pass |
| Table Result: Pass | | | by -1.5 dB | | | Worst Freq: 440.0 MHz | | | |
| Test Site: "T" | | Pre-Amp: Blue | Cable: EMIR-04 | | | Analyzer: Yellow | Antenna: Red-White | | |

Radiated Emissions Table*Curtis-Straus LLC*

| Date: 06-Sep-05 Engineer: Evan Gould | | Company: Mercury Computer Systems EUT Desc: VistaNav | | Work Order: F0579 | | | | | |
|---|------------------|---|--------------------|-------------------------------|----------------------|------------------------|---------------------------------|---|--|
| Frequency Range: 1-8GHz | | | | Measurement Distance: 3 m | | | | | |
| Notes: | | | | EUT Max Freq: 2480MHz | | | | | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dB μ V) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Duty Cycle Factor (dB) | Adjusted Reading (dB μ V/m) | 47 CFR 15.209 | |
| | | | | | | | | Limit (dB μ V/m) Margin (dB) Result (Pass/Fail) | |
| (Ch. 0) Vpk | 4804.0 | 45.0 | 19.7 | 35.3 | 3.6 | 0.0 | 64.2 | 74.0 -9.8 Pass | |
| (Ch. 0) Vav | 4804.0 | 45.0 | 19.7 | 35.3 | 3.6 | 20.0 | 44.2 | 54.0 -9.8 Pass | |
| (Ch. 39) Vpk | 4882.0 | 45.3 | 18.8 | 35.5 | 3.6 | 0.0 | 65.6 | 74.0 -8.4 Pass | |
| (Ch. 39) Vav | 4882.0 | 45.3 | 18.8 | 35.5 | 3.6 | 20.0 | 45.6 | 54.0 -8.4 Pass | |
| (Ch. 78) Vpk | 4960.0 | 44.2 | 19.5 | 35.7 | 3.8 | 0.0 | 64.2 | 74.0 -9.8 Pass | |
| (Ch. 78) Vav | 4960.0 | 44.2 | 19.5 | 35.7 | 3.8 | 20.0 | 44.2 | 54.0 -9.8 Pass | |
| (Ch. 0) Vpk | 7206.0 | 40.1 | 18.4 | 38.1 | 4.5 | 0.0 | 64.3 | 74.0 -9.7 Pass | |
| (Ch. 0) Vav | 7206.0 | 40.1 | 18.4 | 38.1 | 4.5 | 20.0 | 44.3 | 54.0 -9.7 Pass | |
| (Ch. 39) Vpk | 7323.0 | 40.9 | 17.2 | 38.4 | 4.9 | 0.0 | 67.0 | 74.0 -7.0 Pass | |
| (Ch. 39) Vav | 7323.0 | 40.9 | 17.2 | 38.4 | 4.9 | 20.0 | 47.0 | 54.0 -7.0 Pass | |
| (Ch. 78) Vpk | 7440.0 | 38.0 | 15.6 | 38.7 | 4.6 | 0.0 | 65.7 | 74.0 -8.3 Pass | |
| (Ch. 78) Vav | 7440.0 | 38.0 | 15.6 | 38.7 | 4.6 | 20.0 | 45.7 | 54.0 -8.3 Pass | |
| Table Result: Pass by -7.0 dB | | | | Worst Freq: 7323.0 MHz | | | | | |
| Test Site: "T" | Pre-Amp: Yel-Blk | Cable: EMIR-HIGH 2 | | Analyzer: Orange | Antenna: Orange Horn | | | | |

Radiated Emissions Table*Curtis-Straus LLC*

| Date: 06-Sep-05 Engineer: Evan Gould | | Company: Mercury Computer Systems EUT Desc: VistaNav | | Work Order: F0579 | | | | | |
|---|------------------|---|--------------------|--------------------------------|----------------------|------------------------|---------------------------------|---|--|
| Frequency Range: 8-25GHz | | | | Measurement Distance: 3 m | | | | | |
| Notes: | | | | EUT Max Freq: 2480MHz | | | | | |
| Antenna Polarization (H / V) | Frequency (MHz) | Reading (dB μ V) | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB) | Duty Cycle Factor (dB) | Adjusted Reading (dB μ V/m) | 47 CFR 15.209 | |
| | | | | | | | | Limit (dB μ V/m) Margin (dB) Result (Pass/Fail) | |
| (Ch. 0) Vpk | 12010.0 | 34.6 | 17.0 | 40.1 | 6.2 | 0.0 | 63.9 | 83.5 -19.6 Pass | |
| (Ch. 0) Vav | 12010.0 | 34.6 | 17.0 | 40.1 | 6.2 | 20.0 | 43.9 | 63.5 -19.6 Pass | |
| (Ch. 39) Vpk | 12205.0 | 32.5 | 16.9 | 40.1 | 6.5 | 0.0 | 62.2 | 83.5 -21.3 Pass | |
| (Ch. 39) Vav | 12205.0 | 32.5 | 16.9 | 40.1 | 6.5 | 20.0 | 42.2 | 63.5 -21.3 Pass | |
| (Ch. 78) Vpk | 12400.0 | 32.6 | 17.0 | 40.0 | 6.7 | 0.0 | 62.3 | 83.5 -21.2 Pass | |
| (Ch. 78) Vav | 12400.0 | 32.6 | 17.0 | 40.0 | 6.7 | 20.0 | 42.3 | 63.5 -21.2 Pass | |
| Table Result: Pass by -19.6 dB | | | | Worst Freq: 12010.0 MHz | | | | | |
| Test Site: "T" | Pre-Amp: Yel-Blk | Cable: EMIR-HIGH 2 | | Analyzer: Orange | Antenna: Orange Horn | | | | |
| | Pre-Amp: Yellow | Cable: EMIR-HIGH 2 | | Analyzer: Orange | Antenna: White Horn | | | | |

Duty-Cycle Factor = $20 \cdot \log(0.00574) = 44\text{dB}$ (20dB maximum)

A duty cycle of 0.574% was taken from the dwell time calculation.

Voltage Variation

REQUIREMENT

“For intentional radiators, measurements of the variation of the...radiated signal level of the fundamental frequency component of the emission...shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.”
[15.31(e)]

MEASUREMENTS

The voltage range listed on the power supply is 12-32VDC. This test was performed at a maximum of 32V due to the fact that it is battery powered.

| Voltage Variations | | |
|-----------------------------|-----------------|---------------|
| Date: 6-Sep-05 | | |
| Work Order: F0579 | | |
| Company: Mercury | | |
| Engineer: Evan Gould | | |
| EUT: VistaNav | | |
| Notes: | | |
| Supply Voltage (VDC) | Frequency (MHz) | Reading (dBm) |
| 10.2 | 2401.8 | 58.0 |
| 12 | 2401.8 | 57.9 |
| 32 | 2401.8 | 57.8 |

Test Equipment Used

| REV. 31-AUG-2005 | | | | | | | |
|--------------------------------|--------------|------------------|-----------|-----------------------|-----------------|-----|--------------------|
| SPECTRUM ANALYZERS / RECEIVERS | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| RED | 9kHz-1.8GHz | 8591E | HP | 3441A03559 | 00024 | I | 13-JAN-2006 |
| WHITE | 9kHz-22GHz | 8593E | HP | 3547U01252 | 00022 | I | 08-MAR-2006 |
| BLUE | 9kHz-1.8GHz | 8591E | HP | 3223A00227 | 00070 | I | 03-NOV-2005 |
| YELLOW | 9kHz-2.9GHz | 8594E | HP | 3523A01958 | 00100 | I | 20-APR-2006 |
| GREEN | 9kHz-26.5GHz | 8593E | HP | 3829A03618 | 00143 | I | 02-AUG-2006 |
| BLACK | 9kHz-12.8GHz | 8596E | HP | 3710A00944 | 00337 | I | 27-DEC-2005 |
| YELLOW-BLACK | 20Hz-40.0MHz | 3585A | HP | 2504A05219 | 00030 | I | Out of Service |
| TELECOM 3585A | 20Hz-40.0MHz | 3585A | HP | 1750A02762 | 01067 | I | 04-FEB-2006 |
| ORANGE | 9kHz-26.5GHz | E4407B | HP | US39440975 | 00394 | I | 22-JUN-2006 |
| EMI TEST RECEIVER | 20-1000MHz | ESVS30 | R&S | 827957/001 | 01098 | I | 27-OCT-2005 |
| LISNs/MEASUREMENT PROBES | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| RED | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 956348 | 00753 | II | 15-APR-2006 |
| BLUE (DC) | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 956349 | 00752 | II | 02-MAY-2006 |
| YELLOW-BLACK | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 984735 | 00248 | II | 15-APR-2006 |
| ORANGE | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 903707 | 00754 | II | 02-MAY-2006 |
| GOLD (DC) | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 984734 | 00247 | II | 02-MAY-2006 |
| BROWN | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 0411656 | 00986 | II | 04-MAY-2006 |
| GREEN | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 0411657 | 00987 | II | 04-MAY-2006 |
| YELLOW | 10kHz-30MHz | 8012-50-R-24-BNC | SOLAR | 0411658 | 1080 | II | 04-MAY-2006 |
| WHITE-BLACK | 10kHz-30MHz | 8610-50-TS-100-N | SOLAR | 972019 | 00678 | II | 15-APR-2006 |
| BLACK | 10kHz-30MHz | 8610-50-TS-100-N | SOLAR | 972017 | 00675 | II | 15-APR-2006 |
| RED-BLACK | 10kHz-30MHz | 8610-50-TS-100-N | SOLAR | 972016 | 00677 | II | 15-APR-2006 |
| BLUE-BLACK | 10kHz-30MHz | 8610-50-TS-100-N | SOLAR | 972018 | 00676 | II | 15-APR-2006 |
| BLUE MONITORING PROBE | 0.01-150MHz | 91550-2 | TEGAM | 12350 | 00807 | I | 26-MAY-2007 |
| YELLOW MONITORING PROBE | 0.01-150MHz | 91550-2 | ETS | 50972 | 00493 | I | 24-NOV-2005 |
| GREEN CURRENT TRANSFORMER | 40Hz-20MHz | 150 | PEARSON | 10226 | 00793 | I | 07-APR-2007 |
| BLUE CISPR LINE PROBE | 150kHz-30MHz | N/A | C-S | N/A | 00805 | II | 08-JUN-2007 |
| BLACK CISPR LINE PROBE | 150kHz-30MHz | N/A | C-S | N/A | NONE | II | 08-JUN-2007 |
| CISPR TELCO VOLTAGE PROBE | 10kHz-30MHz | CS A/C-10 | C-S | CS01 | 00296 | II | 28-SEP-2005 |
| CISPR 22 TELCO ISN | 9kHz-30MHz | FCC-TLISN-T4 | FISCHER | 20115 | 00746 | I | 26-OCT-2006 |
| OPEN AREA TEST SITE (OATS) | FCC CODE | IC CODE | VCCI CODE | CAT | CALIBRATION DUE | | |
| SITE F | 93448 | IC 2762-F | R-1688 | II | 04-APR-2007 | | |
| SITE T | 93448 | IC 2762-T | R-905 | II | 14-AUG-2007 | | |
| SITE A | 93448 | IC 2762-A | R-903 | II | 13-AUG-2007 | | |
| SITE M | 93448 | IC 2762-M | R-904 | II | 19-MAR-2007 | | |
| LINE CONDUCTED TEST SITES | FCC CODE | IC CODE | VCCI CODE | CAT | CALIBRATION DUE | | |
| EMI 1 | 93448 | N/A | C-1801 | II | 01-MAY-2006 | | |
| EMI 2 | 93448 | N/A | C-1802 | II | 01-MAY-2006 | | |
| EMI 3 | 93448 | N/A | C-1803 | II | 01-MAY-2006 | | |
| MIXERS/DIPLEXERS | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| MIXER / HORN | 26.5-40 GHz | 11970A/28-442-6 | HP/ATM | 2332A01695/A046903-01 | 1087 | I | 23-AUG-2006 |
| MIXER / HORN | 26.5-40 GHz | 11970A/28-442-6 | HP/ATM | 3003A07825/A046903-01 | 1086 | I | 23-AUG-2006 |
| MIXER / HORN | 40-60 GHz | M19HW/A | OML | U30110-1 | 00821 | I | 02-MAR-2007 |
| MIXER / HORN | 60-90 GHz | M12HW/A | OML | E30110-1 | 00822 | I | 03-MAR-2007 |
| MIXER / HORN | 90-140 GHz | MO8HW/A | OML | F21206-1 | 00811 | I | 03-MAR-2007 |
| MIXER / HORN | 140-220 GHz | MO5HW/A | OML | G21206-1 | 00812 | II | OUT OF CALIBRATION |
| DIPLEXER | 40-220 GHz | DPL.26 | OML | N/A | 00813 | I | 03-MAR-2007 |
| ABSORBING CLAMPS | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| FISCHER CLAMP | 30-1000MHz | F-201-23MM | FISCHER | 10 | 00081 | I | 16-JAN-2006 |

| PREAMPS / ATTENUATORS / FILTERS | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|---------------------------------|--------------|--------------------------|--------------------|-------------------|-------|-----|-----------------|
| RED | 0.10-2000MHz | ZFL-1000-LN | C-S | N/A | 00798 | II | 08-APR-2006 |
| BLUE | 0.01-2000MHz | ZFL-1000-LN | C-S | N/A | 00759 | II | 03-AUG-2006 |
| BLUE-BLACK | 0.01-2000MHz | ZFL-1000-LN | C-S | N/A | 00800 | II | 10-FEB-2006 |
| GREEN | 0.01-2000MHz | ZFL-1000-LN | C-S | N/A | 00802 | II | 21-JUL-2006 |
| BLACK | 0.01-2000MHz | ZFL-1000-LN | C-S | N/A | 00799 | II | 10-FEB-2006 |
| ORANGE | 0.01-2000MHz | ZFL-1000-LN | C-S | N/A | 00765 | II | 10-FEB-2006 |
| WHITE | 1-20GHz | SMC-12A | C-S | 426643 | 00760 | II | 04-AUG-2006 |
| BROWN | 1-20GHz | PM2-38-218-4R5-17-15-SFF | C-S | PL1655 | 1132 | II | 27-JUN-2006 |
| YELLOW-BLACK | 1-20GHz | SMC-12A | C-S | 535055 | 00801 | II | 25-AUG-2006 |
| HF (YELLOW) | 18-26.5GHz | AFS4-18002650-60-8P-4 | C-S | 467559 | 00758 | II | 23-AUG-2007 |
| HIGH PASS FILTER | 1-18 GHz | SPA-F-55204 | K&L | 36 | 00817 | II | 06-JAN-2006 |
| LOW PASS FILTER | 1-9 GHz | 11SL10-4100/X4400-O/O | K&L | 4 | 00816 | II | 06-JAN-2006 |
| HF 20dB 50W ATTENUATOR | 0.03-20 GHz | PE 7019-20 | PASTERNAK | 01 | 00791 | II | 10-MAY-2007 |
| HF 30dB | 0.03-20 GHz | PE 7019-30 | PASTERNAK | 02 | | II | 10-MAY-2007 |
| 50WATTENAUATOR | | | | | | | |
| LOW FREQ LPF | 10-100kHz | L200K1G1 | MICROWAVE CIRCUITS | 4460-01 DC0432 | 1019 | II | OUT OF SERVICE |
| LOW FREQ LPF | 10-100kHz | L200K1G1 | MICROWAVE CIRCUITS | 4777-01 DC0434 | 1088 | II | 30-AUG-2006 |

| ANTENNAS | RANGE | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|----------------------|-------------|--------------|----------|-----------|-------|-----|-------------------------------------|
| GREEN BILOG | 30-2000MHz | CBL6112B | CHASE | 2742 | 00620 | II | 06-APR-2006 |
| GREEN-BLACK BILOG | 30-2000MHz | CBL6112B | CHASE | 2412 | 00127 | II | 06-JAN-2006 |
| GREEN-RED BILOG | 30-2000MHz | CBL6112B | CHASE | 2435 | 00990 | II | OUT OF SERVICE |
| BLUE BILOG | 30-1000MHz | 3143 | EMCO | 1271 | 00803 | II | 06-MAY-2007 |
| GRAY BILOG | 20-2000MHz | 3141 | EMCO | 9703-1038 | 00066 | II | 06-MAY-2007(EMI) / 05-AUG-2006(RFI) |
| YELLOW-BLACK BILOG | 20-2000MHz | CBL6140A | CHASE | 1112 | 00126 | II | 06-MAY-2007(EMI) / 12-AUG-2006(RFI) |
| RED-WHITE BILOG | 30-2000MHz | JB1 | SUNOL | A091604-1 | 01105 | II | 28-SEP-2006 |
| RED-BLACK BILOG | 30-2000MHz | JB1 | SUNOL | A091604-2 | 01106 | II | 28-SEP-2006 |
| YELLOW HORN | 1-18GHz | 3115 | EMCO | 9608-4898 | 00037 | I | 27-MAY-2007(EMI) / 05-JUN-2006(RFI) |
| BLACK HORN | 1-18GHz | 3115 | EMCO | 9703-5148 | 00056 | I | 17-JUN-2007 |
| ORANGE HORN | 1-18GHz | 3115 | EMCO | 0004-6123 | 00390 | I | 09-JUN-2007 |
| HF (WHITE) HORN | 18-26.5GHz | 801-WLM | WAVELINE | 00758 | 00758 | I | 26-AUG-2007 |
| SMALL LOOP | 9kHz-30MHz | PLA-130/A | ARA | 1024 | 00755 | I | 23-FEB-2006 |
| LARGE LOOP | 20Hz-5MHz | 6511 | EMCO | 9704-1154 | 00067 | I | 12-NOV-2005 |
| ACTIVE MONPOLE | 30Hz-30MHz | 3301B | EMCO | 3824 | 00068 | II | 04-MAY-2006 |
| INDUCTION COIL | 50-60Hz | 1000-4-8 | C-S | N/A | 00778 | II | 13-SEP-2006 |
| ADJUSTABLE DIPOLE | 30-1000MHz | 3121C | EMCO | 1370 | 00757 | II | 18-MAR-2007 |
| ADJUSTABLE DIPOLE | 30-1000MHz | 3121C | EMCO | 1371 | 00756 | II | 18-MAR-2007 |
| RE101 LOOP SENSOR | 30Hz-100kHz | RE101-13.3cm | C-S | N/A | 00818 | II | 13-MAR-2007 |
| RS101 RADIATING LOOP | 30Hz-100kHz | RS101-12CM | C-S | N/A | 00819 | II | 13-MAR-2007 |
| RS101 LOOP SENSOR | 30Hz-100kHz | RS101-4CM | C-S | N/A | 00820 | II | 13-MAR-2007 |

| EFT | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|-------------------------|-----|-----|----|-------|-----|-----------------|
| EFT DIRECT COUPLING CAP | N/A | C-S | 01 | 00794 | II | 29-JAN-2006 |

| ESD GENERATORS | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|----------------|--------|-----------|--------|-------|-----|-----------------|
| GREEN | NSG435 | SCHAFFNER | 000839 | 00763 | I | 17-FEB-2006 |
| RED | NSG435 | SCHAFFNER | 001625 | 00762 | I | 29-DEC-2005 |
| YELLOW | 930D | ETS | 201 | 00673 | I | 18-AUG-2007 |

| BEST EMC-2 | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|------------|----------|-----------|--------------|-------|-----|---|
| BLUE | 711-1100 | SCHAFFNER | 199824-002SC | 00117 | II | 16-JUN-2006 (SURGE) / 03-AUG-2006 (D+I) / 05-AUG-2006 (EFT) |
| RED | 711-1100 | SCHAFFNER | 200122-074SC | 00623 | II | 16-JUN-2006 (SURGE) / 04-AUG-2006 (D+I) / 03-DEC-2005 (EFT) |

| HARMONIC & FLICKER ANALYZER | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
|----------------------------------|---------------------|------------------------------|--------------------------------|----------------|-----|----------------------------|
| HFTS 10001I/2 AC POWER SYSTEM | HP6842A (2) 500I | HP CALIFORNIA INSTRUMENTS | 3531A-00169 HK53687/HK53688 | 00738 00376 | II | 03-DEC-2005 20-JAN-2006 |

| CHAMBERS AND STRIPLINE | | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE | |
|------------------------|----------------------------|-------------------|-----------------|------------|--------|-------|---|-------------|
| RFI 1 CHAMBER | 3 METER COMPACT | | PANASHIELD | N/A | 00797 | II | 12-AUG-2006 | |
| RFI 2 CHAMBER | 04' x 07' SHIELDING SYSTEM | | LINDGREN | 13329 | 00795 | II | 05-AUG-2006 | |
| RFI 3 STRIPLINE | N/A | | C-S | N/A | 00796 | III | NA | |
| ENVIRONMENTAL (SAFETY) | ECL5 | | B-M-A INC. | 2041 | 00029 | I | 12-JAN-2006 | |
| ENVIRONMENTAL (SAFETY) | SGTH-31S | | B-M-A INC. | 2245 | 00321 | I | 12-JAN-2006 | |
| AMPLIFIERS | | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE | |
| RED | 0.5-1000MHz | 10W1000B | AR | 18708 | 00032 | II | 05-AUG-2006 (RFI2) / 12-AUG-2006 (RFI1) | |
| GREEN | 0.5-1000MHz | 10W1000B | AR | 23423 | 00123 | II | 05-AUG-2006 (RFI2) | |
| BLUE | 0.01-250MHz | 75A250 | AR | 19165 | 00039 | II | 08-JUL-2006 (EU & NEBS CRFI) | |
| BLACK | 0.01-250MHz | 75A250 | AR | 23411 | 00122 | II | 08-JUL-2006 (EU & NEBS CRFI) / 05-AUG-2006 (RFI2) | |
| ORANGE | 0.01-250MHz | 75A250 | AR | 26827 | 00367 | II | 08-JUL-2006 (NEBS CRFI) / 12-AUG-2006 (RFI1) | |
| HP489A | 1.0-2.0GHz | HP489A | HP | 449-00762 | 00971 | II | OUT OF SERVICE | |
| HUGHES 10W | 1.0-2.0GHz | 1177H09 | HUGHES | 272 | RENTAL | II | 14-JUL-2006 | |
| HP491C | 2.0-4.0GHz | HP491C | HP | 449-00636 | 00764 | II | 05-JUN-2006 | |
| HUGHES 10W | 4.0-8.0GHz | 1177H02 | HUGHES | 092 | RENTAL | II | 05-JUN-2006 | |
| HP493A #1 | 4.0-8.0GHz | HP493A | HP | 171402242 | 00085 | II | OUT OF SERVICE | |
| HP493A #2 | 4.0-8.0GHz | HP493A | HP | 449-00562 | 00771 | II | OUT OF SERVICE | |
| HP495A | 7.0-10.0GHz | HP495A | HP | 304-00237 | 00086 | II | 05-JUN-2006 | |
| FIELD PROBES | | RANGE | MN | MFR | SN | ASSET | CALIBRATION DUE | |
| RED | 0.01-1000MHz | HI-4422 | | HOLADAY | 90369 | 00031 | I | 15-AUG-2006 |
| GREEN | 0.01-1000MHz | HI-4422 | | HOLADAY | 97363 | 00136 | I | 26-AUG-2006 |
| BLUE | 0.01-1000MHz | HI-4422 | | HOLADAY | 95696 | 01100 | I | 15-AUG-2006 |
| SIGNAL GENERATORS | | RANGE | MN | MFR | SN | ASSET | CALIBRATION DUE | |
| RED | 0.09-2000MHz | HP8648B | HP | 3847U02192 | 00366 | I | 15-FEB-2006 | |
| BLUE | 0.1-1000MHz | HP8648A | HP | 3426A00548 | 00034 | I | 25-AUG-2006 | |
| GREEN | 0.09-2000MHz | HP8648B | HP | 3623A02072 | 00125 | I | 12-OCT-2005 | |
| ORANGE | 0.1-1000MHz | HP8648B | HP | 3537A01210 | 00025 | I | 24-JUN-2006 | |
| BLACK (TELECOM) | 15MHz | HP33120A | HP | US36004674 | 00766 | I | 21-OCT-2005 | |
| YELLOW | 15MHz | HP33120A | HP | US36014119 | 00249 | I | 02-JUN-2006 | |
| BLUE-WHITE | 0.1Hz-13MHz | HP3312A | HP | 1432A07632 | 00775 | I | 11-MAR-2006 | |
| SWEEPER | 0.01-20.0GHz | HP83752A | HP | 3610A01133 | 00087 | II | 03-MAY-2006 | |
| AM/FM STEREO SIG. GEN. | 0.1-170MHz | LG3236 | LEADER | 3687301 | 00959 | I | 03-SEP-2005 | |
| IMPULSE GENERATOR | 1-100Hz | CIG-25 | ELECTRO-METRICS | 290 | 00942 | I | 05-AUG-2006 | |
| BULK INJECTION CLAMPS | | RANGE | MN | MFR | SN | ASSET | CALIBRATION DUE | |
| GREEN | 0.01-100MHz | 95236-1 | ETS | 50215 | 00118 | II | 08-JUL-2006 (EU & NEBS CRFI) | |
| RED | 0.01-100MHz | 95236-1 | ETS | 34026 | 1020 | II | 08-JUL-2006 (EU & NEBS CRFI) | |
| CDN NETWORKS | | RANGE | MN | MFR | ASSET | CAT | CALIBRATION DUE | |
| BLACK | 0.10-100MHz | 20A M-2 | C-S | 00783 | II | | 08-JUL-2006 | |
| BLUE | 0.10-100MHz | 15A M-3 | C-S | 00806 | II | | 08-JUL-2006 | |
| ORANGE | 0.10-100MHz | 15A M-2 | C-S | 00786 | II | | 08-JUL-2006 | |
| RED | 0.10-100MHz | 15A M-3 | C-S | 00780 | II | | 08-JUL-2006 | |
| WHITE | 0.10-100MHz | 15A M-3 | C-S | 00782 | II | | 08-JUL-2006 | |
| YELLOW-BLACK | 0.10-100MHz | 15A M-3 | C-S | 00784 | II | | 08-JUL-2006 | |
| GREEN | 0.10-100MHz | 30A M-3 | C-S | 00779 | II | | 08-JUL-2006 | |
| YELLOW | 0.10-100MHz | 30A M-5 | C-S | 00804 | II | | 08-JUL-2006 | |
| BLUE-WHITE | 0.10-100MHz | 15A M-5 | C-S | 00788 | II | | 08-JUL-2006 | |
| BROWN | 0.10-100MHz | M-3 | C-S | | | II | 08-JUL-2006 | |
| BROWN-WHITE | 0.10-100MHz | M-3 | C-S | | | II | 08-JUL-2006 | |
| BROWN_BLACK | 0.10-100MHz | M-2 | C-S | | | II | 08-JUL-2006 | |
| YELLOW (RES) | 0.10-100MHz | 100Ω RESISTOR NWK | C-S | 00810 | II | | 28-SEP-2005 | |
| GREEN (RES) | 0.10-100MHz | 100Ω RESISTOR NWK | C-S | NA | II | | 17-JAN-2006 | |
| OSCILLOSCOPES | | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE | |
| EMC 100MHz | TDS 220 | TEKTRONIX | | C036986 | | I | 26-AUG-2006 | |
| PRODUCT SAFETY 100 MHz | TDS 340 | TEKTRONIX | | B012357 | 00737 | I | 04-OCT-2005 | |
| TELECOM 100 MHz | 54645A | HP/AGILENT | | US36320452 | 00103 | I | 06-JUL-2006 | |

| RMS VOLTMETERS/CURRENT CLAMP | MN | MNFR | SN | ASSET | CAT | CALIBRATION DUE |
|-------------------------------------|---------------------|-------------------|------------|-------|-----|-----------------|
| TRUE-RMS MULTIMETER | 79III | FLUKE | 71700298 | 00769 | I | 21-OCT-2005 |
| TRUE-RMS MULTIMETER | 177 | FLUKE | 83390024 | 00973 | I | 10-MAR-2006 |
| TRUE-RMS MULTIMETER (REFERENCE) | 177 | FLUKE | 83390025 | 00974 | I | 10-MAR-2006 |
| TRUE-RMS MULTIMETER (TELECOM) | 177 | FLUKE | 83430419 | 00975 | I | 10-MAR-2006 |
| TRUE-RMS CLAMP METER (SAFETY) | 36 | FLUKE | 68805882 | 00700 | I | 11-MAR-2006 |
| SURGE GENERATORS | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| TRANSIENT WAVEFORM MONITOR | TWM-5 | CDI | 003982 | 00323 | II | 07-JUN-2006 |
| UNIVERSAL SURGE GENERATOR | M5 | CDI | 003966 | 00324 | II | 09-JUN-2006 |
| THREE PHASE COUPLING NWK | 3CN | CDI | 003455 | 00325 | II | 09-JUN-2006 |
| 1.2x50US PLUGIN MODULE | 1.2x50US PLUGIN | CDI | N/A | 00842 | II | 09-JUN-2006 |
| 10x160US PLUGIN MODULE | 10x160US PLUGIN | C-S | N/A | 00843 | II | 09-JUN-2006 |
| 10x560US PLUGIN MODULE | 10x560US PLUGIN | C-S | N/A | 00841 | II | 09-JUN-2006 |
| PSURGE CONTROLLER MODULE | PSURGE 8000 | HAEFELY | 150267 | 00879 | II | 13-JUN-2006 |
| COUPLING/DECOPLING MODULE | PCD 900 | HAEFELY | 149213 | 00880 | II | 13-JUN-2006 |
| IMPULSE MODULE | PIM 900 | HAEFELY | 149202 | 00881 | II | 13-JUN-2006 |
| HIGH VOLTAGE CAP NWK 5kVDC, 18μF | CS-HVCC | C-S | 01 | 00772 | II | 28-SEP-2006 |
| NEBS SURGE GENERATOR | N/A | C-S | N/A | 00088 | II | 08-JUN-2006 |
| 2x10US SURGE GENERATOR | 2x10US | C-S | N/A | 00846 | II | 09-JUN-2006 |
| 10x700US SURGE GENERATOR | 10x700US | C-S | N/A | 00847 | II | 09-JUN-2006 |
| 12 PAIR SURGE RESISTOR MODULE | N/A | C-S | N/A | 00768 | II | 28-SEP-2005 |
| POWER/NOISE METERS | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| POWER METER | 435B | HP | 2445A11012 | 00773 | I | 06-APR-2006 |
| POWER METER | 437B | HP | 2912A01367 | 01099 | I | 27-OCT-2005 |
| POWER SENSOR | 8481A | HP | 2702A61351 | 00774 | I | 05-APR-2006 |
| PSOPHOMETER | 2429 | BRUEL & KJAER | 1237642 | 00585 | II | 14-FEB-2007 |
| TRANSMISSION LINE TESTER (DBRNC) | 185T | AMREL | 998658 | 00823 | II | 07-MAR-2006 |
| OVERVOLTAGE CHAMBERS | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| 72kW POWER FAULT SIMULATOR | OV1 | C-S | N/A | 00792 | II | 31-MAR-2007 |
| POWER FAULT SIMULATOR | OV2 | C-S | N/A | 00116 | II | 31-MAR-2007 |
| DIPOLE TAPE MEASURES | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| 26FT TAPE #1 | 2338CME | LUFKIN | C3166-1 | 00776 | I | 13-MAR-2007 |
| 26FT TAPE #2 | 2338CME | LUFKIN | C3166-2 | 00777 | I | 13-MAR-2007 |
| METEOROLOGICAL METERS | MN | MFR | SN | ASSET | CAT | CALIBRATION DUE |
| TEMP./HUMIDITY/ATM. PRESSURE GAUGE | 7400 PERCEPTION II | DAVIS | N/A | 00965 | II | 08-FEB-2007 |
| TEMPERATURE /HUMIDITY GAUGE | THG-912 | HUGER | 4000562 | 00789 | I | 01-FEB-2007 |
| WEATHER CLOCK (PRESSURE ONLY) | BA928 | OREGON SCIENTIFIC | C3166-1 | 00831 | I | 02-FEB-2007 |
| CONSUMABLES | SPEC. | MFR | STOCK/MN | ASSET | CAT | CALIBRATION DUE |
| NEBS CHEESECLOTH | 26-28M/KG | ED&D | ACC-01 | N/A | III | N/A |
| NEBS CARBON BLOCK | 3-MIL-GAP 1KV SURGE | RELIABLE | 3AB | N/A | III | N/A |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Terms And Conditions

Paragraph 1. SERVICES. LABORATORY will:

- 1.1 Use the degree of care and skill ordinarily exercised by and consistent with the standards of the profession.
- 1.2 Perform all technical services in substantial accordance with the generally accepted laboratory principles and practices.
- 1.3 Retain all pertinent records relating to the services performed for a period of three (3) years following submission of the report describing such services, during which period the records will be made available to CLIENT upon reasonable request.

Paragraph 2. CLIENT'S RESPONSIBILITIES. CLIENT or his authorized representative will:

- 2.1 Provide LABORATORY with all plans, schematics, specifications, addenda, change orders, drawings and other information for the proper performance of technical services.
- 2.2 Designate a person to act as CLIENT's representative with respect to LABORATORY's services to be performed on behalf of the CLIENT; such person or firm to have complete authority to transmit instructions, receive information and data, interpret and define CLIENT's policies and decisions with respect to the LABORATORY's work on behalf of the CLIENT and to order, at CLIENT's expense, such technical services as may be required.
- 2.3 Designate a person who is authorized to receive copies of LABORATORY's reports.
- 2.4 Undertake the following:
 - (a) Secure and deliver to LABORATORY, without cost to LABORATORY, preliminary representative samples of the equipment proposed to require technical services, together with any relevant data.
 - (b) Furnish such labor and equipment needed by LABORATORY to handle samples at the LABORATORY and to facilitate the specified technical services.

Paragraph 3. GENERAL CONDITIONS:

- 3.1 LABORATORY, by the performance of services covered hereunder, does not in any way assume any of those duties or responsibilities customarily vested in the CLIENT, its employees, or any other party, agency or authority.
- 3.2 LABORATORY shall not be responsible for acts of omissions of any other party or parties involved in the design, manufacture or maintenance of the equipment or the failure of any employee, contractor or subcontractor to undertake any aspect of equipment's design, manufacture or maintenance.
- 3.3 LABORATORY is not authorized to revoke, alter, release, enlarge or release any requirement of the equipment's design, manufacture or maintenance unless specifically authorized by CLIENT or his authorized representative.
- 3.4 THE ONLY WARRANTY MADE BY LABORATORY IN CONNECTION WITH ITS SERVICE PERFORMED HEREUNDER IS THAT IT WILL USE THAT DEGREE OF CARE AND SKILL AS SET FORTH IN PARAGRAPH 1 ABOVE. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE OR INTENDED FOR SERVICES PROVIDED HEREUNDER.
- 3.5 Where the LABORATORY indicates that additional testing is advisable to obtain more valid or useful data, and where such testing has not been authorized, CLIENT agrees to view such test reports as inconclusive and preliminary.
- 3.6 The LABORATORY will supply technical service and prepare a report based solely on the sample submitted to the LABORATORY by the CLIENT. The CLIENT understands that application of the data to other devices is highly speculative and should be applied with extreme caution.
- 3.7 The LABORATORY agrees to exercise ordinary care in receiving, preserving and shipping (F.O.B. Littleton, MA) any sample to be tested, but assumes no responsibility for damages, either direct or consequential, which arise from loss, damage or destruction of the samples due to the act of examination, modification or testing, or technical services or circumstances beyond LABORATORY's control.
- 3.8 The LABORATORY will hold samples for thirty (30) days after tests are completed, or until the CLIENT's outstanding debts to the LABORATORY are satisfied, whichever is later.
- 3.9 The CLIENT recognizes that generally accepted error variances apply and agrees to consider such error variances in its use of test data.
- 3.10 It is agreed between LABORATORY and CLIENT that no distribution of any tests, reports or analysis other than that described below shall be made to any third party without the prior written consent of both parties unless such distribution is mandated by operation of law. It is agreed that tests, reports, or analysis results may be disclosed to third party auditors of the laboratory at the laboratory facility in the course of accreditation maintenance audits. No reference to reports or technical services of the LABORATORY shall be made in any advertising or promotional literature without the express written permission of the LABORATORY.
- 3.11 The CLIENT acknowledges that all employees of LABORATORY operate under employment contracts with the LABORATORY and CLIENT agrees not to solicit employment of such employees or to solicit information related to other clients from said employees.
- 3.12 In recognition of the relative risks and benefits of the project to both CLIENT and LABORATORY, the risks have been allocated such that the CLIENT agrees, to the fullest extent permitted by law, to limit the liability of the LABORATORY to the CLIENT for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, including attorneys' fees and costs and expert witness fees and costs, so that the total aggregate liability of the LABORATORY to the CLIENT shall not exceed \$100,000, or the LABORATORY'S total fee for services rendered on this project, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

Paragraph 4. INSURANCE:

- 4.1 LABORATORY shall secure and maintain throughout the full period of the services provided to the CLIENT adequate insurance to protect it from claims under applicable Workmen's Compensation Acts and also shall maintain one million dollars of general liability coverage to cover claims for bodily injury, death or property damage as may arise from the performance of its services.
- 4.2 The CLIENT hereby warrants that it has sufficient insurance to protect its employees adequately under applicable Workmen's Compensation Acts and for bodily injury, death, or property damage.
- 4.3 No insurance of whatever kind or type, which may be carried by either party is to be considered as in any way limiting any other party's responsibility for damages resulting from their operations or for furnishing work and materials.

Paragraph 5. PAYMENT:

- 5.1 CLIENT shall pay to LABORATORY such fees for services as previously agreed, orally or in writing, within 30 days of presentation of a bill for such services performed. In the event CLIENT ordered, orally or in writing, services but such services were not assigned a rate for billing, such services shall be billed at the LABORATORY's reasonable and customary rate.

5.2 CLIENT shall be responsible for all shipping, customs and other expenses related to services provided by LABORATORY to the CLIENT, and shall fully insure any test sample or other equipment provided to LABORATORY by the CLIENT.

5.3 Amounts overdue from CLIENT to LABORATORY shall be charged interest at a rate of 1½% per month.

Paragraph 6. ISO/IEC GUIDE 17025 ADDITIONS:

6.1 CLIENT agrees that this test report will not be reproduced except in full, without written approval from the LABORATORY.

6.2 CLIENT agrees that this test report shall not be used to claim product endorsement by A2LA or ANSI or any agency of the U.S. Government.

6.3 CLIENT agrees that test results presented herein relate only to the sample tested by the LABORATORY.

A2LA Accreditation

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| SCOPE OF ACCREDITATION TO ISO/IEC 17025-1999 CURTIS-STRAUSS¹ 527 Great Road Littleton, MA 01460 Barry Quinlan Phone: 978-486-8880 ELECTRICAL Valid until: November 30, 2005 Certificate Number: 1627-01 In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following <u>Electromagnetic Compatibility (EMC)</u> , <u>Telecommunications</u> , and <u>Product Safety</u> tests: | | EN 55011 1991, 1998 SABS CISPR 11:1997 Canada ICES-001 1998 CNS13803 AS/NZS 2064: 1997 CSA C108.8 – M1983 CISPR 13:1996, 1998, 2001 EN 55013: 1990, 2001 EN 55013 Amend 12 1994 SABS CISPR 13: 1996 CNS 13439 AS/NZS 1053: 1999 CISPR 14 1993 (except discontinuous disturbances) EN 55014 1993, 1997 discontinuous disturbances AS/NZS 1044: 1995 discontinuous disturbances Immunity CNS13783-1 SABS CISPR 14-1 1993 SABS CISPR 14-2 1997 + A1:2001 Household Electrical Appliances Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus Part 1: Emission – Product family standard Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus Part 2: Immunity – Product family standard | |
| ¹ Note: This accreditation covers testing performed at the laboratory listed above and the satellite facility located at 168 Ayer Rd, Littleton, MA 01460 | | (A2LA Cert. No. 1627-01) 9/22/05 | |
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| CISPR 14-2 1996, 1997 + A1:2001 CISPR 20: 1995, 2002 with amendment 3 (associated group only) EN 55020: 1995, 2002 (associated group only) CISPR 24 SABS CISPR 24 1997 AS/NZS 3200.1.2: 1995 European Union Basic EMC Standards EN 61000-4-2: 1995, 1999, 2001 EN 61000-4-3:1997, 1998, 2002 AS/NZS 61000.4.3 1999 EN 61000-4-4 1995 EN 61000-4-5 1995 AS/NZS 61000.4.5 1999 EN 61000-4-6 1996 AS/NZS 61000.4.6 1999 EN 61000-4-8 1994 EN 61000-4-11 1994 ENV 61000-2-2 1993 EU Product Family Standards EN 50081-1 1992 EN 50081-2 1993 EN 50082-1 1992, 1998 EN 50082-2 1995 | | EN 61000-6-1: 1997, 2001 EN 61000-6-2: 1998, 2001 EN 50091-2 1996 EN 55024 1998 EN 55103-1 1997 EN 55103-2 1997 (excluding Annex A3) EN 61326 1998 EN 61547 1996 EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002 IEC 1800-3 1995 EN 60555 Part 2 1987 EN 60555 Part 3 1987 EN 61000-3-2: 1995, 2000 AS/NZS 61000.3.2 1998 EN 61000-3-3 1995 AS/NZS 61000.3.3 1999 ETS 300 386-1 1994 Equipment Engineering (EE): Public telecommunication network equipment electro-magnetic compatibility (EMC) requirements Part 1: Product family overview, compliance criteria and test levels | |
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| ETS EN 300 386-2 1997, 1998, ETS EN 300 386 2000 v1.2.1, 2001 v1.3.1 | Electromagnetic compatibility and radio spectrum matters (ERM); Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements; Part 2: Product family standard. | EN 300 328-2:2001 v1.2.1 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive |
| ETS 300 132-1 1996 | Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 1: Operated by alternating current (ac) derived from direct current (dc) sources | EN 301 489-1:2002 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements |
| ETS 300 132-2 1996 | Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc) | EN 60669-2-1:2002 | Switches for household and similar fixed electrical installations -- Part 2-1: Particular requirements - Electronic switches |
| ETR 283 1997 | Equipment Engineering (EE); Transient voltages at Interface A on telecommunications direct current (DC) power distributions. | <i>Canada Radio Standards</i> Canadian GL-36 1995 | Industry Canada - technical requirements for low power Devices in the 2400 - 2483.5 MHz band. |
| <i>EU radio standards</i> (ETSI) EN 300 385 v1.2.1: 1998, 1999 | Electromagnetic compatibility and Radio spectrum matters (ERM); Electromagnetic Compatibility (EMC) standard for fixed radio links and ancillary equipment (ETSI) | Canadian RSS-119 1999, 2000 Issue 6 | Industry Canada - Land mobile and fixed radio Transmitters and receivers, 27.41 to 960.0 MHz |
| EN 300 330 v1.2.1: 1998, 1999 | Electromagnetic compatibility and Radio spectrum matters (ERM); Short range devices (SRD); Technical characteristics and test methods for radio equipment in the range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz | Canadian RSS-134 1996 & 2000, Issue Rev 1 | Industry Canada - 900 MHz narrowband personal communications services |
| ETS 300 328 1996 | Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques | Canadian RSS-210 2000 Issue 3, RFS29 1998 | Industry Canada - Low power license-exempt radio 2001 Issue 5 communication devices Specification for Restricted Radiation Radio Apparatus (New Zealand) |
| ETS EN 300 440 v1.2.1 1999 | Electromagnetic compatibility and Radio spectrum matters (ERM); Short range devices; Technical characteristics and test methods for radio equipment to be used in the 1 GHz to 40 GHz frequency range | <i>FCC Standards</i> | |
| EN 301 893:2002 v1.2.1 | Broadband Radio Access Networks (BRAN); 5 GHz (draft) high performance RLAN; Harmonized EN covering Essential requirements of article 3.2 of the R&TTE Directive | 47 CFR FCC low power transmitters operating on frequencies below 1 GHz, emergency alert systems, unintentional radiators and ISM devices. | Scope A1 |
| ETS 300 836-1:1998 | Broadband Radio Access Networks (BRAN); High Performance Radio Local Area Network (HIPERLAN) Type 1; Conformance testing specification; Part 1: Radio Type approval and Radio Frequency (RF) conformance test specification | 47 CFR FCC low power transmitters operating on frequencies above 1 GHz, with the exception of spread spectrum devices. | Scope A2 |
| EN 301 489-17:2002 v1.2.1 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2.4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment | 47 CFR FCC Unlicensed Personal Scope Communications System (PCS) devices | A3 |
| | | 47 CFR FCC Unlicensed National Scope | A4 |
| | | Information Infrastructure devices and low power transmitters using spread spectrum techniques. | |
| | | 47 CFR FCC Personal mobile Scope Radio Services in the following FCC Rule Parts 22, 24, 25, 27. | B1 |
| | | 47 CFR FCC General Mobile Radio Scope Services in the following FCC Rule Parts 22, 74, 90, 95, 97. | B2 |
| | | 47 CFR FCC Maritime and Aviation Scope RadioServices in 47 CFR Parts 80 and 87 | B3 |
| | | 47 CFR FCC Microwave Radio Services Scope in 47 CFR Parts 21, 74 and 101. | B4 |
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| FCC/OST MP-5 1986 | FCC (Federal Communications Commission) methods Of measurement of radio noise emissions from industrial, scientific and medical equipment. | TIA/EIA-IS-968 | Telecommunications Telephone Terminal Equipment Technical Requirements for Connection of Terminal Equipment to the Telephone Network |
| GR-1089-CORE: 1997, 1999 issue 2/ 2002 Issue 3 | Bellcore electromagnetic compatibility and electrical safety - Generic criteria for network telecommunications equipment. | TIA/EIA-IS-883 | Telecommunications Telephone Terminal Equipment Supplemental Technical Requirements for Connection of Stutter Dial Tone Detection Devices and ADSL Modems to the Telephone Network |
| <i>ANSI EMC Standards</i> ANSI C63.4: 1992, 1999, 2001, 2003 | American National Standard for methods of measurement of radio-noise emissions for low-voltage electrical and electronic equipment in the range of 9 kHz to 40GHz. | TIA-968-A | Telecommunications Telephone Terminal Equipment Technical Requirements for Connection of Terminal Equipment to the Telephone Network |
| ANSI C63.5 1988 | American National Standard for electromagnetic compatibility - radiated emissions measurements in electromagnetic interference (EMI) control - calibration of antennas. | T1.TRQ.6-2001 | Technical Requirements for SHDSL, HDSL2, HDSL4 Digital Subscriber Line Terminal Equipment to Prevent Harm to the Telephone Network Industry |
| <i>IEEE EMC Standards</i> IEEE C62.41: 1980, 1991 | IEEE recommended practice on surge voltages in low-voltage AC power circuits | Canada VDSL Issue 1 January 2003 | Terminal Attachment Program Requirements and Test Methods for Very-High-Bit-Rate Digital Subscriber Line (VDSL) Terminal Equipment |
| <i>Swedish EMC Standards</i> BAKOM 3336.3 1995 | Electromagnetic compatibility and electrical safety (EMC & S) for wired terminal equipment. Harmonization document information over the OFCOM requirements. | AS/ACIF S002-2001 | Analogue interworking and non-interference requirements for Customer Equipment for connection to the Public Switched Telephone Network |
| <i>South African EMC standards other than CISPR equivalents</i> SABS 1718-1: 1996 | South African Bureau of Standards: Specification for Gaming equipment. Part 1: Casino equipment. | AS/ACIF S016-2001 | Requirements for Customer Equipment for connection to hierarchical digital interfaces |
| <i>Japanese VCCI Standards</i> VCCI V-3/99.05 1999 VCCI V-4/99.05 1999 | Technical Requirements Instruction for Test Conditions for Requirement under Test | AS/ACIF S031-2001 AS/ACIF S038-2001 AS/ACIF S043-2001 | Requirements for ISDN Basic Access Interface Requirements for ISDN Primary Rate Access Interface Requirements for Customer Equipment for Connection to a Metallic Local Loop Interface of a Telecommunications Network — Part 1: General Part 2: Broadband Part 3: DC, Low Frequency AC and Voiceband |
| <i>Telecommunications</i> | Telecommunications Registration; General test methods; Lightning surge; Drop testing; Balance testing; Signal power (metallic and longitudinal); Frequency measurements; Pulse templates; Leakage testing; Impedance testing; Hearing Aid Compatibility testing (<i>excluding volume control</i>); Protocol analysis and Jitter testing. | ITU-T G.703 HKTA 2028 HKTA 2029 TBR 1 : 1995 | Physical/electrical characteristics of hierarchical Digital interfaces Network connection specification for connection of CPE to the PTNs in Hong Kong using digital leased circuits at data rate of 1544 kbit/s Network connection specification for connection of CPE to the PTNs in Hong Kong using digital leased circuits at data rate of 2048 kbit/s Attachment requirements for terminal equipment to be connected to circuit switched data networks and leased circuits using a CCITT Recommendation X.21 interface, or at an interface physically, functionally and electrically compatible with CCITT Recommendation X.21 but operating at any data signaling rate up to, and including, 1 984 kbit/s |
| <i>Telecom Standards</i> | <i>Title</i> | TBR 2 : 1997 | Attachment requirements for Data Terminal Equipment (DTE) to connect to Packet Switched Public Data Networks (PSPDNs) for CCITT Recommendation X.25 interfaces at data signaling rates up to 1 920 kbit/s utilizing interfaces derived from CCITT Recommendations X.21 and X.21 bit |
| FCC 47 CFR Part 68 Telephone | Connection of terminal equipment to the telephone Terminal Equipment network. Analog and Digital Equipment. TCB Scope C1. | | |
| CS-03 Issue 8 1996 through amendment 5 | Specification for terminal equipment, terminal systems, Network protection devices, connection arrangements and hearing aids compatibility. | | |
| TIA/EIA TSB31-B 1998 | Bulletin Part 68 Rationale and Measurement Guidelines (Feb 1998) | | |
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| TBR 3 : 1995 + Amdt : 1997 | Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access | IEC 60950 2000 EN 60950 1997, 1998, 2000 IEC 60950-1 2001 UL 60950-1 2003 CSA C22.2 No. 60950-00 CSA C22.2 No. 60950-1 03 AS/NZS 3260 1993 | Safety of information technology equipment Safety of information technology equipment, including Electrical business equipment. |
| TBR 4 : 1995 + Amdt : 1997 | Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN primary rate access | | |
| TBR 012 : 1993 + Amdt : 1996 | Business Telecommunications (BT); Open Network Provision (ONP) technical requirements; 2 048 kbit/s digital unstructured leased line (D2048U) Attachment requirements for terminal equipment | ACA TS 001 1997 | Approval and test specification – Safety of information technology equipment including electrical business Equipment. |
| TBR 013 : 1996 | Business TeleCommunications (BTC); 2 048 kbit/s digital structured leased lines (D2048S); Attachment requirements for terminal equipment interface | UL 1459 1995 IEC 1010-1 1990 IEC 61010-1 1993 EN 61010-1 1993, 2001 IEC 61010-1 2001 UL 61010B-1 2003 UL 3101-1 1993 CAN/CSA 1010-1 1999 (Including AM 2) UL 3111-1 1996 UL 3121-1 1995 IEC 60601-1 1995 EN 60601-1 1995 (Including AM 2) UL 2601-1 1997 IEC 60065 1998, 2000 ANSI/UL 6500: 1998 CAN/CSA 60065-00 AS/NZS 3250 1995 AS/NZS 60065 2000 | Approval and test specification – Safety of information technology equipment including electrical business equipment – Alphabetical reference index to IEC 950 (Supplement to AS/NZS 3260:1993) Australian Communications Authority – Safety requirements for customer equipment. Telephone Equipment Safety requirements for electrical equipment for measurement, control and laboratory use, Part 1: General requirements. Safety requirements for electrical equipment for measurement, control and laboratory use, Part 1: General requirements. |
| TBR 21 : 1998 | Terminal Equipment (TE); Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting the voice telephony service) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signaling | | Electrical equipment for laboratory use Part 1: General requirements. |
| TBR 24 : 1997 | Business TeleCommunications (BTC); 34 Mbit/s digital Unstructured and structured leased lines (D34U and D34S); Attachment requirements for terminal equipment interface | | Electrical measuring and test equipment. Part 1: General requirements. |
| <i>Australia</i> | | | Medical electrical equipment. Part 1: General requirements for safety. |
| TS 002 : 1997 | Analogue Interworking and Non interference Requirements for Customer Equipment Connected to the Public Switched Telephone Network | | Medical electrical equipment |
| TS 016 : 1997 | General Requirements for Customer Equipment Connected to Hierarchical Digital Interfaces | | Medical electrical equipment. Part 1: General Requirements for safety. |
| TS 031 : 1997 | Requirements for ISDN Basic Access Interface | | Audio, video and similar electronic apparatus – Safety requirements |
| TS 038 : 1997 | Requirements for ISDN Primary Rate Access Interface | | Audio/video and musical instrument apparatus for Household, commercial and similar general use |
| AS/ACIF S043.2:2001 | Requirements for Customer Equipment for connection to a metallic loop interface of a Telecommunications Network – Part 2 Broadband | | Australian/New Zealand Standard – Approval and test Specification – Mains operated electronic and related Equipment for household and similar general use |
| Product Safety | Title | | Audio, video and similar electronic equipment. Consumer and 1994, commercial products |
| General test methods; Input tests; Electric strength tests; Impulse tests; Permanency of marking tests; Accessibility tests; Energy Hazard measurements; Capacitor discharge tests; Humidity conditioning; Earthing tests; Limited power source measurements; Stability tests; Steel ball tests; Lithium Battery Reverse Current measurements; Leakage current tests; Transformer abnormal tests; Telecom leakage tests; Over voltage/power cross tests (<i>excluding x-ray tests</i>). | | | Safety requirements for main operated electronic and related apparatus for household and similar general use. |
| <u>Product Safety Standards</u> | <u>Title</u> | | Radiation safety of laser products, equipment Classification, requirements and user's guide |
| Specific Product Safety Standards | | | Safety of laser products Part 1: equipment Classification, requirements and user's guide. |
| IEC 950 1991 | Safety of information technology equipment including Includes Amendments 1, 2, 3, and 4 electrical business equipment. | | Safety of laser products – Part 2: Safety of optical communication systems |
| UL 1950 1998 | Safety of information technology equipment, including electrical business equipment. | | Safety of laser products – Part 4: Laser guards |
| CSA C22.2 No.950-95 | Safety of Information Technology Equipment (UL 1950) | | Safety of household and similar electrical appliances |
| UL 60950 2000 | Safety of information technology equipment | | |
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| UL 61010A-1 : 2002 | Electrical equipment for laboratory use; part 1: General requirements | | |
| EN 61010-1 : 2001 | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements | | |
| AS/NZS 60950 : 2000 | Safety information technology equipment | | |
| Environmental² | Title | | |
| <u>Environmental Standards</u> | | | |
| GR-63-CORE | NEBS Requirements: Physical Protection | | |
| ETS 300 019 | Environmental conditions and environmental tests For telecommunications equipment | | |
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² Environmental testing is performed at the satellite facility located at 168 Ayer Rd, Littleton, MA 01460