# MARSTECH LIMITED

EXHIBIT A

[FCC Ref. 2.1033(b)(6)]

"Report of Measurements"

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### TEST REPORT CONTAINING:

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## 15.249 (a), (b) and (c) **FIELD STRENGTH OF EMISSIONS**

### **Requirements:**

Fundamental Frequency	Field Strength of Harmonics	15.209		
94dBμV	54 dBμV/m@ 3m	30-88 MHz	40 dBμV/m@ 3m	
		88-216 MHz	43.5	
		216-960 MHz	46	
		Above 960 MHz	54	

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.

Emissions that fall in the restricted bands (15.205) must be less than  $54 dB \mu V/m$ 

### **Procedure**

The test procedure used was ANSI STANDARD C63.4-1992 and DA-00-705 using an appropriate spectrum analyzer, as listed in the Test Equipment List. The bandwidth (RBW) of the spectrum analyzer was 100KHz/120KHz up to 1GHz with an appropriate sweep speed. The RBW above 1.0GHz was = 1.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the EUT was 24°C with a humidity of 60%.

### **Test Data:**

Refer to Exhibit A(2)-2

ATLINKS/H5400XXX-A [Handset/Charger Unit & Separate RF Module] FCC ID: G9H-H5400A Marstech Report No. 25038D

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# FIELD STRENGTH OF EMISSIONS

# Models H5400XXX-A and 25415XXX-A

# RF MODULE/BASE UNIT

Emission Frequency MHz	Meter Reading @3m dBµV	Antenna	Cable and ACF dB	Field Strength dBµV/M	FCC Limit dBµV/M	Margin dB	Detector & BW KHz
<u>Channel 1</u>							
902.080	50.4	RT4 V	33.30	83.70	94	-10.30	PK 100
<u>TX</u>							
2255.600	13.00	Horn V	33.22	46.22	54	-7.78	PK 1000
2286.970	9.00	Horn V	33.22	42.22	54	-11.78	PK 1000
2706.240	13.00	Horn V	33.92	46.92	54	-7.08	PK 1000
Channel 40							
904.360	51.00	RT4 V	33.30	84.30	94	-9.70	PK 100
<u>TX</u>							
2261.020	13.00	Horn V	33.22	46.22	54	-7.78	PK 1000
2292.790	9.00	Horn V	33.22	42.22	54	-11.78	PK 1000
2713.190	13.00	Horn V	33.92	46.92	54	-7.08	PK 1000

 $ATLINKS/H5400XXX-A \ [Handset/Charger \ Unit \& \ Separate \ RF \ Module] \\ FCC \ ID: \ G9H-H5400A$ 

Marstech Report No. 25038D

### **MARSTECH LIMITED**

## TEST FACILITY AND EQUIPMENT LIST

#### FACILITIES:

Radiated

ANSI C63.4 (FCC OET/55) open field 3 metre test range. This test range is protected from the cold and moisture by a non-conductive enclosure.

#### **EQUIPMENT**

Anritsu 2601A Spectrum Analyzer
Advantest R3261A Spectrum Analyzer
Hewlett-Packard RF generator # 8640 B with an 002 doubler
A.H. Systems biconical antenna; ....... 20 MHz to 330 MHz
A.H. Systems log periodic antenna; ..... 300 MHz to 1.8 GHz
Compliance Design P950 Preamp (16 dB) ... 25 MHz to 1.0 GHz

#### NOTE:

The Anritsu 2601A Spectrum Analyzer and the Advantest R3261A Spectrum Analyzer are calibrated annually, and that calibration is directly traceable to the National Research Council of Canada. (NRC) This equipment is only used by qualified technicians and only for the purpose of EMI measurements. The three metre test range has been carefully evaluated to the ANSI document C63.4 and will be remeasured for reflections and losses every three years.

#### **MARSTECH LIMITED**

### ADDITIONAL TEST EQUIPMENT LIST

- 1. Spectrum Analyzer: HP 8591EM, S/N 3639A00995, (9KHz 1.8GHz), Calibration Due June 2005
- 2. Spectrum Analyzer: ANRITSU 2601A, S/N MT64544, (10KHz 2.2GHz), Calibration Due June 2005
- 3. Spectrum Analyzer: IFR AN940, S/N 635001039, (9KHz 26.5GHz), Calibration Due April 2005
- 4. Preamp: HP 8449B, S/N 3008A00378, (1 26.5GHz), Calibration Due August 2005
- 5. Horn Antenna: Q-PAR 6878/24, S/N 1721, (1.5-18GHz)
- 6. Horn Antenna: A. H. Systems SAS 572, S/N 164 (18 26.5GHz)
- 7. Line Impedance Stabilization Network.: Marstech, Calibration Due July 2005
- 8. Horn Antenna: Radar System (Flange 3/4" Square) MIL F 3922/68 (26.5 40GHz)
- 9. OML Mixer: M28HWD, S/N Ka31114-1 (26.5 40GHz), Calibration Due Nov. 2005
- 10. OML Diplexer: DPL.313A (Unit plugs into M28HWD)
- 11. Semflex Cable: Used with M28HWD and DPL.313A

# FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division 7435 Oakland Mills Road Columbia, MD 21046

August 22, 2003

Registration Number: 90578

Electrohome Electronics Ltd. 809 Wellington St. N. Kitchener, Ontario, N2G 4J6 Canada

Attention:

Tuat Huynh

Rc:

Measurement facility located at Roseville

3 meter site

Date of Renewal: August 22, 2003

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website <a href="www.fcc.gov">www.fcc.gov</a> under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely.

 $\frac{1}{2} \frac{\partial \Phi}{\partial x} = \frac{1}{2} \frac{\partial \Phi}{\partial x} + \frac{1}{2} \frac{\partial \Phi}{\partial x}$ 

Ms. Phyllis Parrish Information Technician

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