

# ENVIRONMENTAL TEST REPORT

PO #: 0000025127  
Quote #: 090206BH  
Test #: IDAH-090052  
REV000

## Idaho Technology

February 23, 2009

PROPRIETARY



# Idaho Technology 11 day Temp/Humidity Test

## APPROVALS

**Approved By:** Bryce Buckley **Date:** 3/4/2009  
Sr. Environmental Test Technician

**Written By:** Katy Smythe **Date:** 2/27/2009  
Sr. Quality Test Engineer

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## **1.0 PURPOSE**

The purpose of this report is to present the test procedures used and the test results obtained during the performance of an environmental test program. The results included in this report relate only to the items tested. The objective of the test was for (1) Razor EX unit to undergo testing according to Quote#:090206BH.

## **2.0 REFERENCES**

- 2.1 RMTS Quote #: 090206BH
- 2.2 Test Part Serial Number: EX4001
- 2.3 The article tested was (1) Razor EX unit hereafter referred to as "Product." The Product was tested by Rocky Mountain Testing Solutions, LLC located in Roy, Utah to the requirements listed in References 2.1.
- 2.4 RMTS Test #: IDAH090052

## **3.0 TEST CONDITIONS AND TEST EQUIPMENT**

### **3.1 TEST CONDITIONS**

Unless otherwise specified herein, all tests were performed at room ambient conditions defined as a temperature of  $73^{\circ} \pm 18^{\circ}$  F ( $23^{\circ} \pm 10^{\circ}$  C), with a relative humidity of  $40\% \pm 30\%$ .

### **3.2 TEST EQUIPMENT**

The required test equipment presented in Appendix A was calibrated in accordance with established standards set by Rocky Mountain Testing Solutions, LLC. The calibration records are maintained on file.

4.0 **TEST PROCEDURES AND TEST RESULTS**

4.1 **TEMPERATURE/HUMIDITY TEST**

- Reference 2.1, Document: Quote #:090206BH
- 1 sample tested: SN: 4001

Date Commenced: February 12, 2009

Date Completed: February 23, 2009

4.1.1. The test Product was placed in an environmental test chamber. The test set-up photographs are shown in Appendix B.

4.1.2. Each Product was tested according to the following profile.

Step Num.	Step Type	Chamber(degC) Ch1.	RH(%) Ch2.	Step Time	Step Num.	Num of Times
1	RAMP	23	50%	5 MIN		
2	SOAK	23	50%	24:00:00		1
3	RAMP	30	95%	00:30:00		1
4	RAMP	49	95%	02:00:00		
5	SOAK	49	95%	06:00:00		
6	RAMP	30	95%	08:00:00		
7	SOAK	30	95%	08:00:00		
8	LOOP from			10	4	10
9	EOP					

4.1.3. (10) 24hr cycles were completed according to steps 4 thru 7 in the above chart. *\*\*See Appendix C for Temperature Plots  
 \*\*Due to some anomalies in the data logging system, some RH spikes were present in the temperature plot. These are present as the temperature starts to ramp down and the compressors turn on for cooling\*\**

4.1.4. An additional thermocouple was monitored throughout testing. See Appendix C for temperature plots.

4.2 This concludes the Temp/Humidity testing of the Idaho Technology Product.

**APPENDIX LISTING**

APPENDIX A (Page 7)	Equipment List
APPENDIX B (Page 9)	Photographs
APPENDIX C (Pages 11-12)	Temperature Plots

# **APPENDIX A**

## **EQUIPMENT LIST**

## ***ENVIRONMENTAL LAB EQUIPMENT LIST***

Instrument	Field Point Recorder	DAQ-001
Manufacturer	National Instruments	
Model Number	CFP-2010	
Serial Number	114C6DC	
Calibration Date	8/08/2008	
Calibration Due Date	8/08/2009	
Instrument	USB Thermocouple Unit	DAQ-005
Manufacturer	National Instruments	
Model Number	9211	
Serial Number	124B406	
Calibration Date	1/12/2009	
Calibration Due Date	1/12/2010	
Instrument	Temperature Humidity Chamber	TL-005
Manufacturer	Blue M	
Model Number	FRC-27F	
Serial Number	FRC-130	
Instrument	Temperature Humidity Controller	TL-005
Manufacturer	JC	
Model Number	600-RTD	
Serial Number	96071710	
Calibration Date	1/12/2009	
Calibration Due Date	1/12/2010	

# **APPENDIX B**

# **PHOTOGRAPHS**

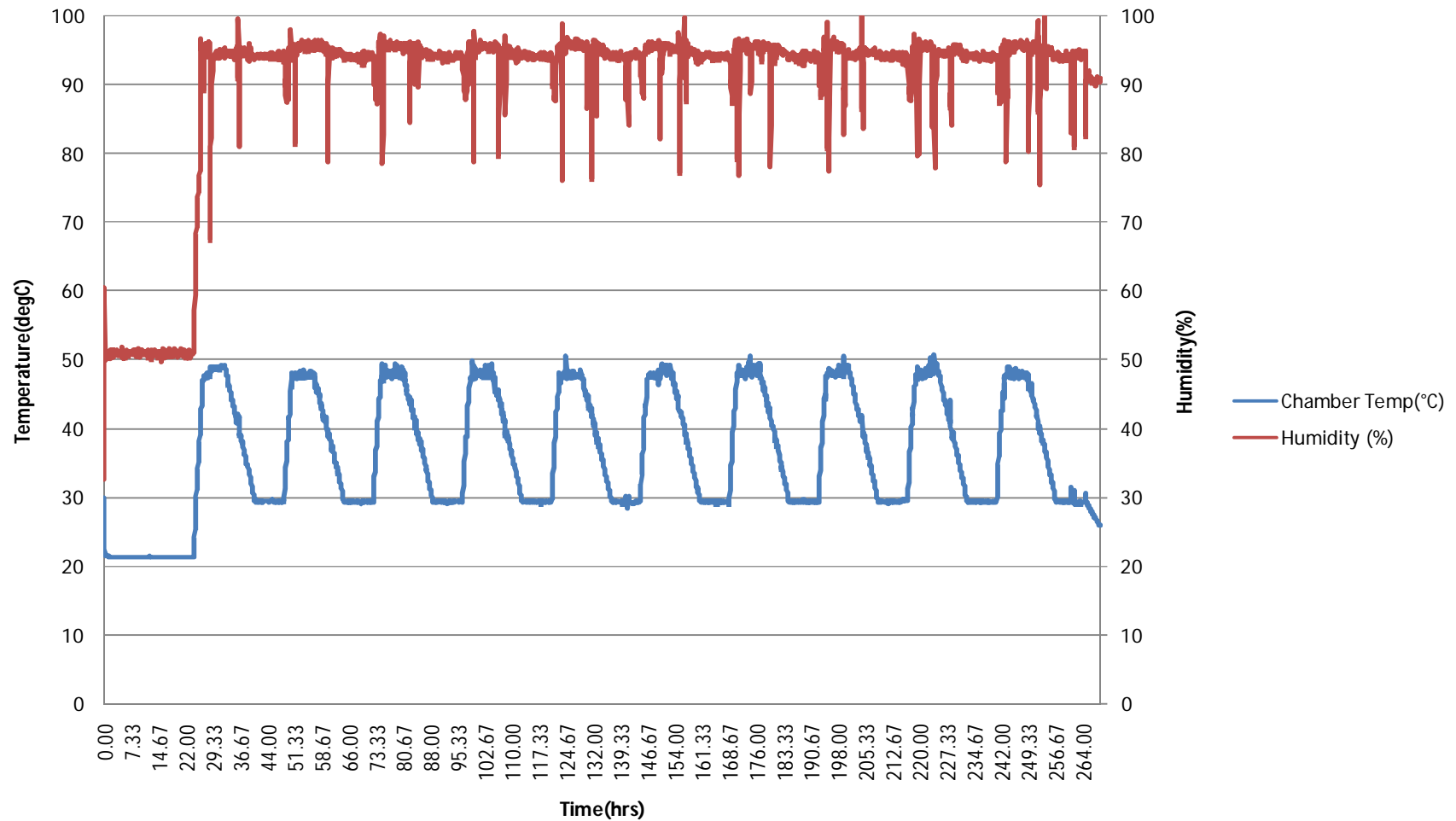


**Photograph 1. Test Setup.**

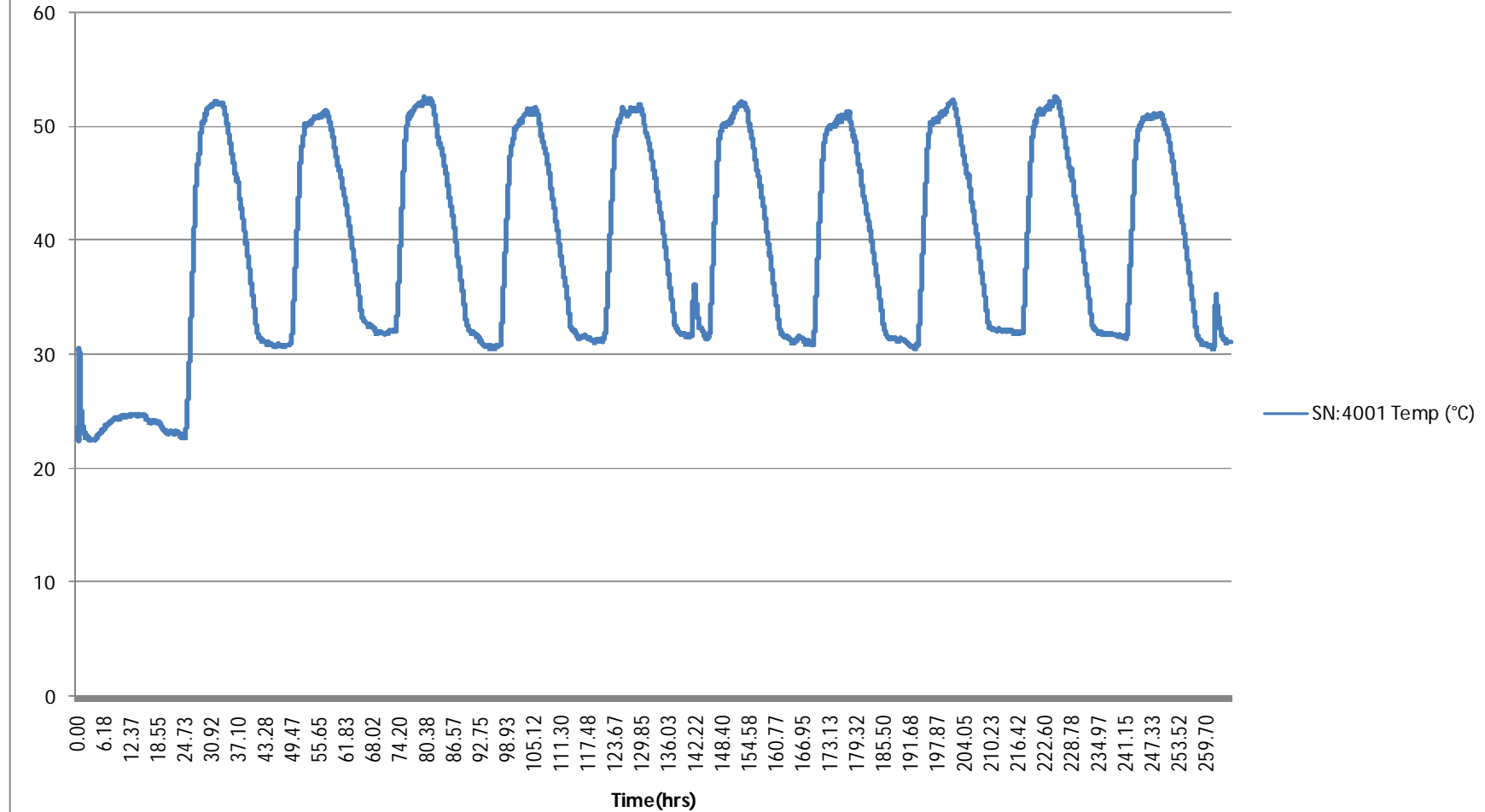
# **APPENDIX C**

## **Temperature Test Plots**

TEST#: IDAH090052  
11-day Temp/Humidity Test  
SN:4001  
(Chamber Temp/RH)



Test #: IDAH090052  
11-day Temp/Humidity Test  
SN:4001 Temp (°C)



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