

## TEST REPORT

Report No.: HC20184/2013

Page: 1 of 6

Date: March 19, 2013

TWINHEAD INTERNATIONAL CORP.  
10F, NO. 550, RUEIGUANG ROAD,  
NEIHU, TAIPEI, TAIWAN, R.O.C.

The following merchandise was submitted and identified by the vendor as:

Product Description: DURABOOK  
Style/ Item No.: SA14iT/ No.1~ No.3  
Quantity: Total 3 pieces  
Testing Period: Mar. 14, 2013 to Mar. 15, 2013

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required: (According to client's test specification, please see following sheets in detail.)

1. Random Vibration Test

Test Results: – PLEASE SEE ATTACHED SHEETS –

Signed for and on behalf of  
SGS TAIWAN Ltd.



Winson Tseng  
Asst. Manager

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# TEST REPORT

Report No.: HC20184/2013

Page: 2 of 6

## 1. Random Vibration Test:

### Test Equipment:

Name	Brand	Model	Serial No.
Vibration Test System	UNHOLTZ-DICKIE	SAI60-H560BAC/2/ST	474
Controller	Dactron	LASER	7110357
Control Accelerometer	PCB	353B34	143549

### Lab Environmental Conditions:

Ambient temperature:  $(25 \pm 3) ^\circ\text{C}$

Ambient humidity:  $(55 \pm 20) \% \text{RH}$

### Test Method/ Specification:

Test method: Reference to MIL-STD-810G, Method 514.6, Figure C-I Category 4-Common carrier (US highway truck vibration exposure).

Sample condition: Operating (Execute test program "Burn in");

Wave form: Random

Frequency: (10 ~ 500) Hz (Test Spectrums as shown in the following sheets in detail)

Direction: X, Y, Z axes (see photo 3 ~ 8)

Duration: 1 hour/ axis (Battery for 15 minutes, Connect adapter for 45 minutes, see photo 3 ~ 8)

- Examine the appearance of specimen by visual check and perform functional check during this test.
- Functional check: Connect the specimen with rated power then turn on the power of specimen. Execute the test program "Burn in" while performing functional check.

# TEST REPORT

Report No.: HC20184/2013

Page: 3 of 6

Test Method/ Specification--Continued:

Test Spectrums:

Vertical - Z axis		Transverse - X axis		Longitudinal - Y axis	
Frequency (Hz)	PSD (g <sup>2</sup> /Hz)	Frequency (Hz)	PSD (g <sup>2</sup> /Hz)	Frequency (Hz)	PSD (g <sup>2</sup> /Hz)
10	0.01500	10	0.00013	10	0.00650
40	0.01500	20	0.00065	20	0.00650
500	0.00015	30	0.00065	120	0.00020
⇒ equivalent to 1.04 G <sub>rms</sub>		78	0.00002	121	0.00300
		79	0.00019	200	0.00300
		120	0.00019	240	0.00150
		500	0.00001	340	0.00003
		⇒ equivalent to 0.20 G <sub>rms</sub>		500	0.00015
				⇒ equivalent to 0.74 G <sub>rms</sub>	

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# TEST REPORT

Report No.: HC20184/2013

Page: 4 of 6

**Specimen:**

Style/ Item No.: SA14iT/ No.1~ No.3

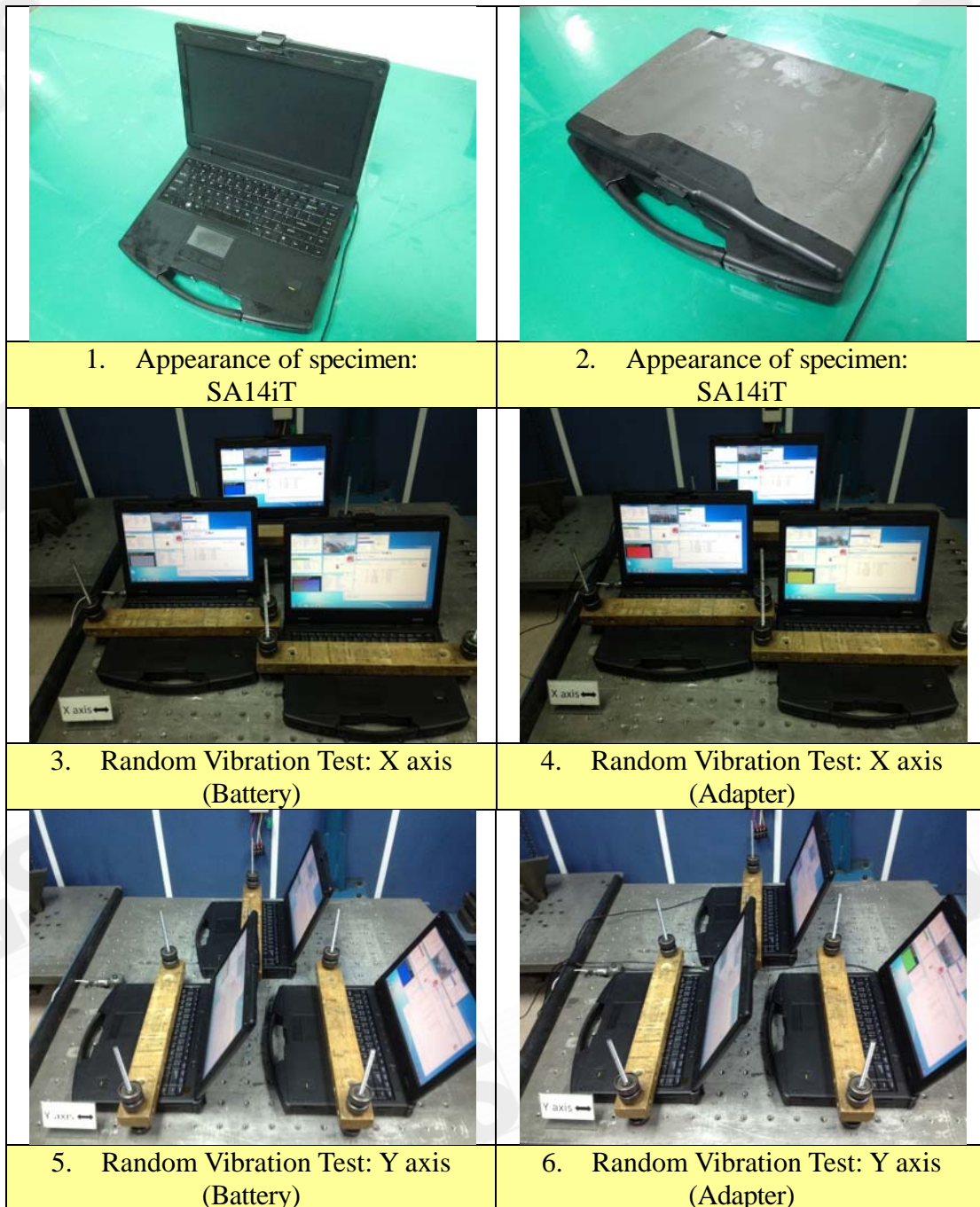
Quantity: Total 3 pieces

**Test Result:**

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
SA14iT/ No.1		No visible damage	Normal
SA14iT/ No.2		No visible damage	Normal
SA14iT/ No.3		No visible damage	Normal

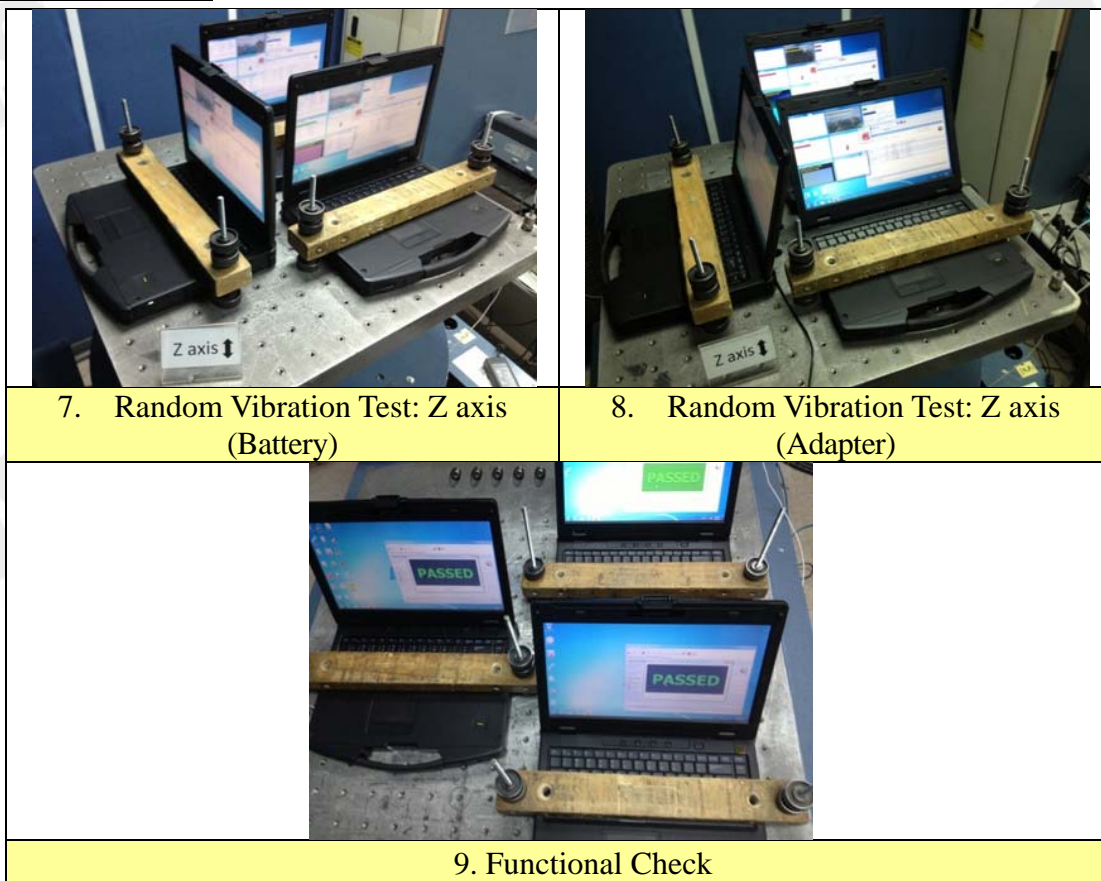
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Test Photos:



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Test Photos--Continued:



— — — The End of Test Report — — —

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