

## TEST REPORT

Report No.: HC60006/2014

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Date: June 12, 2014

VECOW CO., LTD.

12 F, NO. 111, ZHONGCHENG RD.,

TUCHENG DIST., NEW TAIPEI CITY,

TAIWAN, R.O.C.

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

Product Description: Advanced Box PC  
Style/ Item No.: ABP-2845/ No.1  
Manufacturer/ Vendor: Vecow Co., Ltd.  
Country of Origin: Taiwan  
Quantity: Total 1 set  
Testing Period: Jun. 9, 2014 to Jun. 11, 2014

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. High Temperature Test
2. Low Temperature Test
3. Random Vibration Test
4. Mechanical Shock Test

Test Results: – PLEASE SEE ATTACHED SHEETS –

Signed for and on behalf of  
SGS TAIWAN Ltd.



Winson Tseng  
Asst. Manager

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## 1. High Temperature Test:

### Test Equipment:

Name	Brand	Model	Serial No.
Anaerobic Oven	KSON	NHC-200	3967

### Lab Environmental Conditions:

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

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

### Test Method/ Specification:

Sample Condition: Operating (Execute test program "Burn-In")

Test temperature: 85°C

Test duration: 16 hours

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen with rated power then turn on the power of specimen. Execute the test program "BurnIn Test" while perform functional check.

### Sample Configuration:

Item	Description	Quantity
IPC	Vecow ABP-2845	1
DRAM	Vecow M340L-W28M1 4G	1

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**Specimen:**

Style/ Item No.: ABP-2845/ No.1

Quantity: Total 1 set

**Test Result:**

<div style="text-align: center;">Check Item</div> <div style="text-align: left;">Style/ Item No.</div>	<div style="text-align: center;">Appearance check (Visual check)</div>	<div style="text-align: center;">Functional check</div>
<div style="text-align: center;"><b>ABP-2845/ No.1</b></div>	<div style="text-align: center;">No visible damage</div>	<div style="text-align: center;">Normal</div>

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## 2. Low Temperature Test:

### Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	Giant Force	GTH-800-40-CP-AR	MAA1207-001

### Lab Environmental Conditions:

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

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

### Test Method/ Specification:

Sample Condition: Operating (Execute test program "Burn-In")

Test temperature:  $-40^\circ\text{C}$

Test duration: 16 hours

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen with rated power then turn on the power of specimen. Execute the test program "BurnIn Test" while perform functional check.

### Sample Configuration:

Item	Description	Quantity
IPC	Vecow ABP-2845	1
DRAM	Vecow M340L-W28M1 4G	1

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**Specimen:**

Style/ Item No.: ABP-2845/ No.1

Quantity: Total 1 set

**Test Result:**

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
<b>ABP-2845/ No.1</b>		No visible damage	Normal

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### 3. Random Vibration Test:

#### Test Equipment:

Name	Brand	Model	Serial No.
Vibration Tester	King Design	EM-800F2K-50N120	RU104080389
Controller	Dactron	COM 200	10539718
Control Accelerometer	PCB	353B34	139174

#### Lab Environmental Conditions:

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

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

#### Test Method/ Specification:

Sample condition: Operating (Execute the test program "BurnIn Test")

Wave form: Random

Frequency: (5 ~ 500) Hz

Frequency (Hz)	Left Slope (dB/Oct.)	PSD $((\text{m/s}^2)^2/\text{Hz})$	Right Slope (dB/Oct.)
5	-	1.95	3.98
10	3.98	4.87	0
500	0	4.87	-

⇨ equivalent to 49  $(\text{m/s}^2)_{\text{rms}}$

Direction: X, Y, Z axes (see photo 5 ~ 7)

Duration: 30 minutes/ axis

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen with rated power then turn on the power of specimen. Execute the test program "BurnIn Test" while perform functional check.

#### Sample Configuration:

Item	Description	Quantity
IPC	Vecow ABP-2845	1
DRAM	Vecow M340L-W28M1 4G	1

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**Specimen:**

Style/ Item No.: ABP-2845/ No.1

Quantity: Total 1 set

**Test Result:**

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
<b>ABP-2845/ No.1</b>		No visible damage	Normal

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## 4. Mechanical Shock Test:

### Test Equipment:

Name	Brand	Model	Serial No.
Shock Test System	LANSMONT	65-81 TTSII	M-13418
Data Acquisition & Analysis System	LANSMONT	103570-2-B	0503-73
ICP Accelerometer	PCB	353B14	79712

### Lab Environmental Conditions:

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

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

### Test Method/ Specification:

Specimen Condition: Operating (Execute the test program "BurnIn Test")

Pulse shape: Half-sine

Acceleration: 50 G

Velocity Change: 11 ms

Shock direction: 6 faces ( $\pm X$ ,  $\pm Y$ ,  $\pm Z$  axes, see photo 8 ~ 13)

No. of shock: 3 shocks/ face (total 18 shocks)

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen with rated power then turn on the power of specimen. Execute the test program "BurnIn Test" while perform functional check.

### Sample Configuration:

Item	Description	Quantity
IPC	Vecow ABP-2845	1
DRAM	Vecow M340L-W28M1 4G	1

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**Specimen:**

Style/ Item No.: ABP-2845/ No.1

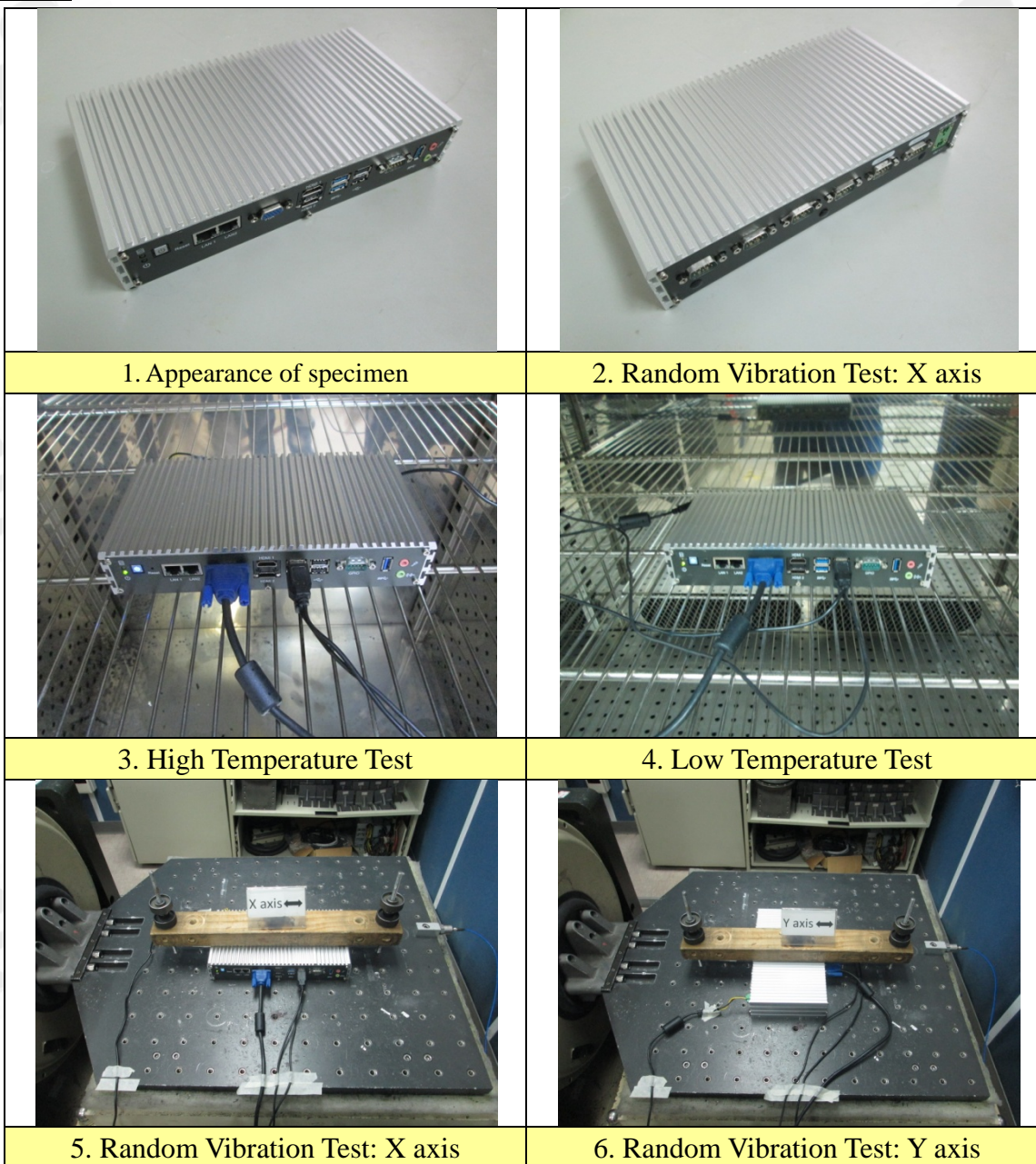
Quantity: Total 1 set

**Test Result:**

Check Item	Appearance check (Visual check)	Functional check
Style/ Item No.  <b>ABP-2845/ No.1</b>	No visible damage	Normal

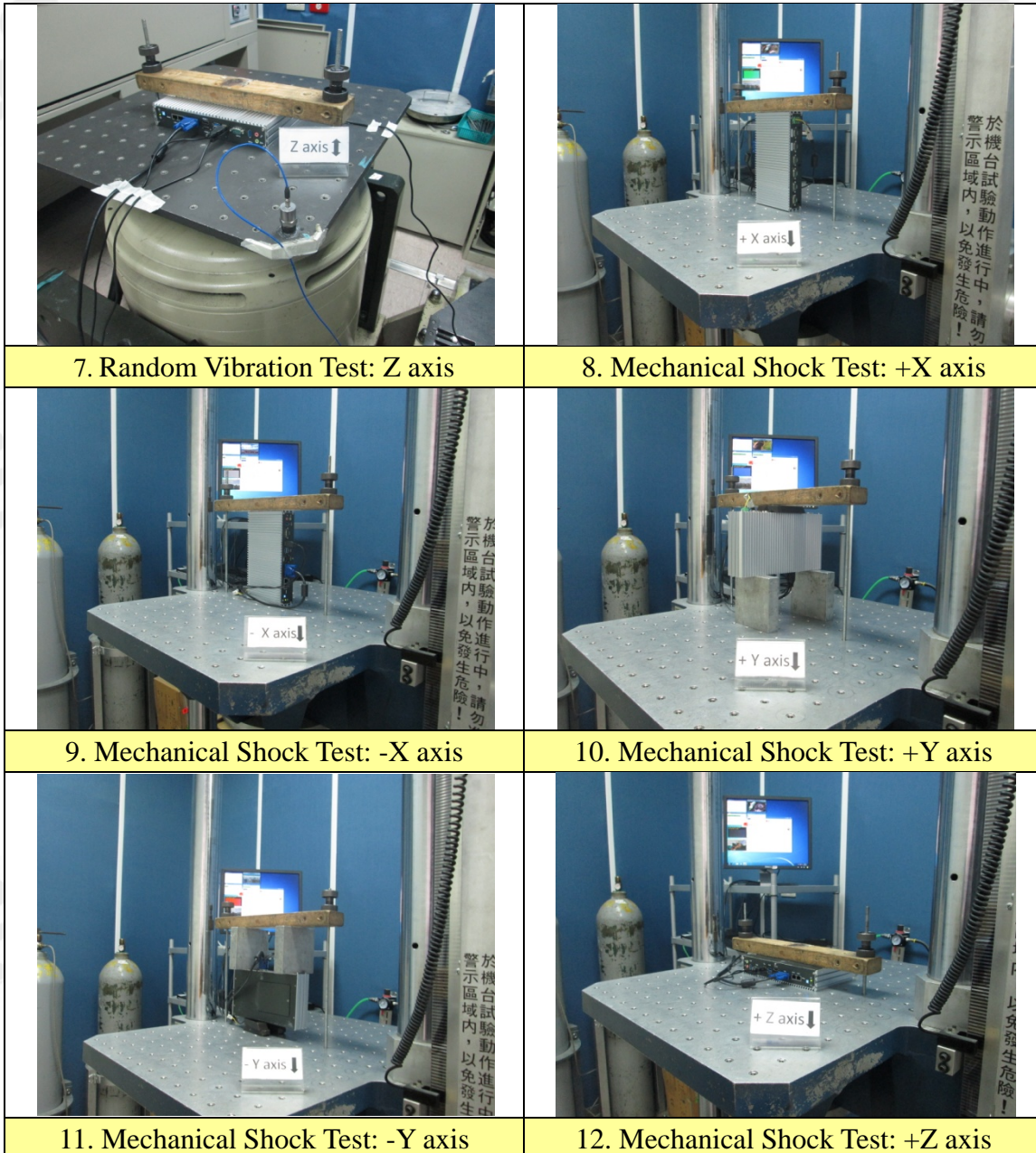
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Test Photos:



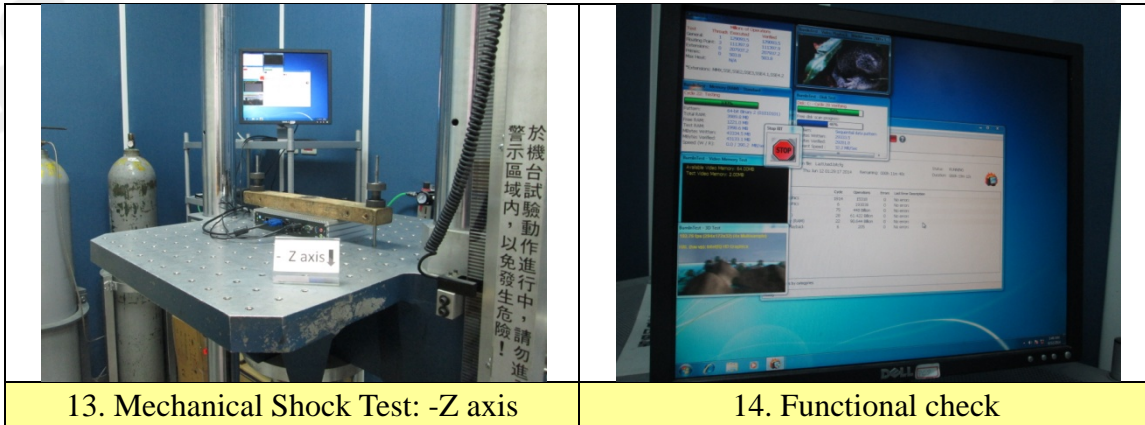
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Test Photos--Continued:



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