TESTING / INSPECTION REPORT

REPORT NO : ST-180511-1

COMPANY : TechNexion Ltd.
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           New Taipei City, Taiwan
TEL : 886-2-8227-3585
FAX : 886-2-8227-3590
SPECIMEN : TEP1010-BSW series
           TEP5-BSW N3710---TEP5-BSW N3710
           Power Expansion-L130---TXB-P1-1030V-LAN1
           I/O Expansion-XG21---TXB-I2-GS2-GG8

DATE OF RECEIVED : 2018/04/26
DATE OF TESTED : 2018/04/26

TEST / INSPECTION ITEMS : Shock Test

REMARKS :
● The laboratory is accredited by ISO/IEC 17025 General Requirements for the
  Competence of Calibration and Testing Laboratory.
● The results only apply to the device under test.
● This report is 11 pages, and no part of it may be abstracted or reproduced.

Test Engineer :

Approval Signatory : Laboratory Head :

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TESTING EQUIPMENT:
2. Controller: DACTRON LASER USB, S/N: 12448370

TEST ENVIRONMENT:
Temperature: 25°C (25±10°C)
Relative Humidity: 62%RH (50±25% RH)

SPECIMEN:
Model/(S/N): TEP1010-BSW series
    TEP5-BSW N3710---TEP5-BSW N3710
    Power Expansion-L130---TXB-P1-1030V-LAN1
    I/O Expansion-XG21---TXB-I2-GS2-GG8

Quantity: 1 unit
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TEST SPECIFICATION:
As per applicant’s requirement---

Shock test  (Operating)
Wave Form  :  Half sine wave
Acceleration :  15 g
Duration Time :  11 mS
No. of Shock :  3 (Each Axis)
Shock Direction :  ±X, ±Y, ±Z axis

TEST RESULT:

<table>
<thead>
<tr>
<th>Describe</th>
<th>PASS</th>
<th>FAIL</th>
<th>Non-Judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function judgment(1)</td>
<td>√</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Appearance check(2)</td>
<td>√</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

(1)—Booting function was normal after the test.
(2)—No visible damages were found.
### Shock testing photos

<table>
<thead>
<tr>
<th>+X axis</th>
<th>-X axis</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>+Y axis</th>
<th>-Y axis</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
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</table>

<table>
<thead>
<tr>
<th>+Z axis</th>
<th>-Z axis</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
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</tbody>
</table>
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Testing photos

After test-1

After test-2
+X axis - shock test

**Test Name:** HS 15g 11 ms [VCS (Shock)]  
**Test Type:** Classical Shock  
**Run Folder:** \RunDefault Apr 26, 2018 12-16-20

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**Diagram Description:**

- **Profile (t):** The profile curve shows the response over time.
- **High-Abort (t):** The high-abort curve indicates the scenario where the shock exceeds a critical level.
- **Low-Abort (t):** The low-abort curve represents a lower threshold.
- **Control (t):** The control curve is used as a reference.

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**Graph Details:**

- **Level:** 100%
- **Block Size:** 2048
- **Elapsed Pulses:** 14
- **Frame Time:** 0.400000 Seconds
- **Control Peak:** 15.47542
- **Control RMS:** 2.247041
- **Remaining Pulses:** 7

**Pulse Type:** Half Sine  
**Amplitude:** 14.999999  
**Pulse Width:** 11.000000 ms
+Y axis - shock test

**Test Name:** HS 15g 11 ms [VCS (Shock)]  **Test Type:** Classical Shock  **Run Folder:** \RunDefault Apr 26, 2018 10:51:46

- **Level:** 100 %  **Block Size:** 2048  **Elapsed Pulses:** 14
- **Frame Time:** 0.400000 Seconds  **Control Peak:** 15.407299  **Control RMS:** 2.246772  **Full Level Elapsed Pulses:** 3
- **dT:** 0.000195 Seconds  **Demand Peak:** 14.999999  **Demand RMS:** 2.156666  **Remaining Pulses:** 7
- **Pulse Type:** Half Sine  **Amplitude:** 14.999999  **Pulse Width:** 11.000000 ms
+Z axis - shock test

**Test Name:** HS 15g 11 ms[VCS (Shock)]
**Test Type:** Classical Shock
**Run Folder:** \RunDefault Apr 26, 2018 14-59-53

- **Level:** 100%
- **Block Size:** 2048
- **Elapsed Pulses:** 14
- **Frame Time:** 0.400000 Seconds
- **Control Peak:** 15.487382
- **Control RMS:** 2.232955
- **Full Level Elapsed Pulses:** 3
- **dT:** 0.000195 Seconds
- **Demand Peak:** 14.999999
- **Demand RMS:** 2.156666
- **Remaining Pulses:** 7
- **Pulse Type:** Half Sine
- **Amplitude:** 14.999999
- **Pulse Width:** 11.000000 ms
-X axis - shock test

Test Name: HS 15g 11 ms[VCS (Shock)]
Test Type: Classical Shock
Run Folder: \RunDefault Apr 26, 2018 12-16-20

Level: 100 %  Block Size: 2048  Elapsed Pulses: 21
Frame Time: 0.400000 Seconds  Control Peak: 15.218359  Control RMS: 2.237796  Full Level Elapsed Pulses: 6
dT: 0.000195 Seconds  Demand Peak: 14.999999  Demand RMS: 2.156666  Remaining Pulses: 0
Pulse Type: Half Sine  Amplitude: 14.999999  Pulse Width: 11.000000 ms
-Y axis - shock test

**Test Name:** HS 15g 11 ms [VCS (Shock)]  
**Test Type:** Classical Shock  
**Run Folder:** RunDefault Apr 26, 2018 10-51-46

![Graph](image)

**Level:** 100%  
**Block Size:** 2048  
**Elapsed Pulses:** 21

**Frame Time:** 0.400000 Seconds  
**Control Peak:** 15.147860  
**Control RMS:** 2.239851  
**Full Level Elapsed Pulses:** 6

**dT:** 0.000195 Seconds  
**Demand Peak:** 14.999999  
**Demand RMS:** 2.156666  
**Remaining Pulses:** 0

**Pulse Type:** Half Sine  
**Amplitude:** 14.999999  
**Pulse Width:** 11.000000 ms
-Z axis - shock test

**Test Name:** HS 15g 11 ms[VCS (Shock)]  **Test Type:** Classical Shock  
**Run Folder:** C:\RunDefault Apr 26, 2018 14:59-53

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**Profile (t)**

- gn Level: 100%
- Block Size: 2048
- Elapsed Pulses: 21
- Frame Time: 0.400000 Seconds
- Control Peak: 15.71083
- Control RMS: 2.236671
- Full Level Elapsed Pulses: 6
- dT: 0.000195 Seconds
- Demand Peak: 14.999999
- Demand RMS: 2.156666
- Remaining Pulses: 0
- Pulse Type: Half Sine
- Amplitude: 14.999999
- Pulse Width: 11.000000 ms

END