# Reliability Tests Report

**Product Name:** TLP352  
**Package Name:** DIP8 THD

### 1. Thermal tests

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Test Condition</th>
<th>Failure Size / Sample Size</th>
</tr>
</thead>
</table>
| Heat resistance (Flow) | Peak: 260 deg.C  
Immersion time: 10 s  
Once | 0 / 32 |
| Heat resistance (Iron) | Temperature of the iron tip: 350 deg.C  
Time: 3 s  
Once | 0 / 32 |
| Temperature cycling | - 55 deg.C(30 min) to 150 deg.C(30 min)  
100 cycles | 0 / 50 |

### 2. Mechanical tests

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Test Condition</th>
<th>Failure Size / Sample Size</th>
</tr>
</thead>
</table>
| Solderability | Solder bath: Sn-Ag-Cu 245 deg.C, 5 s, once (using Flux)  
Solder bath: Sn-Pb 230 deg.C, 5 s, once (using Flux) | 0 / 11 |
| Lead integrity | Weight = 2.5 N  
0 deg. to 90 deg. to 0 deg. Bend, 3 times | 0 / 11 |

### 3. Life tests

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Test Condition</th>
<th>Failure Size / Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady state operation</td>
<td>Ta = 125 deg.C, IF = 14.6mA, VCC = 30V, IO = ±2.5A, Duty = 50% , 1000 h</td>
<td>0 / 30</td>
</tr>
<tr>
<td>High temp. bias</td>
<td>Ta = 125 deg.C, VCC = 35V, 1000 h</td>
<td>0 / 30</td>
</tr>
<tr>
<td>High temp. storage</td>
<td>Ta = 150 deg.C, 1000 h</td>
<td>0 / 30</td>
</tr>
<tr>
<td>High temp. high humidity storage</td>
<td>Ta = 85 deg.C, RH = 85%, 1000 h</td>
<td>0 / 30</td>
</tr>
<tr>
<td>Pressure cooker test</td>
<td>Ta = 121 deg.C(203kPa)(Unsaturated), 96 h</td>
<td>0 / 20</td>
</tr>
</tbody>
</table>

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## Estimated Failure Rate

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Estimated failure rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLP352</td>
<td>0.84 Fit or less</td>
</tr>
</tbody>
</table>

Above estimated value is determined with the standard operation under the general environment:

*The general environment here means the conditions of $T_j \leq 55$ degree C and no application of surge and so on.

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Heat-resistant Mounting Conditions

- **Product Name:** FTLP352
- **Package Name:** FDIP8 THD

**1. Flow**
- **Solder temperature:** 260 deg.C maximum
- **Soldering time:** Within 10 seconds
- **Preheat:** 150 deg.C, 60 to 120 seconds

**NOTE**
Preheating conditions are based on the surface temperature of the PWB by the solder mounting side.
(When the PWB surface by the device side is preheated, its condition should not exceed the maximum storage temperature of a device.)

If the double-wave method is used, keep the total dwell time for a first bath and a second bath within 10 seconds.

Apply up to stopper part or point 1.5 mm or 2.0 mm more far from the body of device. (It depends on each specifications.)

**2. Others**
We urge you to verify well before mounting to assure enough solder joint strength.

Always solder the Product in accordance with the heat-resistance mounting conditions set forth above. In the event the Product is soldered otherwise, the applicable product warranty, if any, is void.

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