

Product Name: 2SA1941  
 Package Name: TO-3P(N)

### 1. Thermal tests

| Test Item              | Test Condition   | Failure Size / Sample Size |
|------------------------|--|----------------------------|
| Heat resistance (Flow) | Peak : 260 deg.C<br>Immersion time : 10 s<br>(Up to 1.5mm from the Root shall be immersed)<br>Once | 0 / 32                     |
| Heat resistance (Iron) | Temperature of the iron tip : 400 deg.C<br>Time : 3 s<br>Once                                      | 0 / 32                     |
| Temperature cycling    | - 55 deg.C(30 min) to 150 deg.C(30 min)<br>100 cycles  | 0 / 50                     |
| -                      | -  | -                          |

### 2. Mechanical tests

| Test Item      | Test Condition  | Failure Size / Sample Size |
|----------------|---|----------------------------|
| Solderability  | Solder bath : Sn-Ag-Cu 245 deg.C , 5 s ,once (using Flux)<br>Solder bath : Sn-Pb 230 deg.C , 5 s ,once (using Flux) | 0 / 11                     |
| Lead integrity | Weight = 10 N 0 deg. to 90 deg. to 0 deg. Bend , 3times   | 0 / 11                     |
| -              | -   | -                          |
| -              | -   | -                          |
| -              | -   | -                          |

### 3. Life tests

| Test Item                        | Test Condition                            | Failure Size / Sample Size |
|----------------------------------|---|----------------------------|
| Steady state operation           | Ta = 25 deg.C, PC = 9.3W *1 ,1000 h       | 0 / 30                     |
| High temp. reverse bias          | Ta = 150 deg.C, VCB = - 112V ,1000 h      | 0 / 30                     |
| High temp. storage               | Ta = 150 deg.C ,1000 h                    | 0 / 30                     |
| High temp. high humidity storage | Ta = 85 deg.C, RH = 85% ,1000 h           | 0 / 30                     |
| Pressure cooker test             | Ta = 121 deg.C(203kPa)(Unsaturated) ,96 h | 0 / 20                     |
| -                                | -   | -                          |

(\*1)Using heat sink.

## Estimated Failure Rate

| Product Name | Estimated failure rate |
|--------------|------------------------|
| 2SA1941      | 0.20 Fit or less       |

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

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

The Estimated Failure Rate contained herein represents the result of our internal product reliability tests, and is provided for your reference only.  
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For detailed reliability test information, please contact your Toshiba sales representative.

Product Name: 2SA1941  
Package Name: TO-3P(N)

### 1.Flow

Number: Only once  
Solder temperature : 260 deg.C maximum  
Soldering time : Within 10 seconds  
Preheat : 150 deg.C , 60 to 120 seconds

NOTE: Apply up to stopper part or point 1.5 mm or more far from the body of device.

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

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. )

### 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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