

Reliability Report

For

**RT9706**

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**Purpose**

- The HTOL test is to demonstrate the quality or reliability of device subjects to the specified conditions over an extended time period.
- The ESD tests are used to classify the electrostatic discharge of microcircuits.
- The latch-up test is used to check IC latch-up characteristics.
- The environment tests are to ensure the process of assembly of this package type that meets Richtek quality specifications.

**Test Items and Conditions**

| Items                 | Condition                                 | Readout    | Q'ty    | Rejects | Reference   |
|-----------------------|---|------------|---------|---------|-------------|
| HTOL                  | T <sub>a</sub> =125°C,<br>VIN=1.1*VIN_MAX | 1000 hours | 77      | 0       | JESD22-A108 |
| ESD                   | HBM                                       | --         | 3/ VOLT | 0       | JESD22-A114 |
|                       | MM  | --         | 3/ VOLT | 0       | JESD22-A115 |
|                       | CDM                                       | --         | 3/ VOLT | 0       | JESD22-C101 |
| Latch-up              | I-TEST                                    | --         | 9       | 0       | JESD78A     |
|                       | V-TEST                                    |            |         |         |             |
| Preconditioning MSL-3 |   |            |         |         |             |
| Bake                  | 125°C                                     | 24 hours   | 385     | 0       | JESD22-A113 |
| MSL-3 Soaking         | 30°C / 60% RH                             | 192 hours  | 385     | 0       |             |
| Reflow                | 260 +0/-5°C                               | 3 cycles   | 385     | 0       |             |
| HTST                  | T <sub>a</sub> =150°C                     | 1000 hours | 77      | 0       | JESD22-A103 |
| THT                   | T <sub>a</sub> =85°C, 85%RH               | 1000 hours | 77      | 0       | JESD22-A101 |
| TCT                   | T <sub>a</sub> =-65°C ~ 150°C             | 500 cycles | 77      | 0       | JESD22-A104 |
| PCT                   | T <sub>a</sub> =121°C, 100%RH, 2ATM       | 168 hours  | 77      | 0       | JESD22-A102 |
| uHAST                 | T <sub>a</sub> =130°C, 85%RH              | 96 hours   | 77      | 0       | JESD22-A118 |

- NOTE:**
1. Preconditioning MSL-3 test was done before HTST, THT, TCT, PCT and uHAST tests.
  2. All assembly houses are Richtek qualified suppliers.

**Summary**

- The test results can be applied to all of the products including a series of RT9706.
- Any questions or inquiries for regarding related products or service of Richtek, you may contact us through our technical support center.  
(<http://www.Richtek.com/contact10.1.jsp>)