

UMA30F series Reliability test results

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| No. | Test Item                                       | Testing conditions                                                                                                                                                                     | Conditions of acceptability                                                                                                         | Number of samples | Number of failures |
|-----|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------|
| 1   | Heat cycle test                                 | (1) -40°C ~ 125°C 30minutes each<br>(2) 800cycles                                                                                                                                      | (1)No degradation of electric characteristics after test.<br>(2)No crack at solder joint.                                           | 4                 | 0                  |
| 2   | High temperature/<br>High humidity<br>bias test | (1) Ta=85°C, RH=85%<br>(2) At rated input<br>(3) Load 0%<br>(4) 1000hours                                                                                                              | (1)No degradation of electric characteristics after test.                                                                           | 1                 | 0                  |
| 3   | Vibration test                                  | (1) f=10~55Hz, 19.6m/s <sup>2</sup> (2G)<br>(2) 3 minutes period<br>(3) 60 minutes along X, Y and Z axis                                                                               | (1)No degradation of electric characteristics after test.<br>(2)No crack at solder joint.<br>(3)No mechanical damage of appearance. | 3                 | 0                  |
| 4   | Impact test                                     | (1) 196.1m/s <sup>2</sup> (20G), 11ms<br>(2) Once each X, Y and Z axis                                                                                                                 | (1)No degradation of electric characteristics after test.<br>(2)No crack at solder joint.<br>(3)No thermal damage of appearance.    | 3                 | 0                  |
| 5   | Electrostatic discharge<br>immunity test        | (1) Rated load<br>(2) Ambient temp. 25±10°C<br>(3) Contact Discharge : Level 4 (8kV)<br>(4) Air Discharge : Level 4 (15kV)<br>(5) Applied to Chassis, Input,<br>Output and FG terminal | (1)No protection circuit fail.<br>(2)No output voltage drop with control<br>circuit fail.<br>(3)No any other function fail.         | 1                 | 0                  |