

## Reliability Report 1SC0450E2A0

### Scope

The goal of this document is to explain reliability tests done on 1SC0450E2A0 family. Following drivers are covered by this family:

- 1SC0450E2A0-45
- 1SC0450E2A0-65

### Serial Environmental Load

Serial stress: all the tests in the table below are done on the same samples

Test Name	Test Settings	Results
Vibration (sinusoidal)	IEC 60068-2-6:2007-12: Frequency range: 5Hz to 200Hz Cross-over frequency: 8.4Hz Displacement amplitude below cross-over frequency: $\pm 3.5$ mm Acceleration amplitude above cross-over frequency: 1g Sweep rate: 1.0 Okt/min Test duration per axis: 20 sweeps (X, Y and Z) DUT not powered	Pass
Shock	IEC 60068-2-27:2008-02: Pulse shape: Half-sine Peak acceleration: 15g Corresponding duration of the nominal pulse: 6ms Number of shocks in each of the six directions: 100 Axis: X, Y and Z (pos. and neg.) DUT not powered	Pass
Cold	IEC 60068-2-1:2007-03: Test: Ae Temperature: -40°C Duration: 96h DUT powered	Pass
Dry heat	IEC 60068-2-2:2007-07: Test:Be Temperature: 85°C Duration: 96h DUT powered	Pass
Change of temperature	IEC 60068-2-14:2009-01: Test: Nb Cycles: 2 Start temperature: 20°C Low temperature: -40°C High temperature: 85°C Rate of change: 10K/min Exposure time at lower/upper temperature: 30min DUT powered	Pass
Damp heat	IEC 60068-2-78:2012-10: Temperature: 40°C Relative humidity: 93% Duration of test: 96h DUT not powered	Pass