

Product Qualification Report

1EDF5673F

Driver IC

Description

This product qualification report describes the characteristics of the product with respect to quality and reliability.

The qualification sample selection was done on production lots which were manufactured and tested on standard production processes and meet the defined requirements.

The qualification test results of those products as outlined in this document are based on **JEDEC** for target applications and may reference existing qualification results of similar products. Such referencing is justified by the structural similarity of the products.

Qualification Assessment

Fully qualified according to **JEDEC** for **Industrial Applications** and assessed as PASS

For further information about comparable products, please contact the nearest Infineon Technologies office (www.infineon.com).

1EDF5673F
PG-DSO-16
MSL: 3; 260 °C

qualified 2018

Electrical Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|-------|---|----------|------------------------------|----------|-------------------|
| High Temperature Operating Live <i>JESD22-A108</i> | HTOL | T _j = approx. 145 °C V _{CC} = 5 V / 20 V | 1000 h | 3 x 77 | 0 / 231 | PASS |
| Latch-Up Robustness <i>EIA/JESD 78</i> | LU | T _a = 125 °C | | 1 x 6 | 0 / 6 | PASS ¹ |
| ESD (HBM) <i>ANSI/ESDA/JEDEC JS-001</i> | HBM | Class 2 (2000 V to <4000 V) | | 1 x 3 (per voltage level) | 0 / 3 | PASS |
| ESD (CDM) <i>ANSI/ESDA/JEDEC JS-002</i> | CDM | Class C2A (500 V to <750 V) | | 1 x 3 (per voltage level) | 0 / 3 | PASS |

Environmental Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|-------------------|--|----------|---------|----------|--------|
| Pre-Conditioning <i>J-STD020 / JESD22 A113</i> | PC | MSL and 3 x reflow | | 3 | 0 | PASS |
| High Temperature Storage Life <i>JESD22-A103</i> | HTSL | T _a = 150 °C | 1000 h | 3 x 77 | 0 / 231 | PASS |
| Biased Highly Accelerated Stress Test <i>JESD22 A110</i> | HAST ² | T _a = 130 °C r.h. = 85% V _{CC} = 3.3 V | 96 h | 3 x 77 | 0 / 231 | PASS |
| Temperature Cycling <i>JESD22 A104</i> | TC ² | -65 °C to +150 °C | 500x | 3 x 77 | 0 / 231 | PASS |

Mechanical Stress Test Results:

| Test Description | Abb | Condition | Duration | Lots | Fail/Qty | Result |
|--|-----|----------------|----------|--------|----------|--------|
| Moisture Sensitivity Level <i>IPC / J-STD-020</i> | MSL | MSL 3 @ 260 °C | | | 0 / 22 | PASS |
| Solderability <i>JESD22 B102</i> | SD | | | 3 x 15 | 0 / 45 | PASS |
| Lead Integrity <i>JESD22 B105</i> | LI | | | 3 x 12 | 0 / 36 | PASS |

¹ Pin 8 passed at <90 mA @ 125 °C, all other pins passed at 150 mA @ 125 °C. Refer to datasheet.

² For SMD devices, a preconditioning (PC) according to JESD22 was performed prior to selected reliability stress tests.

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Document reference

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