# Product Qualification Report

# 4DIR0401H

ISOFACE™

## 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).

**4DIR0401H**
**PG-DSO-16**
**MSL: 3; 260**

**qualified 2023**

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Parametric Verification | PV | -55°C, +25°C, +150°C | | 6 x 30 | 0 / 180 | PASS |
| High Temperature Operating Lifetime JESD22 A108 | HTOL* | Ta = 150°C Vstress = 6.5V | 1000 h | 3 x 77 | 0 / 231 | PASS |
| High Accelerated Stress Test JESD22A-110 | HAST* | Ta = 130°C rh = 85% Vstress = 6.5V | 1000 h | 3 x 77 | 0 / 231 | PASS |
| ESD (HBM) AEC-Q100-002 | HBM | Class 2 ( 2000 V to < 4000 V) | | | | PASS |
| ESD (CDM) AEC-Q100-011 | CDM | Class C3 (≥ 1000V) | | | | PASS |

**Environmental Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Pre-conditioning J-STD020 / JESD22 A113 | PC | MSL and 3 x reflow | | 4 x 231 | 0 / 924 | PASS |
| Temperature Cycling JESD22 A104 | TC* | -55°C to +150°C | 1000 cyc | 3 x 77 | 0 / 231 | PASS |
| Unbiased Highly Accelerated Stress Test JESD22 A118 | UHAST* | Ta = 130°C rh = 85% | 96 h | 4 x 77 | 0 / 308 | PASS |

**Mechanical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Destructive Physical Analysis | DPA | samples from HAST, HTSL, TC | | | 0 / 3 | PASS |

**Notes:**
* For SMD devices reliability stress tests performed after preconditioning test (PC) according to JESD22

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**Document reference**
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