# Product Qualification Report

# 4DIR1421HA

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 **AEC Q100 Rev H** 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

Qualified acc. **AEC Q100 Rev H** and assessed as PASS

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

# 4DIR1421HA
# PG-DSO-16
# MSL: 3; 260 °C

**qualified 2023**

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/ss | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Electrical Distribution AEC Q100-009 | ED | -55°C, +25°C, +150°C | | 3 x 30 | 0 / 90 | PASS |
| Highly Accelerated Stress Test JESD22 A110 | HAST | Ta=130°C, RH=85% | 96 h | 3 x 77 | 0 / 231 | PASS |
| High Temperature Operating Life JESD22 A108 | HTOL | Tj=150°C | 1000 h | 3 x 77 | 0 / 231 | PASS |
| Power Temperature Cycling JEDS22 A105 | PTC | Ta=-40°C up +150°C | 1000 cyc | 1x45 | 0/45 | PASS |
| ESD Human Body Model JESD22 Axx | HBM | Class 2 (2000 – 4000 V) | | | | PASS |
| ESD CDM JESD22 Axx | CDM | Class C3 (>= 1000 V) | | | | PASS |
| Latch Up AEC Q100 | LU | | | | | PASS |

**Environmental Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Temperature Cycling* JESD22 A104 | TC* | -55°C to +150°C | 1000 cyc | 3x77 | 0 / 231 | PASS |
| Unbiased HAST* JESD22 A118 | uHAST* | Ta=130°C, RH=85% | 96 h | 3x77 | 0 / 231 | PASS |
| High Temperature Storage Life JESD A103 | HTSL | Ta=150°C | 1000h | 1x45 | 0 / 45 | PASS |
| Physical Dimensions JESD B-100 | PD | Generic Data | | | | Production Data |
| Solderability J-STD-002 | SD | Generic Data | | | | Production Data |

**Notes:**

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

Further abbreviations: MSL - moisture sensitivity level, Qty – quantity, RH – relative humidity, SS – sample size, Ta – ambient temperature, Ts – solder temperature

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**Document reference**

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