# Product Qualification Report

# XDP700-002

Hot-swap Controller 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).

**XDP700-002**
**PG-VQFN-29**
**MSL: 3; 260°C**

**qualified since November 2022**

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| High Temperature Storage Life<br>JESD22 A103 | HTSL | Ta ≥ 150°C | 1000 h | 3 x 77 | 0 / 231 | PASS |
| High Temperature Operating Life<br>JESD22 A108 | HTOL | Tj = 150°C<br>$V_{stress}$ = 80V | 1000h | 3 x 77 | 0 / 231 | PASS |
| Latch-up<br>JESD78 | LU | Class 2 | | | | PASS |
| ESD (HBM)<br>JESD22-A114 | HBM | Class 2<br>(2000V to <4000V) | | | | PASS |
| ESD (CDM)<br>JESD22-C101 | CDM | Class C2<br>(500 V to <1000 V) | | | | PASS |

**Environmental Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Pre-conditioning<br>J-STD020 / JESD22 A113 | PC | MSL and 3 x reflow | | 6 x 77 | 0 / 462 | PASS |
| Temperature Cycling<br>JESD22 A104 | TC* | -65°C to +150°C | 500 cyc | 3 x 77 | 0 / 231 | PASS |
| Biased Highly Accelerated Stress Test<br>JESD22 A110 | HAST* | Ta = 130°C<br>rh = 85%<br>$V_{stress}$ = 80V | 96 h | 3 x 77 | 0 / 231 | PASS |

**Mechanical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Destructive Physical Analysis | DPA | Samples from HAST, HTSL and TC | | 9 | 0 / 135 | PASS |

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

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**Document reference**

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