# Product Qualification Report

# IM70D122V01

XENSIV™

## 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).

# IM70D122V01 qualified 2022
# PG-TLGA-5-2
# MSL: 1; 260°C

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| High Temperature Operating Life JESD22-A108 | HTOL | $T_a$=+125°C, $V_{DD}$=3.6V | 1000h | 3 x 77 | 0/231 | PASS |
| Low Temperature Operating Life JESD22-A119 | LTOL | $T_a$=-40°C, $V_{DD}$=3.6V | 1000h | 3 x 32 | 0/96 | PASS |
| Temperature Humidity Bias JESD22-A101 | PC + THB | MSL 1 pre-conditioning | | 3 x 32 | 0/96 | PASS |
| | | $T_a$=+85°C, 85% rH, $V_{DD}$=3.6V | 1000h | | | PASS |
| ESD (SLT) IEC-61000-4-2 | ESD-SLT | ±15kV air | 25x | 3/3 | 0/9 | PASS |
| | | ±8kV contact | 25x | 3/3 | 0/9 | |
| ESD (HBM) JEDEC-JS001 | ESD - HBM | Class 2 2000V to <4000V | | 3/3 | 0/9 | PASS |
| ESD (CDM) JEDEC-JS002 | ESD-CDM | Class C2a 500V to <750V | | 3/3 | 0/9 | PASS |
| Latch Up JESD78E | LU | Class II A $T_a=T_{max\ op}$, $I_{trig}$ ≥ 100mA | | 3/3 | 0/9 | PASS |

**Environmental Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Low Temperature Storage Life JESD22-A119 | LTSL | $T_a$=-40°C | 1000h | 3 x 32 | 0/96 | PASS |
| HighTemperature Storage Life JESD22-A103 | HTSL | $T_a$=+125°C | 1000h | 3 x 32 | 0/96 | PASS |
| Temperature Cycling JESD22-A104 | PC + TC | MSL 1 pre- conditioning | | 3 x 32 | 0/96 | PASS |
| | | -40°C to +125°C, 30min per cycle | 1000 cycles | 3 x 32 | 0/96 | PASS |

**Mechanical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Vibration Test IEC 60068-2-6 / MIL-STD 883K 2007.3 | VVF | 20 to 2000Hz, peak 20g in X, Y, Z | 4 min each direction, 4 cycles | 3 x 32 | 0/96 | PASS |
| Mechanical Shock IEC 60068-2-27 | MS | 10000g/0.1ms in ±x, y, z direction | 5 shocks in each direction | 3 x 32 | 0/96 | PASS |
| Reflow Solder IPC/JEDEC J-Std-020D-01 | RS | 3x reflow cycles, peak 260°C | | 3 x 32 | 0/96 | PASS |

**Notes:**
Preconditioning (PC) of the surface mounted devices is done according to JESD22 for certain reliability stress tests

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