# Product Qualification Report

# ICE2HS01G

CoolSET™

## 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).

**ICE2HS01G** **qualified before 2012**
**PG-DSO-20**
**MSL: 3; 260°C**

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duratio | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| High Temperature Storage Life<br>JESD22-A103 | HTSL | Ta ≥ 150°C | 1000 h | 5 x 77 | 0 / 385 | PASS |
| High Temperature Operating Life<br>JESD22-A108 | HTOL | Ta = 100°C<br>V = max voltage | 1000 h | 5 x 77 | 0 / 385 | 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 C3<br>(> 1000V) | | | | 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 | | 3 x 385 | 0 / 1155 | PASS |
| Temperature Humidity Biased<br>JESD22 A101 | THB* | Ta = 85°C<br>rh = 85%<br>V = Min voltage | 1000 h | 5 x 77 | 0 / 385 | PASS |
| Temperature Cycling<br>JESD22 A104 | TC* | -65°C to +150°C | 500 cycles | 5 x 77 | 0 / 385 | PASS |
| Autoclave<br>JESD22 A102 | AC* | Ta = 121°C<br>rh = 100% | 96 h | 5 x 77 | 0 / 385 | PASS |

**Mechanical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Destructive Physical Analysis | DPA | samples from AC & TC | | 5 | 0 / 5 | PASS |

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

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**Do you have a question about this document?**

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**Document reference**

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