# Product Qualification Report

# BCR431U

LED Driver

## 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).

# BCR431U
# PG-DSO-16
# MSL: 1; 260°C

**qualified in 2020**

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| High Temperature Operating Life<br>JESD22 A108 | HTOL | Ta = 105°C | 1000 h | 3x77 | 0/231 | PASS |
| Temperature Humidity Bias<br>JESD22 A118 | THB* | Ta = 85°C<br>RH = 85 % | 96 h | 3x25 | 0/75 | PASS |

**Environmental Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Pre-Conditioning<br>J-STD-20/JESD22 A113 | PC | MSL and 3 x reflow | - | 9x25 | 0/225 | PASS |
| Temperature Cycling<br>JESD22 A104 | TC* | -55°C to +150°C | 1000 cyc | 3x25 | 0/75 | PASS |
| Unbiased Highly Accelerated Stress Test<br>JESD22 A102 | UHST* | Ta = 130°C<br>RH = 85 % | 96 h | 3x25 | 0/75 | PASS |
| High Temperature Storage Life<br>JESD22 A103 | HTSL | Ta = 150°C | 1000 h | 3x25 | 0/75 | PASS |

**Device Characterization and Classifications:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| ESD Human Body Model<br>ANSI/ESDA/JEDEC JS-001 | ESD HBM | Class 3A<br>4000 V to < 8000 V | - | - | - | PASS |
| ESD Charged Device Model<br>ANSI/ESDA/JEDEC JS-002 | ESD CDM | Class C2A<br>500 V to < 750 V | - | - | - | PASS |
| Latch-Up<br>JESD78 | LU | - | - | - | - | PASS |

**Notes:**

* For SMD devices reliability stress tests performed after pre-conditioning test (PC)

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

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**Document reference**

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