# Product Qualification Report

# IRLML5103

Small Sig

## 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

Qualified according to **JEDEC Standard** and assessed as PASS

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

**Qualified 2016**

# IRLML5103TRPBF
# PG-SOT23-3
# MSL 1, 260°C

### Electrical Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| High Temperature Reverse Bias<br>JESD22 A108 | HTRB | Ta = 150°C/175°C**<br>$V_{DS}$ = 80% $V_{DS,max}$ | 500 h | 3 x 77 | 0 / 231 | PASS |
| High Temperature Gate Bias<br>JESD22 A108 | HTGB | Ta = 150°C/175°C**<br>$V_{GS}$ =80% $V_{GS,max}$ | 500 h | 3 x 77 | 0 / 231 | PASS |
| Temperature Humidity Bias<br>JESD22 A101 | THB* | Ta = 85°C<br>RH = 85%<br>$V_{DS}$ = 80% $V_{DS,max}$ *** | 500 h | 3 x 77 | 0 / 231 | PASS |
| ESD (HBM).<br>JESD22 A114 | HBM | ( please contact quality management ) | | | | |
| ESD (CDM).<br>JESD22 C101 | CDM | C3 ( > 1000 V ) | | | | |

### Environmental Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Pre-conditioning (SMD device only)<br>J-STD020 / JESD22 A113 | PC | MSL and 3x reflow 260°C | | 2 x 231 | 0 / 462 | PASS |
| Temperature Cycling<br>JESD22 A104 | TC* | -55°C to +150°C | 500 cyc. | 3 x 77 | 0 / 231 | PASS |

### Notes:

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

** According to product datasheet Tj maximum rating

*** See AEC Q101 Rev. D1 Table 2 for reference

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

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**Document reference**

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