# Product Qualification Report

# IR4312M

Audio 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

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**

# IR4312MTRPBF
# PG-IQFN-44
# MSL 2, 260°C

## Electrical Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| High Temperature Operating Life<br>JESD22 A108 | HTOL | Tj = 125°C + Bias**<br>**Or**<br>Tj = 150°C + Bias** | 1000h<br><br>500 h | 3 x 77 | 0 / 231 | PASS |
| Biased Highly Accelerated Stress Test<br>JESD22 A110 | HAST * | Ta = 130°C<br>RH = 85% + Bias | 96 h | 3 x 77 | 0 / 231 | PASS |
| ESD (HBM)<br>JS 001 | HBM | 1A ( 250 V to < 500 V ) | | | | |
| Latch-Up<br>JESD78 | LU | Class I, Level A | | | | |

## 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<br>260°C | | | | PASS |
| High Temperature Storage Life<br>JESD22 A103 | HTSL | Ta = 175°C***<br>**Or**<br>Ta = 150°C*** | 500 h<br><br>1000 h | 1 x 45 | 0 / 45 | PASS |
| Temperature Cycling<br>JESD22 A104 | TC* | -55°C to +150°C***<br>**Or**<br>-65°C to +150°C*** | 1000 cyc<br><br>500 cyc | 3 x 77 | 0 / 231 | PASS |
| Autoclave***<br>JESD22 A102<br>**Or**<br>Unbiased Highly Accelerated Stress Test***<br>JESD22 A118 | AC*<br><br><br>UHAST* | Ta=121°C RH=100%<br><br><br>Ta = 130°C<br>RH = 85% | <br><br>96h | 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

*** Selection based on equipment and hardware availability

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**Document reference**

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