

Product Qualification Report

IR4427PBF

Driver 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 potential 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).

IR4427PBF PG-DIP-8

Electrical Stress Test Results:

Test Description	Abbr.	Condition ¹⁾	Duration	Lots/Qty	Result
High Temperature Operating Life <i>JESD22-A108</i>	HTOL	$T_j = T_{j, \max}^{2)}$ $V_{\text{Stress}} = V_{\text{CC}, \max}^{2,4)}$	500 h	3 × 77 pcs	PASS
Latch up <i>JESD78</i>	LU	Refer to datasheet		1 × 3 pcs	PASS
ESD HBM <i>JEDEC JS-001</i>	HBM	Refer to datasheet		3 pcs	PASS
ESD CDM <i>JEDEC JS-002</i>	CDM	Refer to datasheet		3 pcs	PASS

Environmental Stress Test Results:

Test Description	Abbr.	Condition ¹⁾	Duration	Lots/Qty	Result
Preconditioning <i>JESD22-A113</i>	PC	MSL ²⁾ and 3 x reflow			PASS
High Temperature Storage Life <i>JESD22-A103</i>	HTSL	$T_a \geq 150^\circ\text{C}$	1000 h	3 × 45 pcs	PASS
Temperature Humidity Bias <i>JESD22-A101</i>	THB ³⁾	$T_a = 85^\circ\text{C}$ RH = 85% $V_{\text{Stress}} = V_{\text{CC}, \max}^{2,4,5)}$	1000 h	3 × 77 pcs	PASS
Alternative: Highly-Accelerated Stress Test <i>JESD22 A110</i>	HAST ³⁾	$T_a = 130^\circ\text{C}$ RH = 85% $V_{\text{Stress}} = V_{\text{CC}, \max}^{2,4,5)}$	96 h	3 × 77 pcs	PASS
Temperature Cycling <i>JESD22-A104</i>	TC ³⁾	Refer to datasheet	1000 cyc	3 × 77 pcs	PASS
Unbiased Highly-Accelerated Stress Test <i>JESD22-A118</i>	UHST ³⁾	$T_a = 130^\circ\text{C}$ RH = 85 %	96 h	3 × 77 pcs	PASS

Notes:

- 1) As conditions, here typical values are chosen.
- 2) Please refer to datasheet.
- 3) For SMD devices, a preconditioning (PC) according to JESD22 was performed prior to selected reliability stress tests.
- 4) $V_{\text{CC}}/V_{\text{DD}}$ max depending on the device. All values according to max. operating conditions.
- 5) Applied voltage according to V_{CC} , max operating range up to 100 V.

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

Edition 23.05.2024

Published by

Infineon Technologies AG

81726 München, Germany

© 2024 Infineon Technologies AG.

All Rights Reserved.

Do you have a question about this document?

Email: erratum@infineon.com

Document reference

n.a.

IMPORTANT NOTICE

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenhheitsgarantie").

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of Infineon Technologies in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

For further information on the product, technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies office (www.infineon.com).

Please note that this product is not qualified according to the AEC Q100 or AEC Q101 documents of the Automotive Electronics Council.

WARNINGS

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.