Product Qualification Report

IRF7420

Trench ULV

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

IRF7420TRPBF
PG-DSO-8
MSL 1, 260°C

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Reverse Bias JESD22 A108	HTRB	Ta = 150°C/175°C** V_{DS} = 80% $V_{DS,max}$	500 h	3 x 77	0 / 231	PASS
High Temperature Gate Bias JESD22 A108	HTGB	Ta = 150°C/175°C** V_{GS} =80% $V_{GS,max}$	500 h	3 x 77	0 / 231	PASS
Temperature Humidity Bias JESD22 A101	THB*	Ta = 85°C RH = 85% V_{DS} = 80% $V_{DS,max}$ ***	500 h	3 x 77	0 / 231	PASS
ESD (HBM). JESD22 A114	HBM	1C (1000 V to < 2000 V)				
ESD (CDM). 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) J-STD020 / JESD22 A113	PC	MSL and 3x reflow 260°C		2 x 231	0 / 462	PASS
Temperature Cycling 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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Document reference

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