Product Qualification Report

BSC033N08NS5SC

Trench 40<-<100V

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 2023

BSC033N08NS5SC
PG-WSON-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	Tj = 175°C** VCE= 80% $V_{DS,max}$	1000h	3 x 77	0 / 231	PASS
High Temperature Gate Stress JESD22 A108	HTGS	Ta = 175°C** VGE =100% $V_{GS,max}$ (NL)	1000h	3 x 77	0 / 231	PASS
High Humidity High Temp. Reverse Bias*** JESD22 A101	H3TRB*	Ta = 85°C RH = 85% V_{DS} = 80% $V_{DS,max}$ ****	1000 h	3 x 77	0 / 231	PASS
Intermitted Operational Life Test MIL-STD 750 / Meth.1037	IOL*	Delta T=100K	15000 cycles	3 x 77	0 / 231	PASS
ESD (HBM) ANSI/ESDA/JEDEC JS 001	HBM	Class 2 (2000V to 4000V)				

Environmental Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Pre-conditioning (SMD device only) JESD22 A113	PC	MSL and 3x reflow 260°C			0 / 1078	PASS
Temperature Cycling JESD22 A104	TC*	-55°C to +150°C	1000 cycles	3 x 77	0 / 231	PASS
Unbiased Highly Accelerated Stress Test*** JESD22 A118	UHAST *	Ta = 130°C RH = 85%	96h	3 x 77	0 / 231	PASS
High Temperature Storage Lifetime JESD47 / JESD22 A103	HTSL	Ta = 175°C	1000 h	1 x 77	0 / 77	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

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

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Document reference

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