Product Qualification Report

ESD145-B1-W01005

Bi-directional ESD protection device, 18 V, 0.2 pF, 01005

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

Fully qualified according to **JEDEC** for **Industrial Applications** and assessed as PASS

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

ESD145-B1-W01005
SG-WLL-2-2
MSL: 1; 260 °C

qualified 2017

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Electrical Parameter Assessment JESD86	ED	-55 °C - 150 °C		3 x 10	0 / 30	PASS
High Temperature Reverse Bias JESD22-A108	HTRB	T_j = 150 °C $V_{dd} = V_{dd_max}$	1000 h	3 x 77	0 / 231	PASS

Environmental Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Storage Life JESD22-A103	HTSL	T_a = 175 °C	1000 h	3 x 25	0 / 75	PASS
Pre-conditioning JESD22-A113, J-STD020	PC	Soak acc. MSL 1, 3x reflow, 260 °C		3 x 75	0 / 225	PASS
Temperature Cycling JESD22-A104	TC*	-55 °C to 150 °C	1000 cycles	3 x 25	0 / 75	PASS
Autoclave JESD22-A102	AC*	T_a = 121 °C rh = 100 % p = 2.1 bar	96 h	3 x 25	0 / 75	PASS
High Humidity, High Temperature Bias JESD22-A101	H3TRB*	T_a = 85 °C rh = 85 % $V_{dd} = V_{dd_max}$	1000 h	3 x 25	0 / 75	PASS

Mechanical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Physical Dimensions JESD22-B100	PD			1 x 30	0 / 30	PASS
Solderability J-STD-002	SD			3 x 22	0 / 66	PASS

Notes:
* For SMD devices reliability stress tests performed after preconditioning test (PC) according to JESD22-A113

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Document reference

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