Product Qualification Report

4DIR1420H

ISOFACE™

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).

4DIR1420H **qualified 2023**
PG-DSO-16
MSL: 3; 260°C

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Operating Lifetime JESD22 A108	HTOL	Ta = 150°C	1000 h	3 x 77	0 / 231	PASS
High Accelerated Stress Test JESD22A-110	HAST*	Ta = 130°C RH = 85%	1000 h	3 x 77	0 / 231	PASS

Environmental Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Pre-conditioning J-STD020 / JESD22 A113	PC	MSL and 3 x reflow	-	4 x 231	0 / 924	PASS
Temperature Cycling JESD22 A104	TC*	-55°C to +150°C	1000 cyc	3 x 77	0 / 231	PASS
High Temperature Storage Life JESD22 A103	HTSL	Ta = 150°C	1000 h	3 / 77	0 / 231	PASS

Device Characterization and Classifications:
Mechanical Stress Test Results

Test Description	Abbr.	Condition	Duration	Lots / SS	Fail/Qty	Result
ESD (HBM) AEC-Q100-002	HBM	Class 2 (2000 V to < 4000 V)	-	1 / 30	0 / 30	PASS
ESD (CDM) AEC-Q100-011	CDM	Class C3 (≥ 1000V)	-	1 / 30	0 / 30	PASS
Latch-Up JESD78	LU	Ta = 125°C	-	3 / 6	0 / 18	PASS
Destructive Physical Analysis	DPA	Samples from HAST, HTSL, TC	-	4 / 8	0 / 32	PASS

Notes:
* For SMD devices reliability stress tests performed after pre-conditioning test (PC)

Further abbreviations: MSL - moisture sensitivity level, Qty – quantity, RH – relative humidity, SS – sample size, Ta – ambient temperature

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