Product Qualification Report

IM70A135V01

XENSIV™

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).

IM70A135V01 **qualified 2023**
PG-TLGA-5-5
MSL: 1; 260°C

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Operating Life JESD22-A108	HTOL	T_a=+125°C, V_{DD}=3.6V	1000h	3 x 77	0/231	PASS
Low Temperature Operating Life JESD22-A119	LTOL	T_a=-40°C, V_{DD}=3.6V	1000h	3 x 32	0/96	PASS
Temperature Humidity Bias JESD22-A101	PC + THB	MSL 1 pre-conditioning		3 x 32	0/96	PASS
		T_a=+85°C, 85% rH, V_{DD}=3.6V	1000h			PASS
ESD (SLT) IEC-61000-4-2	ESD-SLT	±15kV air	25x	3/3	0/9	PASS
		±8kV contact	25x	3/3	0/9	
ESD (HBM) JEDEC-JS001	ESD - HBM	Class 2 2000V to <4000V		3/3	0/9	PASS
ESD (CDM) JEDEC-JS002	ESD-CDM	Class C2a 500V to <750V		3/3	0/9	PASS
Latch Up JESD78E	LU	Class II A T_a=$T_{max\ op}$, I_{trig} ≥ 100mA		3/3	0/9	PASS

Environmental Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Low Temperature Storage Life JESD22-A119	LTSL	T_a=-40°C	1000h	3 x 32	0/96	PASS
HighTemperature Storage Life JESD22-A103	HTSL	T_a=+125°C	1000h	3 x 32	0/96	PASS
Temperature Cycling JESD22-A104	PC + TC	MSL 1 pre- conditioning		3 x 32	0/96	PASS
		-40°C to +125°C, 30min per cycle	1000 cycles	3 x 32	0/96	PASS

Mechanical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots	Fail/Qty	Result
Vibration Test IEC 60068-2-6 / MIL-STD 883K 2007.3	VVF	20 to 2000Hz, peak 20g in X, Y, Z	4 min each direction, 4 cycles	3 x 32	0/96	PASS
Mechanical Shock IEC 60068-2-27	MS	10000g/0.1ms in ±x, y, z direction	5 shocks in each direction	3 x 32	0/96	PASS
Reflow Solder IPC/JEDEC J-Std-020D-01	RS	3x reflow cycles, peak 260°C		3 x 32	0/96	PASS

Notes:
Preconditioning (PC) of the surface mounted devices is done according to JESD22 for certain reliability stress tests

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