Product Qualification Report

IGLT65R055B2

CoolGaN™

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).

IGLT65R055B2
PG-HDSOP-16
MSL: 3; 260 °C

qualified 2025

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature AC Blocking Voltage JESD22-A108 (Q101)	AC-BV	T_a = 150 °C V_{S1S2} = 430 V (peak) f = 50 Hz (sine)	1000 h	3 x 77	0 / 231	PASS
Positive High Temperature Gate Stress JESD22-A108	P_HTGF	T_a = 150 °C $I_G = I_{Gf\text{-}DC,\ max}$ (According to data sheet maximum values)	1000 h	3 x 40	0 / 120	PASS
Negative High Temperature Gate Stress JESD22-A108	N_HTGS	T_a = 150 °C V_{GS} = -10 V	1000 h	3 x 40	0 / 120	PASS
Intermitted Operational Life Test MIL-STD 750 / Meth.1037	IOL[1]	ΔT = 100 K	7500 cyc	3 x 77	0 / 231	PASS
Electrostatic Discharge Human Body Model ANSI/ESDA/JEDEC-JS-001	ESD-HBM	Class 2 (2000 V to <4000 V)			0 / 3	PASS
Electrostatic Discharge Charged Device Model ANSI/ESDA/JEDEC-JS-002	ESD-CDM	Class C3 (≥1000 V)			0 / 3	PASS
Parametric Verification JESD86	PV	T_a = -40 °C / 25 °C / 150 °C		3 x 30	0 / 90	PASS

Environmental Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Preconditioning J-STD020 / JESD22-A113	PC	MSL 3		3	0	PASS
AC-Highly Accelerated Stress Test JESD22-A110	AC-HAST[1]	T_a =130 °C r.h. = 85% V_{S1S2} ≥ 100 V (peak) f = 50 Hz (sine)	96 h	3 x 77	0 / 231	PASS
Temperature Cycling JESD22-A104	TC[1]	-65 °C to +150 °C	500 cyc	3 x 77	0 / 231	PASS

Mechanical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Destructive Physical Analysis	DPA	samples from TC, AC-HAST, AC-BV			0 / 10	PASS

[1] For SMD devices, a preconditioning (PC) according to JESD22-A113 was performed prior to selected reliability stress tests.

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