Product Qualification Report

ICL8820

AC-DC LED Driver IC

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).

ICL8820 **qualified in 2022**
PG-DSO-8
MSL: 3; 260°C

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Operating Life JESD22 A108	HTOL	Ta = 125°C	1000 h	3 / 77	0 / 231	PASS
Temperature Humidity Bias JESD22 A110	HAST*	Ta = 130°C RH = 85 %	1000 h	3 / 77	0 / 231	PASS

Environmental Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Pre-Conditioning JESD22 A113	PC	MSL and 3 x reflow	-	6 / 77	0 / 462	PASS
Temperature Cycling JESD22 A104	TC*	-55°C to +150°C	1000 cyc	3 / 77	0 / 231	PASS
High Temperature Storage Life JESD22 A103	HTSL	Ta = 175°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 Human Body Model JESD22 A114	ESD HBM	Class 2 2000 V to < 4000 V	-	1 / 30	0 / 30	PASS
ESD Charged Device Model JESD22 C101	ESD CDM	Class C2a 500 V to < 750 V	-	1 / 30	0 / 30	PASS
Latch-Up JESD78	LU	Ta = 125 °C	-	1 / 6	0 / 6	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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Edition 2016-01-22

Published by

Infineon Technologies AG

81726 München, Germany

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Email: erratum@infineon.com

Document reference

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