Product Qualification Report

ICL8105

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).

ICL8105
PG-DSO-8
MSL: 3; 260°C

qualified: Sep 2015

Device Qualification Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Storage Life JESD22-A103	HTSL	T_a = 150 °C	1000 h	3 x 77	0 / 231	**PASS**
High Temperature Operating Life JESD22-A108	HTOL	T_j = 125 °C $V_{stress} = V_{max}$	1000 h	3 x 77	0 / 231	**PASS**
Non-Volatile Memory Tests: Data Retention JESD22A-117	DR	Programming, no Cycling (OTP)	1000 h	3 x 78	0 / 234	**PASS**
Latch-up JESD78	LU			1 x 6	0 / 6	**PASS**
ESD (HBM) JESD22-A114	HBM	Class 2 (2000 V to <4000 V)		1 x 3 (per voltage level)	0 / 3	**PASS**
ESD (CDM) JESD22-C101	CDM	Class C2 (500 V to <1000 V)		1 x 3 (per voltage level)	0 / 3	**PASS**

Device/Package Qualification Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Pre-conditioning J-STD020 / JESD22 A113	PC	MSL and 3 x reflow		3 x 154	0 / 462	**PASS**
Biased HAST JESD22 A110	HAST[1]	T_a = 130 °C rh = 85% $V_{stress} = V_{max}$	96 h	3 x 77	0 / 231	**PASS**
Temperature Cycling JESD22 A104	TC[1]	-65°C to +150°C	500 cycles	3 x 77	0 / 231	**PASS**

Mechanical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Moisture Sensitivity Level IPC / J-STD-020	MSL	MSL 3 @ 260 °C			0 / 22	**PASS**

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

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Document reference

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