Product Qualification Report

XDPS2201E

The XDP™ XDPS2201E PWM controller multimode hybrid-flyback controller supporting extra high power density designs

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).

XDPS2201E **qualified since November 2014**
PG-DSO-14
MSL: 3; 260°C

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
High Temperature Storage Life JESD22 A103	HTSL	Ta ≥ 150°C	1000 h	15 x 25	0 / 375	PASS
High Temperature Operating Life JESD22 A108	HTOL	Ta = 125°C $V_{stress} = V_{max}$	1000h	15 x 77	0 / 1155	PASS
Latch-up JESD78	LU	Class 2				PASS
ESD (HBM) JESD22-A114	HBM	Class 2 (2000V to <4000V)				PASS
ESD (CDM) JESD22-C101	CDM	Class C2 (500 V to <1000 V)				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		36 x 75	0 / 2700	PASS
Temperature Cycling JESD22 A104	TC*	-55°C to +150°C	1000 cyc	15 x 25	0 / 375	PASS
Unbiased Highly Accelerated Stress Test JESD22 A118	UHAST*	Ta = 130°C rh = 85%	96 h	6 x 25	0 / 150	PASS
Biased Highly Accelerated Stress Test JESD22 A110	HAST*	Ta = 130°C rh = 85% $V_{stress} = V_{max}$	96 h	15 x 25	0 / 375	PASS

Mechanical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots	Fail/Qty	Result
Destructive Physical Analysis	DPA	Samples from UHAST, HTSL and TC		9	0 / 45	PASS

Notes:
* For SMD devices reliability stress tests performed after preconditioning test (PC) according to JESD

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Document reference

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