Product Qualification Report

CY8C40XXXXX-T
24QFN / 16QFN / 25WLCSP

PSoC™ 4000T Programmable System-on-Chip

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 JESD47 and 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 JESD47 for Industry Applications and assessed as PASS.

For further information about comparable products, please contact the nearest Infineon Technologies office (www.infineon.com).

Device Qualification:

Test Description	Abbr.	Condition	Duration	Lots x SS per lot	Result
High Temperature Operating Life JESD22 A108	HTOL	Ta = 150°C V_{CC} = 2.07V	500 h	3 x 77	PASS
Early Failure Rate JESD22 A108 / JESD74	EFR	Ta = 150°C V_{CC} = 2.07V	48 h	3 x 1000	PASS
Low Temperature Operating Life JESD22-A108	LTOL	Ta = -40°C Vcc= 3.0V	1000 h	1 x 32	PASS
Latch Up JESD78	LU	Class II	-	1 x 3	PASS
ESD Human Body Model JS-001	ESD HBM	Class 3B	-	1 x 3	PASS
ESD Charged Device Model JS-002	ESD CDM	Class C3	-	1 x 3	PASS
Endurance + Room Temperature Operating Life JESD22-A117 / JESD22 A108	ENDU RTOL	Ta = 25°C	250k cyc 1000h	3 x 77	PASS

Package Qualification:

Test Description	Abbr.	Condition	Duration	Lots x SS per lot	Result
Pre-Conditioning JESD22 A113 acc. MSL per J-STD-020	PC	MSL 3 peak 260 °C	-	Prior HAST, TC, uHAST, PCT	PASS
Temperature Cycling JESD22 A104	TC	-65°C to +150°C	500 cyc	3 x 25	PASS
Pressure Cooker Test JESD22 A102	PCT	Ta = 121°C RH = 100 %	168 h	3 x 25	PASS
High Temperature Storage Life JESD22 A103	HTSL	Ta = 150°C	1000 h	3 x 25	PASS
Unbiased HAST JESD22 A118	uHAST	Ta=130°C RH=85%	96 h	3 x 25	PASS
Biased HAST JESD22-A110	HAST	Ta=130°C / RH=85% V_{DD} = 5.5 V	96 h	3 x 25	PASS

MSL - moisture sensitivity level, RH – relative humidity, ss – sample size, Ta – ambient temperature

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**	7956921	deuel	Initial Spec Release

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