Product Qualification Report

QTP#203304
CY8C40xx / S8PFHD-10R

PSoC 4000S 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 **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** and assessed as **PASS**

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

CY8C40xx / S8PFHD-10R
48-lead TQFP (7x7x4mm)
MSL: 3; 260°C

Electrical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
Early Life Failure JESD22 A108 / JESD74	EFR	Ta = 150°C	96 h	1x1,517	0/1,517	PASS
High Temperature Operating Life JESD22 A108	HTOL	Ta = 150°C	500 h	1x120	0/120	PASS
Endurance + Data Retention JESD22 A117 / JESD22 A103	EDDR	Ta = 25°C Ta = 150°C	10,000 cyc 500 h	1x83	0/83	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	-	1x195	0/195	PASS
Temperature Cycling JESD22 A104	TC*	-65°C to +150°C	1000 cyc	1x80	0/80	PASS
Unbiased HAST JESD22 A118	uHAST*	Ta = 130°C RH = 85 %	192 h	1x85	0/85	PASS
Biased HAST JESD22 A110	HAST*	Ta = 130°C RH = 85 %	96 h	1x30	0/30	PASS

Device Characterization and Classifications:
Mechanical Stress Test Results:

Test Description	Abbr.	Condition	Duration	Lots/SS	Fail/Qty	Result
ESD Charged Device Model JESD22-C101	ESD CDM	Class C2	-	-	-	PASS
ESD Human Body Model JESD22-A114E	ESD HBM	Class 1C	-	-	-	PASS
Static Latch-Up JESD78	SLU	Class II	-	-	-	PASS

Notes:
* For SMD devices reliability stress tests performed after pre-conditioning test (PC)
** PSoC 4000s is a derivative product. 3 lots qualification was done on the lead device in QTP#194712

Further abbreviations: MSL - moisture sensitivity level, Qty – quantity, RH – relative humidity, SS – sample size, Ta – ambient temperature

Document History Page

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**	7813664	HSTO	Initial Spec Release

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