RESTRICTED

Qualification Test Report

Date: March 16, 2022

Title: QTP# 202901: Qualification of PSoC™ 4100S Plus device using S8SPF-10R Technology Fabricated in UMC Fab 12I

Reason for choosing the following test vehicles:	**Affected device (CY8C4127)**
Scope of qualifications:	**PSoC™ 4100S Plus device fabricated in UMC Fab 12I**
Assessment of Q-Results:	**Pass**
QTP # :	**202901**

Stress Test	Abbreviation	Test Condition	Readout	CY8C4127AZI9-S455 TV 1
				fails / stressed
BIASED HAST JESD22-A110	HAST	130°C / 85%RH	96 hours 128 hours	0/30 0/30
EARLY LIFE FAILURE RATE JESD22-A108	EFR	150°C	48 hours	0/1520
ENDURANCE FOLLOWED BY DATA RETENTION JESD22-A117, JESD22-A103	EDDR	25°C 150°C	10000 cycling 500 hours 1000 hours 1500 hours	0/80 0/80 0/80 0/80
ESD (CDM) SENSITIVITY JS-002	CM	--	500 volts 750 volts 1000 volts 1250 volts 1500 volts 1750 volts	0/3 0/3 0/3 0/3 0/3 0/3
ESD (HBM) SENSITIVITY IEC/EN 61000-4-2, JS-001	ES	-	1100 volts 2200 volts 3300 volts 4000 volts 5000 volts 6000 volts 7000 volts	0/3 0/3 0/3 0/3 0/3 0/3 0/3
INHERENT LIFE FAILURE RATE JESD22-A108, JESD22-A108	LFR	150°C	80 hours 500 hours	0/120 0/120
LOW TEMP OP LIFE	LTOL	140°C	500 hours 1000 hours	0/80 0/80
PRE CONDITIONING	PC	24HRS_125°C 260°C -0 / +5°C MSL3_30°C / 60%RH for 192 hrs	COMP	0/190
PRESSURE COOKER TEST JESD22-A102	PCT	121°C / 100%RH / 15psig	96 hours 168 hours 288 hours	0/80 0/80 0/80
SOFT ERROR RATE MIL-STD 883 MET 1032.1, JESD89-1/2/3	SER	-	COMP	0/3
STATIC LATCHUP SENSITIVITY	S_LU	-	+/-100mA, 125C +/-140mA 125C +/-140mA 85C +/-200mA 85C	0/3 0/3 0/3 0/3
TEMP CYCLE JESD22-A104,JESD47	TCT	C -65°C to 150°C	500 cycles 1000 cycles	0/80 0/80

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Rev.	ECN No.	Orig of Changes.	Description of Change
**	7730257	SINTOS	Initial Spec Release
*A	7748846	SINTOS	Updated LTOL