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Cypress Semiconductor
Product Qualification Report

QTP#183602 VERSION*B
August 2022

PSoC® 4000Device Family S8PF-10R, Fab25 (Cu BEOL Interconnect)	
CY8C4013 **CY8C4014**	**Programmable System-on-Chip (PSoC)**

FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PACKAGE/PRODUCT QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
151008	Qualification of S8* Technology in Fab25 Using TSG6M Device (AL BEOL Interconnect)	Dec 2015
151403	Qualification of PSoC® 4100 and PSoC® 4200 Device, S8PF-10R Technology in Fab25 (AL BEOL Interconnect)	Dec 2015
151303	Qualification of CapSense® MBR3 Device, S8PF-10R Technology in Fab25 (AL BEOL Interconnect)	Dec 2015
160401	Qualification of PSoC™ Multitouch Fingerprint Device, S8PFHD-10R Technology in Fab25 (AL BEOL Interconnect)	May 2016
160301	Qualification of PSoC™ Multitouch Gen6XL Touchscreen Controller Device, S8SPF-10P Technology in Fab25 (AL BEOL Interconnect)	Jun 2016
160803	Qualification of PSoC® 4000S Device, S8PFHD-10R Technology in Fab25 (AL BEOL Interconnect)	Jun 2016
160207	Qualification of PSoC3 Leopard T06, S8P12-10P Technology in Fab25 (AL BEOL Interconnect)	Jul 2016
160702	Qualification of PSoC® 4200L, S8SPF-10P Technology in Fab25 (AL BEOL Interconnect)	Sep 2016
160701	Qualification of PSoC® 4200L, S8SPF-10P Technology in Fab25 (Cu BEOL Interconnect)	Apr 2017
172307	Qualification of PSoC® 4200L Fix TO Metal Mask Non-Minor Add-On, S8SPF-10P Technology in Fab25. (Cu BEOL Interconnect)	Nov 2017
173204	Qualification of PSoC® 4100S Plus Device, S8SPFHD-10 in Fab25 (Cu BEOL Interconnect)	Dec 2017
183602	Qualification of PSoC® 4000Device Family S8PF-10R, Fab25 (Cu BEOL Interconnect)	Sept 2018

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of PSoC® 4000Device Family S8PF-10R, Fab25 (Cu BEOL Interconnect)	
Marketing Part #:	CY8C4013 / CY8C4014
Device Description:	Programmable System-on-Chip (PSoC)
Cypress Division:	Cypress Semiconductor Corporation – MCU and Connectivity Division (MCD)

TECHNOLOGY/FAB PROCESS DESCRIPTION			
Number of Metal Layers:	Proprietary	Metal Composition:	Proprietary
Passivation Type and Thickness:			Proprietary
Generic Process Technology/Design Rule (μ-drawn):			Proprietary
Gate Oxide Material/Thickness (MOS):			Proprietary
Name/Location of Die Fab (prime) Facility:			Cypress, Fab 25
Die Fab Line ID/Wafer Process ID:			Fab25 / S8PF-10P

ALTERNATIVE FAB FACILITY SITE

FAB SITE	LOCATION	QTP NUMBER
HHGrace Fab3	Shanghai, China	142304

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	LQ24A
Package Outline, Type, or Name:	QFN24L (4x4x0.6mm)
Mold Compound Name/Manufacturer:	GE 7470 / Nitto
Mold Compound Flammability Rating:	UL94 V-0
Mold Compound Alpha Emission Rate:	N/A (not low alpha mold compound)
Oxygen Rating Index: >28%	54%
Lead Frame Designation:	FMP
Lead Frame Material:	Pre-plated leadframe with base Copper
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	NiPdAu
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Henkel
Die Attach Material:	QMI-519
Bond Diagram Designation	001-88426
Wire Bond Method:	Thermosonic
Wire Material/Size:	CuPd / 0.8 mil (20um)
Thermal Resistance Theta JA °C/W:	38.01 CW (QFN24)
Package Cross Section Yes/No:	No
Assembly Process Flow:	001-87690M
Name/Location of Assembly (prime) facility:	CML-RA
MSL LEVEL	3
REFLOW PROFILE	260C

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	LQ16A
Package Outline, Type, or Name:	QFN16L (3x3x0.6mm)
Mold Compound Name/Manufacturer:	G700 / Sumitomo
Mold Compound Flammability Rating:	UL 94 V=0 pass
Mold Compound Alpha Emission Rate:	N/A (not low alpha mold compound)
Oxygen Rating Index: >28%	54%
Lead Frame Designation:	FMP
Lead Frame Material:	Copper with Ag-Spot Plating
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure Sn
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Hitachi
Die Attach Material:	FH900
Bond Diagram Designation	001-88428
Wire Bond Method:	Thermosonic
Wire Material/Size:	CuPd / 0.8mil (20um)
Thermal Resistance Theta JA °C/W:	49.6 C/W (QFN16)
Package Cross Section Yes/No:	No
Assembly Process Flow:	001-89390M
Name/Location of Assembly (prime) facility:	ASEK Taiwan (G)
MSL LEVEL	3
REFLOW PROFILE	260C

PACKAGE AVAILABILITY

PACKAGE	WIRE MATERIAL	ASSEMBLY SITE	QTP NUMBER
16/24-Pin QFN	CuPd	CML-Philippines (RA)	140804
16/24-Pin QFN	CuPd	ASEK-Taiwan (G)	134505
16/24-Pin QFN	CuPd	UTAC-Thailand (UT)	141704
8-Lead SOIC	CuPd	UTAC-Thailand (UT)	134513
16-Lead SOIC	CuPd	UTAC-Thailand (UT)	134506
28-Lead SSOP	CuPd	CML-Philippines (RA)	131804

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	ASEK-Taiwan (G), CML-Philippines (RA)

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate (EFR)	Dynamic Operating Condition, 150°C, 2.07V, 48 Hours JESD22-A-108-B	P
High Temperature Operating Life Latent Failure Rate (LFR)	Dynamic Operating Condition, 150°C, 2.07V, 500 Hours JESD22-A-108-B	P
Low Temperature Operating Life	-40°C	P
Endurance	Per datasheet, JESD22-A117	P
Data Retention	JESD22-A117 and JESD22-A103, 150C, 1000 Hours	P
Temperature Cycle	-65^{0}C to 150^{0}C, JESD22-A-104, 500 Cycles / 1000Cycles Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
High Accelerated Saturation Test (HAST)	130C, 5.5V, 85%RH, JESD22-A-110-B, 96 Hours Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Pressure Cooker	121C/100%RH, JESD22-A102-C, 168 Hours Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2200V, 3300V, JESD22-A114E	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V JESD22-C101C	P
Static Latch-up	± 140mA, 125C/85°C, JESD78	P
Acoustic (M3)	J-STD-020	P

RELIABILITY FAILURE RATE SUMMARY

Stress/Test	Device Tested/ Device Hours	# Fails	Activation Energy	Thermal AF[3]	Failure Rate
High Temperature Operating Life Early Failure Rate	1,548 Devices	0	N/A	N/A	0 PPM 1
High Temperature Operating Life Long Term Failure Rate	550,000	0	0.7	170	10 FIT 2

1. EFR devices number is based on QTP#183602 EFR data.
2. LFR device hours are based on QTP#151008, QTP#151403, QTP#151303, QTP#160301, QTP#160207, QTP#160702, QTP#160701, QTP#172307 and QTP#183602 LFR data.

[1] Assuming an ambient temperature of 55°C and a junction temperature rise of 15°C.
[2] Chi-squared 60% estimations used to calculate the failure rate.
[3] Thermal Acceleration Factor is calculated from the Arrhenius equation

$$AF = \exp\left[\frac{E_A}{k}\left[\frac{1}{T_2} - \frac{1}{T_1}\right]\right]$$

where:

E_A =The Activation Energy of the defect mechanism.
K = Boltzmann's constant = 8.62×10^{-5} eV/Kelvin.
T_1 is the junction temperature of the device under stress and T_2 is the junction temperature of the device at use conditions.

Reliability Test Data

QTP #: 151008

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	15	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	15	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	80	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1000	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1000	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	76	80	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	152	79	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	76	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	152	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	76	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.07V, Vcc Max)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	48	1490	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	48	1510	0	
CYTT214032 (8CP206101)	4545249	611537364	CML-RA	48	1547	0	
STRESS: ENDURANCE							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	168	78	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	78	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	168	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	168	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	9	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	750	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1000	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1250	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1500	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1750	3	0	

Reliability Test Data

QTP #: 151008

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	9	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	750	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1000	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1250	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1500	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1750	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	9	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	750	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1000	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1250	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1500	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1750	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1100	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	2200	8	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	3300	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	4000	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	5000	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1100	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	2200	8	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	3300	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	4000	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1100	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	2200	8	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	3300	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	4000	3	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	96	30	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	96	30	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	80	116	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	116	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	80	120	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	120	0	

Reliability Test Data

QTP #: 151008

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: LOW TEMPERATURE OPERATING LIFE, -40C							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	160	40	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	380	40	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	168	75	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	168	78	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	168	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	288	80	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	10+2	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	10+2	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	10+2	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	6	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	6	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	6	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	3	0	
STRESS: SEM CROSS SECTION							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	1	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	80	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1000	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	79	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1000	79	0	
STRESS: THERMAL JUNCTION MEASUREMENT							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	1	0	

Reliability Test Data

QTP #: 151403

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	76	80	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	48	1510	0	
STRESS: ENDURANCE							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	168	80	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	9	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	750	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1000	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1250	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1500	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1750	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1100	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	2200	8	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	3300	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	4000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	80	120	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	120	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	168	80	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	288	80	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	10+2	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	6	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	3	0	

Reliability Test Data

QTP #: 151403

Device	*Fab Lot #*	*Assy Lot #*	*Assy Loc*	*Duration*	*Samp*	*Rej*	*Failure Mechanism*
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	79	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1000	79	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	48	1469	0	

Reliability Test Data

QTP #: 151303

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	500	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	76	80	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8CMBR31552 (8CP44303CB)	4542914	611534693	ASE-G	48	1469	0	
STRESS: ENDURANCE							
CY8CMBR31552 (8CP44303CB)	4542914	611534693	ASE-G	168	80	0	
CY8CMBR31552 (8CP44303CB)	4542914	611534693	ASE-G	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	500	9	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	750	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1250	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1500	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1750	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1100	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	2200	8	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	3300	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	4000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	5000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	6000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	7000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8CMBR31552(8CP44303CB)	4542914	611534693	ASE-G	80	120	0	
CY8CMBR31552(8CP44303CB)	4542914	611534693	ASE-G	500	120	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	168	80	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	288	79	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8CMBR31552(8CP44303CB)	4542914	611534693	ASE-G	COMP	10+2	0	

Reliability Test Data

QTP #: 151303

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	6	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	500	80	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1000	80	0	

Reliability Test Data

QTP #: 160401

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	500	80	0	
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	1000	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	48	1550	0	
STRESS: ENDURANCE							
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	168	80	0	
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	1000	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	500	9	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	750	3	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	1000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	1100	3	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	2200	3	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	3300	3	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	168	80	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	168	76	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	500	78	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	1000	76	0	

Reliability Test Data

QTP #: 160301

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: DATA RETENTION, PLASTIC, 150C							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	500	80	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	1000	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	76	80	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	48	2609	1	No Visual Defect found
CYAT816882 (8C206802BB)	3617006	611617664	CML-R	48	1013	0	
STRESS: ENDURANCE							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	500	80	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	1000	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	500	9	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	750	3	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	1000	3	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	500	9	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1000	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1250	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1500	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1750	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	1100	3	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	2200	8	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	3300	3	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	4000	3	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	5000	3	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	6000	3	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	7000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	500	99	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	COMP	10	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	

Reliability Test Data

QTP #: 160301

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: STATIC LATCH-UP (85C, 140mA)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	500	80	0	
CYAT816882 (8C206802BB)	3613017	611611087	CML-R	1000	80	0	

Reliability Test Data

QTP #: 160803

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	48	1596	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	500	9	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	750	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	1000	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	1250	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	1500	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	1100	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	2200	8	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	3300	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	4000	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	5000	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	6000	3	0	
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	7000	3	0	
STRESS: STATIC LATCH-UP (125C, 100Ma)							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140Ma)							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 140Ma)							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200Ma)							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300Ma)							
CY8C4045 (8CP40003BB)	3615013	611612344	OSE-T	COMP	3	0	

Reliability Test Data

QTP #: 160207

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	500	90	0	
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	1000	90	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	76	90	0	
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	152	90	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	48	2303	0	
STRESS: ENDURANCE							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	168	90	0	
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	500	90	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	500	9	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	1100	3	0	
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	2200	8	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	96	30	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 5.07V, Vcc Max)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	500	125	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	168	78	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C3866A (8CP38661HB)	3617013	611615839	CML-R	500	80	0	

Reliability Test Data

QTP #: 160702

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	COMP	15	0	
CY8C4246 (8CP480001BB)	4542101	611535695	CML-RA	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	76	80	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	48	1521	0	
CY8C4246 (8CP480001BB)	4542101	611535695	CML-RA	48	1532	0	
STRESS: ENDURANCE							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	168	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	500	9	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	750	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	1000	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	1250	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	1500	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	1750	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	2000	3	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	500	9	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	750	3	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	1000	3	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	1250	3	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	1500	3	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	1750	3	0	
CY8C4248 (8CP42005CB)	3621015	611619414	ASE-G	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	1100	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	2200	8	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	3300	3	0	
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	4000	3	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	96	30	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 5.07V, Vcc Max)							
CY8C4246 (8CP480001BB)	4542101	611535695	CML-RA	80	80	0	
CY8C4246 (8CP480001BB)	4542101	611535695	CML-RA	500	80	0	

Reliability Test Data

QTP #: 160702

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	168	80	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C4248 (8CP42003CB)	3621015	611619413	ASE-G	500	80	0	
CY8C4246 (8CP480001BB)	4542101	611535695	CML-RA	500	80	0	
CY8C4246 (8CP480001BB)	4542101	611535695	CML-RA	1000	80	0	

Reliability Test Data

QTP #: 160701

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	15	0	
CY8C4248 (8CP42003DB)	3649066	611701516	ASE-G	COMP	15	0	
CY8C4248 (8CP42003DB)	3649067	611701515	ASE-G	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	500	80	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1000	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	76	80	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	48	1598	0	
CY8C4248 (8CP42003DB)	3649066	611701516	ASE-G	48	1550	0	
STRESS: ENDURANCE							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	168	88	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	500	88	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	500	9	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	750	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1000	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1250	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1500	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1750	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1000	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	2200	8	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	3300	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	4000	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	5000	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	6000	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	7000	3	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	8000	3	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	96	25	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	192	25	0	

Reliability Test Data

QTP #: 160701

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	80	80	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	500	80	0	
CY8C4248 (8CP42003DB)	3649066	611701516	ASE-G	500	80	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	96	80	0	
CY8C4248 (8CP42003DB)	3649066	611701516	ASE-G	168	80	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	12	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	500	80	0	
CY8C4248 (8CP42003CB)	3631019	611627888	ASE-G	1000	80	0	
CY8C4248 (8CP42003DB)	3649066	611701516	ASE-G	500	80	0	
CY8C4248 (8CP42003DB)	3649066	611701516	ASE-G	1000	80	0	
CY8C4248 (8CP42003DB)	3649067	611701515	ASE-G	500	80	0	
CY8C4248 (8CP42003DB)	3649067	611701515	ASE-G	1000	80	0	

Reliability Test Data

QTP #: 172307

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	48	1196	0	
CY8C4248 (8CP42003DB)	3721130	611729092	ASE-G	48	1200	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	500	9	0	
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	1000	3	0	
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	1250	3	0	
CY8C4248 (8CP42005DB)	3726090	611732045	ASE-G	500	9	0	
CY8C4248 (8CP42005DB)	3726090	611732045	ASE-G	1000	3	0	
CY8C4248 (8CP42005DB)	3726090	611732045	ASE-G	1250	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	1100	3	0	
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	2200	8	0	
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	3300	3	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	96	30	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	500	80	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	168	80	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	12	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	2	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	80	0	
CY8C4248 (8CP42003DB)	3721130	611724119	ASE-G	COMP	78	0	

Reliability Test Data

QTP #: 173204

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	48	537	0	
CY8C4147 (8CP43002AB)	3739025	611738647	ASE-G	48	1090	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	500	9	0	
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1000	3	0	
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1250	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1100	3	0	
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	2200	8	0	
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	3300	3	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1100	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1100	3	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1100	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C4147 (8CP43002AB)	3738085	611737095	ASE-G	1100	3	0	

Reliability Test Data

QTP #: 183602

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	COMP	22	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	76	79	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	152	79	0	
STRESS: ENDURANCE (100K CYCLES)							
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	CYCLING	80	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	168	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4013 (8CP44333C)	3817045	611815693	CML-RA	48	1548	0	
STRESS: ESD-CHARGE DEVICE MODEL (500V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	500	9	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	500	9	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	500	9	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	500	9	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	500	9	0	
STRESS: ESD-CHARGE DEVICE MODEL (750V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	750	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	750	3	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	750	3	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	750	3	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	750	3	0	
STRESS: ESD-CHARGE DEVICE MODEL (1000V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	1000	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	1000	3	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	1000	3	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	1000	3	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	1000	3	0	
STRESS: ESD-CHARGE DEVICE MODEL (1250V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	1250	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	1250	3	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	1250	3	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	1250	3	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	1250	3	0	

Reliability Test Data

QTP #: 183602

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ESD-CHARGE DEVICE MODEL (1500V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	1500	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	1500	3	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	1500	3	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	1500	3	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	1500	3	0	
STRESS: ESD-CHARGE DEVICE MODEL (1750V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	1750	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	1750	3	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	1750	3	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	1750	3	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	1750	3	0	
STRESS: ESD-CHARGE DEVICE MODEL (2000V)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	2000	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	2000	3	0	
CY8C4014 (8CP44334C)	3817045	611817296	CML-RA	2000	3	0	
CY8C4014 (8CP44334C)	3817045	611817297	CML-RA	2000	3	0	
CY8C4014 (8CP44334C)	3817045	611814629	CML-RA	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	1100	3	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	1100	3	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	2200	8	0	
CY8C4013 (8CP44333C)	3817045	611815693	ASEK-G	2200	3	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	3300	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	3300	3	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	4000	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	4000	3	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	5000	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	5000	3	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	6000	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	6000	3	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	7000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C4013 (8CP44334)	3817045	3817045	611815693	ASEK-G	500	80	0
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	96	79	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	168	79	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	288	79	0	

Reliability Test Data

QTP #: 183602

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	COMP	10+2S	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	COMP	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	COMP	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	COMP	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	COMP	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	COMP	3	0	
CY8C4013 (8CP44334)	3817045	611815693	ASEK-G	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	500	80	0	
CY8C4013 (8CP44334)	3817045	611814628	CML-RA	1000	80	0	

Document History Page

Document Title: QTP#183602: PSoC® 4000 DEVICE FAMILY S8PF-10R, FAB25 (CU BEOL INTERCONNECT)
Document Number: 002-25095

Rev.	ECN No.	Orig. of Change	Description of Change
**	6301609	HSTO	Initial Spec Release
*A	6496820	HSTO	Update MPN on Reliability Test Data of QTP#183602
*B	7799935	SLLO	Rebranding to PSoC™ Multitouch in PACKAGE/PRODUCT QUALIFICATION HISTORY table for QTP 160401, and 160301. Aligned header and footer with template 002-33284.