

# Cypress Semiconductor Product Qualification Report

**QTP#172307 VERSION\*\***  
November 2017

|  |  |
|--|--|
| <b>PSoC® 4200L Device Family</b><br><b>S8SPF-10P, Fab25 (Cu BEOL Interconnect)</b> |  |
| <b>CY8C4246</b><br><b>CY8C4247</b><br><b>CY8C4248</b>                              | <b>Programmable System-On-Chip</b><br><b>(PSoC®)</b> |

**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  | Dec 2015 |
| 151403     | Qualification of PSoC® 4100 and PSoC® 4200 Device, S8PF-10R Technology in Fab25  | Dec 2015 |
| 151303     | Qualification of CapSense® MBR3 Device, S8PF-10R Technology in Fab25   | Dec 2015 |
| 160401     | Qualification of TrueTouch® Fingerprint Device, S8PFHD-10R Technology in Fab25   | May 2016 |
| 160301     | Qualification of TrueTouch® Gen6XL Touchscreen Controller Device, S8SPF-10P Technology in Fab25                        | Jun 2016 |
| 160803     | Qualification of PSoC® 4000S Device, S8PFHD-10R Technology in Fab25  | Jun 2016 |
| 160207     | Qualification of PSoC3 Leopard T06, S8P12-10P Technology in Fab25  | 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 |

**PRODUCT DESCRIPTION (for qualification)**

Qualification Purpose: Qualification of PSoC® 4200L Fix TO Metal Mask Non-Minor Add-On, S8SPF-10P Technology in Fab25. (Cu BEOL Interconnect)

|                     |   |
|---------------------|---|
| Marketing Part #:   | CY8C4246 / CY8C4247 / CY8C4248  |
| Device Description: | 1.8V, Industrial Programmable System on a Chip                          |
| 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 ( $\mu$ -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-10 |                    |             |

**ALTERNATIVE FAB FACILITY SITE**

| FAB SITE | LOCATION               | QTP NUMBER                       |
|----------|------------------------|----------------------------------|
| Skywater | Bloomington, Minnesota | 153201                           |
| Fab 25   | Austin, Texas          | 160702<br>(AI BEOL Interconnect) |

**MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION**

|  |                                    |
|--|------------------------------------|
| Package Designation:                           | AY64                               |
| Package Outline, Type, or Name:                | TQFP 64L (14x14x1.4mm)             |
| Mold Compound Name/Manufacturer:               | EME-G631 / Sumitomo                |
| Mold Compound Flammability Rating:             | V-0 / UL94                         |
| Mold Compound Alpha Emission Rate:             | N/A                                |
| Oxygen Rating Index: >28%                      | 54%                                |
| Lead Frame Designation:                        | FMP                                |
| Lead Frame Material:                           | COPPER                             |
| Substrate Material:                            | N/A                                |
| Lead Finish, Composition / Thickness:          | Pure Sn                            |
| Die Backside Preparation Method/Metallization: | Backgrind                          |
| Die Separation Method:                         | 100% Saw                           |
| Die Attach Supplier:                           | Hitachi                            |
| Die Attach Material:                           | DAF FH-900                         |
| Bond Diagram Designation                       | 001-98722                          |
| Wire Bond Method:                              | Thermosonic                        |
| Wire Material/Size:                            | Copper Palladium (Cu-Pd) / 0.8 mil |
| Thermal Resistance Theta JA °C/W:              | 60.50 C/W                          |
| Package Cross Section Yes/No:                  | Yes                                |
| Assembly Process Flow:                         | 001-89431M                         |
| Name/Location of Assembly (prime) facility:    | ASEK-Taiwan                        |
| MSL LEVEL                                      | 3                                  |
| REFLOW PROFILE                                 | 260C                               |

### PACKAGE AVAILABILITY

| PACKAGE      | WIRE MATERIAL | ASSEMBLY SITE        | QTP NUMBER |
|--------------|---------------|----------------------|------------|
| 124-vFBGA    | CuPd          | ASEK-Taiwan (G)      | 153304     |
| 48-Lead TQFP | CuPd          | OSE-Taiwan (T)       | 153305     |
| 64-Lead TQFP | CuPd          | CML-Philippines (RA) | 133307     |
| 64-Lead TQFP | CuPd          | ASEK-Taiwan (G)      | 133306     |
| 68-Lead QFN  | CuPd          | CML-Philippines (RA) | 133308     |
| 68-Lead QFN  | CuPd          | ASEK-Taiwan (G)      | 133309     |

| 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<br>P/F |
|--|--|---------------|
| High Temperature Operating Life<br>Early Failure Rate (EFR)  | Dynamic Operating Condition, 150°C, 2.07V, 48 Hours<br>JESD22-A-108-B  | P             |
| High Temperature Operating Life<br>Latent Failure Rate (LFR) | Dynamic Operating Condition, 150°C, 2.07V, 500 Hours<br>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°C to 150°C, JESD22-A-104, 500 Cycles / 1000Cycles<br>Precondition: JESD22 Moisture Sensitivity Level 3<br>192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C | P             |
| High Accelerated Saturation Test<br>(HAST)                   | 130C, 5.5V, 85%RH, JESD22-A-110-B, 96 Hours<br>Precondition: JESD22 Moisture Sensitivity Level 3<br>192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C           | P             |
| Pressure Cooker  | 121C/100%RH, JESD22-A102-C, 168 Hours<br>Precondition: JESD22 Moisture Sensitivity Level 3<br>192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C                 | P             |
| Electrostatic Discharge<br>Human Body Model (ESD-HBM)        | 2200V, 3300V, JESD22-A114E   | P             |
| Electrostatic Discharge<br>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/<br>Device Hours | #<br>Fails | Activation<br>Energy | Thermal<br>AF <sup>3</sup> | Failure Rate |
|---|--------------------------------|------------|----------------------|----------------------------|--------------|
| High Temperature Operating Life<br>Early Failure Rate     | 2,396 Devices                  | 0          | N/A                  | N/A                        | 0 PPM 1      |
| High Temperature Operating Life<br>Long Term Failure Rate | 560,880                        | 0          | 0.7                  | 170                        | 10 FIT 2     |

1. EFR devices number is based on QTP#172307 EFR data.

2. LFR device hours are based on QTP#151008, QTP#151403, QTP#151303, QTP#160301, QTP#160207, QTP#160702, QTP#160701 and QTP#172307 LFR data.

<sup>1</sup> Assuming an ambient temperature of 55°C and a junction temperature rise of 15°C.

<sup>2</sup> Chi-squared 60% estimations used to calculate the failure rate.

<sup>3</sup> 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 =  $8.62 \times 10^{-5}$  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 |
|--|-----------|------------|----------|----------|------|-----|-------------------|
| <b>STRESS: ACOUSTIC, MSL3</b>  |           |            |          |          |      |     |                   |
| 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   |                   |
| <b>STRESS: DATA RETENTION, PLASTIC, 150C</b>   |           |            |          |          |      |     |                   |
| 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   |                   |
| <b>STRESS: DATA RETENTION, PLASTIC, 175C</b>   |           |            |          |          |      |     |                   |
| 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   |                   |
| <b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.07V, Vcc Max)</b> |           |            |          |          |      |     |                   |
| 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   |                   |
| <b>STRESS: ENDURANCE</b>   |           |            |          |          |      |     |                   |
| 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   |                   |
| <b>STRESS: ESD-CHARGE DEVICE MODEL</b>   |           |            |          |          |      |     |                   |
| 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**

| <i>Device</i>   | <i>Fab Lot #</i> | <i>Assy Lot #</i> | <i>Assy Loc</i> | <i>Duration</i> | <i>Samp</i> | <i>Rej</i> | <i>Failure Mechanism</i> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| <b>STRESS: ESD-CHARGE DEVICE MODEL</b>  |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114</b>                                   |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)</b> |                  |                   |                 |                 |             |            |                          |
| CYTT214032 (8CP206101)  | 4539372          | 611534008         | CML-RA          | 96              | 30          | 0          |                          |
| CYTT214032 (8CP206101)  | 4540145          | 611534709         | CML-RA          | 96              | 30          | 0          |                          |
| <b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)</b>    |                  |                   |                 |                 |             |            |                          |
| 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**

| <i>Device</i>   | <i>Fab Lot #</i> | <i>Assy Lot #</i> | <i>Assy Loc</i> | <i>Duration</i> | <i>Samp</i> | <i>Rej</i> | <i>Failure Mechanism</i> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| <b>STRESS: LOW TEMPERATURE OPERATING LIFE, -40C</b>   |                  |                   |                 |                 |             |            |                          |
| CYTT214032 (8CP206101)  | 4539372          | 611534008         | CML-RA          | 160             | 40          | 0          |                          |
| CYTT214032 (8CP206101)  | 4539372          | 611534008         | CML-RA          | 380             | 40          | 0          |                          |
| <b>STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)</b> |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: PRE/POST LFR PARAMETER ASSESSMENT</b>  |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: STATIC LATCH-UP (85C, 140mA)</b>   |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: STATIC LATCH-UP (85C, 200mA)</b>   |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: STATIC LATCH-UP (85C, 300mA)</b>   |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: SEM CROSS SECTION</b>  |                  |                   |                 |                 |             |            |                          |
| CYTT214032 (8CP206101)  | 4539372          | 611534008         | CML-RA          | COMP            | 1           | 0          |                          |
| <b>STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)</b>                     |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: THERMAL JUNCTION MEASUREMENT</b>   |                  |                   |                 |                 |             |            |                          |
| CYTT214032 (8CP206101)  | 4539372          | 611534008         | CML-RA          | COMP            | 1           | 0          |                          |

## Reliability Test Data

**QTP #: 151403**

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

## Reliability Test Data

**QTP #: 151403**

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

## Reliability Test Data

**QTP #: 151303**

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

## Reliability Test Data

**QTP #: 151303**

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

## Reliability Test Data

**QTP #: 160401**

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

## Reliability Test Data

**QTP #: 160301**

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



## Reliability Test Data

**QTP #: 160301**

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

## Reliability Test Data

**QTP #: 160803**

| <i>Device</i>   | <i>Fab Lot #</i> | <i>Assy Lot #</i> | <i>Assy Loc</i> | <i>Duration</i> | <i>Samp</i> | <i>Rej</i> | <i>Failure Mechanism</i> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| <b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)</b> |                  |                   |                 |                 |             |            |                          |
| CY8C4045 (8CP40003BB)   | 3615013          | 611612344         | OSE-T           | 48              | 1596        | 0          |                          |
| <b>STRESS: ESD-CHARGE DEVICE MODEL</b>  |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114</b>                               |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: STATIC LATCH-UP (125C, 100Ma)</b>  |                  |                   |                 |                 |             |            |                          |
| CY8C4045 (8CP40003BB)   | 3615013          | 611612344         | OSE-T           | COMP            | 3           | 0          |                          |
| <b>STRESS: STATIC LATCH-UP (125C, 140Ma)</b>  |                  |                   |                 |                 |             |            |                          |
| CY8C4045 (8CP40003BB)   | 3615013          | 611612344         | OSE-T           | COMP            | 3           | 0          |                          |
| <b>STRESS: STATIC LATCH-UP (85C, 140Ma)</b>   |                  |                   |                 |                 |             |            |                          |
| CY8C4045 (8CP40003BB)   | 3615013          | 611612344         | OSE-T           | COMP            | 3           | 0          |                          |
| <b>STRESS: STATIC LATCH-UP (85C, 200Ma)</b>   |                  |                   |                 |                 |             |            |                          |
| CY8C4045 (8CP40003BB)   | 3615013          | 611612344         | OSE-T           | COMP            | 3           | 0          |                          |
| <b>STRESS: STATIC LATCH-UP (85C, 300Ma)</b>   |                  |                   |                 |                 |             |            |                          |
| CY8C4045 (8CP40003BB)   | 3615013          | 611612344         | OSE-T           | COMP            | 3           | 0          |                          |

## Reliability Test Data

**QTP #: 160207**

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

## Reliability Test Data

**QTP #: 160702**

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

## Reliability Test Data

**QTP #: 160702**

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

| <i>Device</i>   | <i>Fab Lot #</i> | <i>Assy Lot #</i> | <i>Assy Loc</i> | <i>Duration</i> | <i>Samp</i> | <i>Rej</i> | <i>Failure Mechanism</i> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| <b>STRESS: ACOUSTIC, MSL3</b>   |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: DATA RETENTION, PLASTIC, 150C</b>  |                  |                   |                 |                 |             |            |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 500             | 80          | 0          |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 1000            | 80          | 0          |                          |
| <b>STRESS: DATA RETENTION, PLASTIC, 175C</b>  |                  |                   |                 |                 |             |            |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 76              | 80          | 0          |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 152             | 80          | 0          |                          |
| <b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)</b>     |                  |                   |                 |                 |             |            |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 48              | 1598        | 0          |                          |
| CY8C4248 (8CP42003DB)   | 3649066          | 611701516         | ASE-G           | 48              | 1550        | 0          |                          |
| <b>STRESS: ENDURANCE</b>  |                  |                   |                 |                 |             |            |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 168             | 88          | 0          |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 500             | 88          | 0          |                          |
| <b>STRESS: ESD-CHARGE DEVICE MODEL</b>  |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114</b>                                   |                  |                   |                 |                 |             |            |                          |
| 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          |                          |
| <b>STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)</b> |                  |                   |                 |                 |             |            |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 96              | 25          | 0          |                          |
| CY8C4248 (8CP42003CB)   | 3631019          | 611627888         | ASE-G           | 192             | 25          | 0          |                          |

## Reliability Test Data

**QTP #: 160701**

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

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





## Document History Page

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| Rev. | ECN No. | Orig. of Change | Description of Change |
|------|---------|-----------------|-----------------------|
| **   | 5977929 | HSTO            | Initial Spec Release  |