

Cypress Semiconductor Product Qualification Report

QTP# 170802 VERSION**
November 2017

| EZ-PD™ CCG5 USB Type-C PD Controller Device Family S8SPFN-20R Technology, Fab 25 | |
|---|--|
| CYPD5225* | EZ-PD™ CCG5 USB Type-C Power Delivery (PD) Controller |
| CYPD5235* | |
| CYPD5236* | |
| CYPD5125* | |

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

| QTP Number | Description of Qualification Purpose | Date |
|------------|---|------------|
| 151008 | Qualification of S8* Technology in Fab 25 Using TrueTouch® Gen6M Touchscreen Controller Device | Dec. 2015 |
| 151303 | Qualification of CapSense® MBR3 Device, S8PF-10R Technology in Fab 25 | Dec. 2015 |
| 160401 | Qualification of TrueTouch® Fingerprint Device, S8PFHD-10R Technology in Fab 25 | May 2016 |
| 160301 | Qualification of TrueTouch® Gen6XL Touchscreen Controller Device, S8SPF-10P Technology in Fab 25 | June 2016 |
| 160803 | Qualification of PSoC® 4000S Device, S8PFHD-10R Technology in Fab 25 | June 2016 |
| 160207 | Qualification of PSoC® 3 Device, S8P12-10P Technology in Fab 25 | July 2016 |
| 161003 | Qualification of EZ-PD™ CCG1 USB Type-C PD Controller Device, S8PF-10R Technology in Fab 25 | March 2016 |
| 160809 | Qualification of EZ-PD™ CCG2 USB Type-C PD Controller Device, S8PR2-10R Technology in Fab 25 | Aug. 2016 |
| 164802 | Qualification of EZ-PD™ CCG2 USB Type-C PD Controller Device, S8PR1-10/S8PHR-10R Technology in Fab 25 | Sept. 2017 |
| 163301 | Qualification of EZ-PD™ CCG3 USB Type-C PD Controller Device, S8SPF-20/S8SPF20-NP Technology in Fab 25 (Al BEOL Interconnect) | June 2017 |
| 164302 | Qualification of EZ-PD™ CCG3 USB Type-C PD Controller Device, S8SPF-20/S8SPF20-NP Technology in Fab 25 (Cu BEOL Interconnect) | Nov.2017 |
| 162113 | Qualification of EZ-PD™ CCG4 USB Two-Port Type-C PD Controller Device, S8SPR1P Technology in Fab 25 | March 2017 |
| 170802 | Qualification of EZ-PD™ CCG5 USB Type-C PD Controller Device, S8SPFN-20R Technology in Fab 25 | Oct. 2017 |

| PRODUCT DESCRIPTION (for qualification) | |
|--|---|
| Qualification Purpose: To qualify EZ-PD™ CCG5 USB Type-C PD Controller Device, S8SPFN-20R Technology in Fab 25 | |
| Marketing Part #: | CYPD5225*/CYPD5235*/CYPD5236*/CYPD5125* |
| Device Description: | EZ-PD™ CCG5 USB Type-C Power Delivery (PD) Controller |
| Cypress Division: | Cypress Semiconductor – MCU and Connectivity Division (MCD) |

| TECHNOLOGY/FAB PROCESS DESCRIPTION | | | |
|---|-------------|--------------------|-------------|
| Number of Metal Layers: | Proprietary | Metal Composition: | Proprietary |
| Passivation Type and Thickness: | Proprietary | | |
| Generic Process Technology/Design Rule (μ-drawn): | Proprietary | | |
| Gate Oxide Material/Thickness (MOS): | Proprietary | | |
| Name/Location of Die Fab (prime) Facility: | Fab 25 | | |
| Die Fab Line ID/Wafer Process ID: | S8PFN-20R | | |

| MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION | |
|---|-------------------------|
| Package Designation: | BZ96A |
| Package Outline, Type, or Name: | 96-Ball FBGA, 6x6x1.0mm |
| Mold Compound Name/Manufacturer: | KMC3580LVA/Shinetsu |
| Mold Compound Flammability Rating: | V-0 UL94 |
| Oxygen Rating Index: >28% | 54% |
| Substrate Material: | Substrate Cu/BT |
| Lead Finish, Composition / Thickness: | Sn/Ag/Cu (SAC-305) |
| Die Backside Preparation Method/Metallization: | Backgrind |
| Die Separation Method: | Saw Process |
| Die Attach Supplier: | Henkel |
| Die Attach Material: | QMI 546 |
| Bond Diagram Designation | 002-18470 |
| Wire Bond Method: | Thermosonic |
| Wire Material/Size: | 0.8 mil /CuPd |
| Thermal Resistance Theta JA °C/W: | 15.2°C/W |
| Package Cross Section Yes/No: | Yes |
| Assembly Process Flow: | 002-22185 |
| Name/Location of Assembly (prime) facility: | Bangkok-Thailand (SB) |
| MSL Level | 3 |
| Reflow Profile | 260C |

| ELECTRICAL TEST / FINISH DESCRIPTION | |
|---|-----------------------|
| Test Location: | Bangkok-Thailand (SB) |

| MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION | |
|---|--------------------------------------|
| Package Designation: | LQ40A |
| Package Outline, Type, or Name: | 40-Pin Quad Flat No Lead , 6x6x0.6mm |
| Mold Compound Name/Manufacturer: | GE 7470LA /Nitto |
| Mold Compound Flammability Rating: | V-0 UL94 |
| Oxygen Rating Index: >28% | 54% |
| Lead Frame Designation: | FMP |
| Lead Frame Material: | Copper |
| Lead Finish, Composition / Thickness: | NiPdAu |
| Die Backside Preparation Method/Metallization: | Backgrind |
| Die Separation Method: | Saw Process |
| Die Attach Supplier: | Henkel |
| Die Attach Material: | QMI 519 |
| Bond Diagram Designation | 002-18469 |
| Wire Bond Method: | Thermosonic |
| Wire Material/Size: | 0.8 mil /CuPd |
| Thermal Resistance Theta JA °C/W: | 15.2°C/W |
| Package Cross Section Yes/No: | Yes |
| Assembly Process Flow: | 001-87690 |
| Name/Location of Assembly (prime) facility: | CML-RA |
| MSL Level | 3 |
| Reflow Profile | 260C |

| ELECTRICAL TEST / FINISH DESCRIPTION | |
|---|--------|
| Test Location: | CML-RA |

PACKAGE AVAILABILITY

| PACKAGE | ASSEMBLY FACILITY SITE | WIRE MATERIAL | QTP NUMBER |
|---------------|------------------------|---------------|------------|
| 96-Ball VFBGA | Bangkok, Thailand (SB) | 0.8 mil CuPd | 172106 |
| 40-Pin QFN | CML-RA | 0.8 mil CuPd | 172303 |

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

| Stress/Test | Test Condition (Temp/Bias) | Result P/F |
|--|--|---------------|
| Acoustic Microscopy | J-STD-020 Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow) | P |
| Data Retention | 150°C/175°C, No Bias JESD22-A117 and JESD22-A103 | P |
| Electrostatic Discharge Charge Device Model (ESD-CDM) | 500V/750V/1,000V/1,250V/1,500V/1,750V/2,000V JESD22-C101 | P |
| Electrostatic Discharge Human Body Model (ESD-HBM) | 1,100V/2,200V /3,300V/4,000V/5,000V/6,000V/7,000V JESD22, Method A114 | P |
| Endurance Test | MIL-STD-883, Method 883-1033/ JESD22-A117 | P |
| High Accelerated Saturation Test (HAST) | JEDEC STD 22-A110: 110°C /130°C, 85% RH, 5.5V/6.6V Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow) | P |
| High Accelerated Saturation Test (HAST) - Unbiased | JEDEC STD 22-A110: 130°C, 85% RH Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow) | P |
| High Temperature Operating Life Early Failure Rate | Dynamic Operating Condition, Vcc Max=2.07V/2.27V, 150°C JESD22-A-108 | P |
| High Temperature Operating Life Latent Failure Rate | Dynamic Operating Condition, Vcc Max=2.07V/2.27V, 150°C JESD22-A-108 | P |
| Low Temperature Operating Life | Dynamic Operating Condition, -40°C JESD22-A108 | P |
| Pressure Cooker | JESD22-A102:121°C /100%RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow) | P |
| Pre/Post LFR AC/DC Char | AC/DC Critical Parameter Char at 0 hour/500hrs | P |
| SEM Analysis | MIL-STD-883, Method 2018 | P |
| Static Latch-up | 85°C, +/- 140mA, +/- 200mA, +/-300mA 125°C, +/-100mA, +/-140mA JESD 78 | P |
| Temperature Cycle | MIL-STD-883, Method 1010, Condition B, -55°C to 125°C MIL-STD-883, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow) | P |

RELIABILITY FAILURE RATE SUMMARY

| Stress/Test | Device Tested/ Device Hours | # Fails | Activation Energy | Thermal AF ³ | Failure Rate |
|---|--------------------------------|------------|----------------------|----------------------------|----------------------|
| High Temperature Operating Life Early Failure Rate | 4,785 Devices | 0 | N/A | N/A | 0 PPM ⁽¹⁾ |
| High Temperature Operating Life Long Term Failure Rate | 616,140 DHRs | 0 | 0.7 | 170 | 9 FIT ⁽²⁾ |

1. Early Failure Rate was computed from QTP# 170802.
2. Long Term Failure Rate was computed from QTP#151008, QTP#151303, QTP#160301, QTP#160207, QTP# 161003, QTP# 164802, QTP# 163301, QTP# 164302 and QTP# 170802 LFR data.

¹ Assuming an ambient temperature of 55°C and a junction temperature rise of 15°C.

² Chi-squared 60% estimations used to calculate the failure rate.

³ Thermal Acceleration Factor is calculated from the Arrhenius equation

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

where:

E_A =The Activation Energy of the defect mechanism.

K = Boltzmann's constant = 8.62×10^{-5} eV/Kelvin.

T_1 is the junction temperature of the device under stress and T_2 is the junction temperature of the device at use conditions.

Reliability Test Data

QTP #: 151008

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

Reliability Test Data

QTP #: 151008

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

Reliability Test Data

QTP #: 151008

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

Reliability Test Data

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

Reliability Test Data

QTP #: 151303

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CY8CMBR3106S2(8CP44304) | 4542914 | 611534639 | CML-RA | COMP | 6 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CY8CMBR3106S2(8CP44304) | 4542914 | 611534639 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CY8CMBR3106S2(8CP44304) | 4542914 | 611534639 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CY8CMBR3106S2(8CP44304) | 4542914 | 611534639 | CML-RA | COMP | 3 | 0 | |
| STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3) | | | | | | | |
| CY8CMBR3106S2(8CP44304) | 4542914 | 611534639 | CML-RA | 500 | 80 | 0 | |
| CY8CMBR3106S2(8CP44304) | 4542914 | 611534639 | CML-RA | 1000 | 80 | 0 | |

Reliability Test Data

QTP #: 160401

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

Reliability Test Data

QTP #: 160301

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

Reliability Test Data

QTP #: 160301

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYAT816882 (8C206802BB) | 3613017 | 611611087 | CML-R | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYAT816882 (8C206802BB) | 3613017 | 611611087 | CML-R | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYAT816882 (8C206802BB) | 3613017 | 611611087 | CML-R | COMP | 3 | 0 | |
| STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3) | | | | | | | |
| CYAT816882 (8C206802BB) | 3613017 | 611611087 | CML-R | 500 | 80 | 0 | |
| CYAT816882 (8C206802BB) | 3613017 | 611611087 | CML-R | 1000 | 80 | 0 | |

Reliability Test Data

QTP #: 160803

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

Reliability Test Data

QTP #: 160207

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

Reliability Test Data

QTP #: 161003

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: ACOUSTIC, MSL3 | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | COMP | 15 | 0 | |
| STRESS: DATA RETENTION, PLASTIC, 150C | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 500 | 80 | 0 | |
| STRESS: DATA RETENTION, PLASTIC, 175C | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 76 | 80 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 152 | 80 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 48 | 1510 | 0 | |
| STRESS: ENDURANCE | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 168 | 80 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 500 | 80 | 0 | |
| STRESS: ESD-CHARGE DEVICE MODEL | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 500 | 9 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 750 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 1000 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 1250 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 1500 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 1750 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 2000 | 3 | 0 | |
| STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114 | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 1100 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 2200 | 8 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 3300 | 3 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 4000 | 3 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 80 | 120 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 500 | 120 | 0 | |
| STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 168 | 80 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 288 | 80 | 0 | |
| STRESS: PRE/POST LFR PARAMETER ASSESSMENT | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | COMP | 10+2 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | COMP | 6 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | COMP | 3 | 0 | |

Reliability Test Data

QTP #: 161003

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | COMP | 3 | 0 | |
| STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3) | | | | | | | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 500 | 79 | 0 | |
| CYPD1103 (8F44100) | 4537464 | 611531543 | CML-R | 1000 | 79 | 0 | |

Reliability Test Data

QTP #: 160809

| <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> |
|--|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: ESD-CHARGE DEVICE MODEL | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 500 | 9 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 750 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 1000 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 1250 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 1500 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 1750 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 2000 | 3 | 0 | |
| STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114 | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 1100 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 2200 | 8 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 3300 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 4000 | 3 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 5000 | 3 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.07V, Vcc Max) | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612816 | CML-RA | 48 | 1032 | 0 | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | 48 | 537 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 100mA) | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | COMP | 3 | 0 | |
| YIELD: BACKEND | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612816 | CML-RA | COMP | | | EQUIVALENT |
| CYPD21342 (7CP64111C) | 3612012 | 611612814 | CML-RA | COMP | | | EQUIVALENT |
| YIELD: E-TEST | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612816 | CML-RA | COMP | | | EQUIVALENT |
| YIELD: SORT | | | | | | | |
| CYPD21342 (7CP64111C) | 3612012 | 611612816 | CML-RA | COMP | | | EQUIVALENT |

Reliability Test Data

QTP #: 164802

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: ACOUSTIC, MSL3 | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | COMP | 15 | 0 | |
| STRESS: ESD-CHARGE DEVICE MODEL | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 500 | 9 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 750 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 1000 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 1250 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 1500 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 1750 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 2000 | 3 | 0 | |
| STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114 | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 500 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 1100 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 2200 | 8 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 3300 | 3 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 4000 | 3 | 0 | |
| STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 6.6V), PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 96 | 28 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 48 | 1550 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 80 | 84 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 500 | 81 | 0 | |
| STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 96 | 80 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 168 | 79 | 0 | |
| STRESS: PRE/POST LFR PARAMETER ASSESSMENT | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 0 | 10+2 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 500 | 10+2 | 0 | |

Reliability Test Data

QTP #: 164802

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: STATIC LATCH-UP (125C, 100mA) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | COMP | 6 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | COMP | 3 | 0 | |
| STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3) | | | | | | | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 500 | 80 | 0 | |
| CYPD21227 (7CP64102E) | 3705058 | 611711793 | CML-RA | 1000 | 80 | 0 | |

Reliability Test Data

QTP #: 163301

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: DATA RETENTION, PLASTIC, 175C | | | | | | | |
| CY8C4248AZI2 (8CP42003CB) | 3621015 | 611619413 | G-Taiwan | 76 | 80 | 0 | |
| CY8C4248AZI2 (8CP42003CB) | 3621015 | 611619413 | G-Taiwan | 152 | 80 | 0 | |
| STRESS: ENDURANCE | | | | | | | |
| CY8C4248AZI2 (8CP42003CB) | 3621015 | 611619413 | G-Taiwan | 168 | 80 | 0 | |
| STRESS: ESD-CHARGE DEVICE MODEL | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 500 | 9 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 1000 | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 1250 | 3 | 0 | |
| STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114 | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 1000 | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 2200 | 8 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 3300 | 3 | 0 | |
| STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 96 | 25 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 192 | 25 | 0 | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700857 | CML-RA | 96 | 26 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 48 | 1103 | 0 | |
| CYPD3135 (7CP64301DB) | 3641022 | 611637237 | CML-RA | 48 | 413 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 48 | 1570 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 500 | 117 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 80 | 130 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 500 | 130 | 0 | |
| STRESS: HIGH TEMPERATURE STORAGE, PLASTIC, 150C | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 500 | 45 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 1000 | 45 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 500 | 45 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 1000 | 45 | 0 | |
| STRESS: PRE/POST LFR PARAMETER ASSESSMENT | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 0 | 10+2 | 0 | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | 500 | 10+2 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 0 | 10+2 | 0 | |
| CYPD3135 (7CP64301DB) | 3643014 | 611639672 | CML-RA | 500 | 10+2 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700857 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700858 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3706023 | 611706634 | CML-RA | COMP | 2 | 0 | |

Reliability Test Data

QTP #: 163301

| <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> |
|--|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700857 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700858 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3706023 | 611706634 | CML-RA | COMP | 2 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700857 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700858 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 100mA) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700857 | CML-RA | COMP | 6 | 0 | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700858 | CML-RA | COMP | 6 | 0 | |
| CYPD3135 (7CP64301DB) | 3706023 | 611706634 | CML-RA | COMP | 6 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700857 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3652003 | 611700858 | CML-RA | COMP | 3 | 0 | |
| CYPD3135 (7CP64301DB) | 3706023 | 611706634 | CML-RA | COMP | 2 | 0 | |
| STRESS: THERMAL JUNCTION MEASUREMENT | | | | | | | |
| CYPD3135 (7CP64301DB) | 3641047 | 611637169 | CML-RA | COMP | 1 | 0 | |

Reliability Test Data

QTP #: 164302

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: ACOUSTIC, MSL3 | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 22 | 0 | |
| STRESS: ESD-CHARGE DEVICE MODEL | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 500 | 9 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 750 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 1000 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 1250 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 1500 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 1750 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 2000 | 3 | 0 | |
| STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114 | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 1100 | 9 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 2200 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 3300 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 4000 | 3 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 5000 | 3 | 0 | |
| STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 96 | 30 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 48 | 1040 | 1 | Functional (NGDO_Vbus) |
| CYPD31357 (7CP64301JB) | 3715132 | 611716236 | CML-RA | 48 | 1043 | 0 | |
| CYPD31357 (7CP64301JB) | 3719028 | 611719500 | CML-RA | 48 | 985 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 500 | 79 | 0 | |
| STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 168 | 79 | 0 | |
| STRESS: PRE/POST LFR PARAMETER ASSESSMENT | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 0 | 10+2 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | 500 | 10+2 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 100mA) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 3 | 0 | |

Reliability Test Data

QTP #: 164302

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3) | | | | | | | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 500 | 0 | |
| CYPD31357 (7CP64301JB) | 3714062 | 611714862 | CML-RA | COMP | 1000 | 0 | |

Reliability Test Data

QTP #: 170802

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: ACOUSTIC, MSL3 | | | | | | | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | COMP | 22 | 0 | |
| STRESS: ESD-CHARGE DEVICE MODEL | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 500 | 9 | 0 | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 1000 | 3 | 0 | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 1250 | 3 | 0 | |
| CYPD5125 (7CP645002B) | 3736092 | 611735126 | CML-RA | 500 | 9 | 0 | |
| CYPD5125 (7CP645002B) | 3736092 | 611735126 | CML-RA | 1000 | 3 | 0 | |
| CYPD5125 (7CP645002B) | 3736092 | 611735126 | CML-RA | 1250 | 3 | 0 | |
| STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114 | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 1100 | 3 | 0 | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 2200 | 8 | 0 | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 3300 | 3 | 0 | |
| CYPD5125 (7CP645002B) | 3736092 | 611735126 | SB-Thailand | 1100 | 3 | 0 | |
| CYPD5125 (7CP645002B) | 3736092 | 611735126 | SB-Thailand | 2200 | 8 | 0 | |
| CYPD5125 (7CP645002B) | 3736092 | 611735126 | SB-Thailand | 3300 | 3 | 0 | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 2200 | 12 | 0 | 0 (CC Pins-EAG) |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | 1100 | 56 | 0 | 0 (SBU Pins-CML) |
| STRESS: HI-ACCEL SATURATION TEST (110C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | 264 | 30 | 0 | |
| STRESS: HI-ACCEL SATURATION TEST- UNBIASED (130C, 85%RH), PRE COND 192 HR 30C/60%RH (MSL3) | | | | | | | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | 96 | 80 | 0 | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | 192 | 80 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | 48 | 1538 | 0 | |
| CYPD5225 (7CP645001B) | 3731039 | 611729762 | SB-Thailand | 48 | 1594 | 0 | |
| CYPD5225 (7CP645001B) | 3734103 | 611733486 | SB-Thailand | 48 | 1653 | 0 | |
| STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.27V, Vcc Max) | | | | | | | |
| CYPD5225 (7CP645001B) | 3731039 | 611729762 | SB-Thailand | 80 | 129 | 0 | |
| CYPD5225 (7CP645001B) | 3731039 | 611729762 | SB-Thailand | 500 | 124 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 100mA) | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (125C, 140mA) | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | COMP | 3 | 0 | |

Reliability Test Data

QTP #: 170802

| <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> |
|---|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: STATIC LATCH-UP (85C, 140mA) | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 200mA) | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | COMP | 3 | 0 | |
| STRESS: STATIC LATCH-UP (85C, 300mA) | | | | | | | |
| CYPD5225 (7CP645001B) | 3736092 | 611735125 | SB-Thailand | COMP | 3 | 0 | |
| STRESS: TC COND. B -55C TO 125C, PRE COND 192 HRS 30C/60%RH (MSL3) | | | | | | | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | 500 | 80 | 0 | |
| CYPD5225 (7CP645001A) | 3718035 | 611718382 | SB-Thailand | 1000 | 80 | 0 | |



Document History Page

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Technology, Fab 25
Document Number: 002-22153

| Rev. | ECN No. | Orig. of Change | Description of Change |
|------|---------|-----------------|-----------------------|
| ** | 5975402 | JYF | Initial spec release. |