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Infineon continues to support existing part numbers. Please continue to use the ordering part numbers listed in the datasheet for ordering.

Cypress Semiconductor Package Qualification Report

**QTP# 061102 VERSION*A
October 2014**

**1+4+1 Substrate Structure in 484PBGA (23x23mm)
SnAgCu, Au wire
MSL3, 260C Reflow
ASE-Taiwan**

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

| QUAL REPORT | DESCRIPTION OF QUALIFICATION PURPOSE | DATE COMP. |
|------------------------|----------------------------------------------------------------------------|-----------------------|
| 061102 | Qualify the 1+4+1 substrate structure in 23x23 PBGA package in ASE-Taiwan. | Oct 07 |

| MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION | |
|------------------------------------------------------|----------------|
| Package Designation: | BY484 |
| Package Outline, Type, or Name: | 484 PBGA |
| Mold Compound Name/Manufacturer: | G770-J |
| Mold Compound Flammability Rating: | UL-94 V-0 |
| Oxygen Rating Index: | -- |
| Lead Frame Material: | N/A |
| Lead Finish, Composition / Thickness: | SnAgCu |
| Die Backside Preparation Method/Metallization: | Background |
| Die Separation Method: | Saw singulate |
| Die Attach Supplier: | Ablestik |
| Die Attach Material: | 2100A |
| Die Attach Method: | Epoxy dispense |
| Bond Diagram Designation | 001-03554 |
| Wire Bond Method: | Thermosonic |
| Wire Material/Size: | 0.9mil Au |
| Thermal Resistance Theta JA °C/W: | -- |
| Package Cross Section Yes/No: | No |
| Name/Location of Assembly (prime) facility: | ASE-Taiwan |
| MSL Level | 3 |
| Reflow Profile | 260C |

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

Note: Please contact a Cypress Representative for other packages availability

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

| Stress/Test | Test Condition (Temp/Bias) | Result P/F |
|--------------------|----------------------------------------|-----------------------|
| Die Shear | MIL-STD-883, Method 2019 | P |
| Physical Dimension | MIL-Std 883, Method 2016 | |
| Bond Pull | MIL-STD-883 – Method 2011 | P |
| Ball Shear | JESD22-B116A | P |
| External Visual | MIL-PRF-38535, MILSTD-883, METHOD 2009 | P |
| Internal Visual | MIL-STD-883-2014 | P |
| Age Bond | MIL-STD-883, Method 883-2011 | P |
| Thermal Shock | MIL-STD-883C, Method 1011 | P |

Reliability Test Data

QTP #:061102

| Device | Fab Lot # | Assy Lot # | Assy Loc | Duration | Samp | Rej | Failure Mechanism |
|--------------------------------------|------------------|-------------------|-----------------|-----------------|-------------|------------|--------------------------|
| STRESS: AGE BOND | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | COMP | 3 | 0 | |
| STRESS: BALL SHEAR | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4546070 | 610610519 | ASE-G | COMP | 10 | 0 | |
| CYD18S72V18 (7C08642AC) | 4549164 | 610624646 | ASE-G | COMP | 10 | 0 | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | COMP | 10 | 0 | |
| CYD18S72V18 (7C08642AC) | 4619133 | 610653400 | ASE-G | COMP | 10 | 0 | |
| CYD18S72V18 (7C08642AC) | 4626844 | 610660831 | ASE-G | COMP | 160 | 0 | |
| STRESS: BOND PULL | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4546070 | 610610519 | ASE-G | COMP | 20 | 0 | |
| CYD18S72V18 (7C08642AC) | 4549164 | 610624646 | ASE-G | COMP | 20 | 0 | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | COMP | 20 | 0 | |
| CYD18S72V18 (7C08642AC) | 4619133 | 610653400 | ASE-G | COMP | 30 | 0 | |
| CYD18S72V18 (7C08642AC) | 4626844 | 610660831 | ASE-G | COMP | 470 | 0 | |
| STRESS: D1 PHYSICAL DIMENSION | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | COMP | 5 | 0 | |
| STRESS: DIE SHEAR | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4546070 | 610610519 | ASE-G | COMP | 4 | 0 | |
| CYD18S72V18 (7C08642AC) | 4549164 | 610624646 | ASE-G | COMP | 4 | 0 | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | COMP | 15 | 0 | |
| CYD18S72V18 (7C08642AC) | 4619133 | 610653400 | ASE-G | COMP | 4 | 0 | |
| STRESS: EXTERNAL VISUAL | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | COMP | 15 | 0 | |
| STRESS: INTERNAL VISUAL | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4619133 | 610653400 | ASE-G | COMP | 5 | 0 | |
| STRESS: THERMAL SHOCK | | | | | | | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | 100 | 49 | 0 | |
| CYD18S72V18 (7C08642AC) | 4606179 | 610628791 | ASE-G | 200 | 48 | 0 | |

Document History Page

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Reflow ASE-Taiwan
Document Number: 001-89546

| Rev. | ECN No. | Orig. of Change | Description of Change |
|------|---------|-----------------|------------------------------------------------------------------------|
| ** | 4146472 | HSTO | Initial Spec Release. |
| *A | 4526481 | HSTO | Align qualification report based on the new template in the front page |

Distribution: WEB

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