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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, PLEAE 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 SHEEAR							
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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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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