Cypress Semiconductor
Package Qualification Report

QTP# 052602 VERSION 1.0
July 2005

119-Ball Plastic Ball Grid Array Package (PBGA)
(14 x 22 x 2.4mm)
MSL 3, 220C Solder Reflow
ASE-Taiwan

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

Qual Report		Description of Qualification Purpose		Date Comp
052602		119-Ball PBGA (14 x 22 x 2.4mm), SnPb, MSL3, 220C Reflow assembled in ASE-Taiwan using Plaskon SMT-B-1 Mold Compound and Ablestik-8355F and BT-Resin		Jul 05

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	BG119
Package Outline, Type, or Name:	119-Ball Plastic Ball Grid Array (PBGA) (14 x 22 x 2.4mm)
Mold Compound Name/Manufacturer:	Plaskon SMT-B-1LAS
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	34%
Substrate Material:	BT Resin
Lead Finish, Composition / Thickness:	Sn (63%), Pb (37%)
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Sawing
Die Attach Supplier:	Ablestik
Die Attach Material:	Ablestik 8355F
Die Attach Method:	Silver Epoxy
Bond Diagram Designation:	10-05529
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1.0mil
Thermal Resistance Theta JA °C/W:	31.83°C/W
Package Cross Section Yes/No:	No
Assembly Process Flow:	49-41025
Name/Location of Assembly (prime) facility:	ASE-Taiwan (G)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R
Fault Coverage:	100%

RELIABILITY TESTS PERFORMEDPER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs., 30°C/60%RH+3IR-Reflow, **220°**C+0, -5°C	P
Pressure Cooker	121C, 100%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs., 30°C/60%RH+3IR-Reflow, **220**°C+0, -5°C	P
High Temperature Storage	150°C, no bias	P
Acoustic Microscopy	Cypress Spec. 25-00104	P

Reliability Test Data

QTP #: 052602

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	COMP	15	0	
CY7C0430BV (7C04301A)	4344934	*610454068*	TAIWN-G	COMP	15	0	
CY7C1062AV33 (7C1062A)	4225801	*610239312*	TAIWN-G	COMP	15	0	
STRESS: HIGH TEMPERATURE STORAGE, no bias							
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	500	50	0	
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	1000	50	0	
CY7C0430BV (7C04301A)	4344934	*610454068*	TAIWN-G	500	50	0	
CY7C0430BV (7C04301A)	4344934	*610454068*	TAIWN-G	1000	50	0	
CY7C1062AV33 (7C1062A)	4225801	*610239312*	TAIWN-G	500	45	0	
CY7C1062AV33 (7C1062A)	4225801	*610239312*	TAIWN-G	1000	45	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	168	50	0	
CY7C1062AV33 (7C1062A)	4225801	*610239312*	TAIWN-G	168	45	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	300	50	0	
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	500	50	0	
CY7C1373CV25 (7C13732R)	4422594	*610444010*	TAIWN-G	1000	50	0	
CY7C0430BV (7C04301A)	4344934	*610454068*	TAIWN-G	300	50	0	
CY7C0430BV (7C04301A)	4344934	*610454068*	TAIWN-G	500	50	0	
CY7C1062AV33 (7C1062A)	4225801	*610239312*	TAIWN-G	300	44	0	