Cypress Semiconductor
Package Qualification Report

QTP# 050710 VERSION 2.0
April 2006

ALL Thin Small Outlined Package (TSOP I & Il)
SnPb Lead Finish, MSL3, 235C Reflow
OSE-Taiwan

CYPRESS TECHNICAL CONTACT FOR QUALITFICATION DATA:

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PRODUCT QUALIFICATION HISTORY

Qual Report		Description of Qualification Purpose		Date
033104		32-Lead TSOP I & II (400mils), SnBi, MSL3, 260C Reflow temperature assembled at OSE-Taiwan		Dec 03
050710		Qualify ALL TSOP I & II at MSL3, 235C Reflow, using CEL9200HF Mold Compound, 8340 Epoxy with SnPb Lead Finish assembled at OSE-Taiwan		Mar 05

Major Package Information Used in this Qualification	
Package Designation:	ZS324
Package Outline, Type, or Name:	32-Lead Thin Small Outline Package (TSOP II)
Mold Compound Name/Manufacturer:	CEL9200THF
Mold Compound Flammability Rating:	V-O per UL 94
Oxygen Rating Index:	>28%
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	SnPb
Die Backside Preparation Method/Metallization:	Grinding
Die Separation Method:	Sawing
Die Attach Supplier:	Ablestik
Die Attach Material:	8340
Die Attach Method:	Epoxy
Bond Diagram Designation	10-03536
Wire Bond Method:	Thermosonic
Wire Material/Size:	1.0mil
Thermal Resistance Theta JA °C/W:	50° C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-35014
Name/Location of Assembly (prime) facility:	OSE-Taiwan

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

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
High Accelerated Saturation Test (HAST)	130C, 85%RH, 5.5V Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30°C/60% RH+3IR-Reflow, **235°C**+0, -5°C	P
Pressure Cooker	121C, 100%RH Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30°C/60% RH+3IR-Reflow, **235°C**+0, -5°C	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30°C/60% RH+3IR-Reflow, **235°C**+0, -5°C	P
Acoustic Microscopy Test	Cypress Spec 25-000104	P
External Visual	Cypress Spec 12-00292	P
Solderability	Cypress Spec 25-00018	P
Adhesion of Lead Finish	Cypress Spec 25-00029	P

Reliability Test Data

QTP #: 033104

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY62148BLL	4330154	610342548	OSE-T	COMP	15	0	
CY62148BLL	4330154	610342548M	OSE-T	COMP	15	0	
CY62148BLL	4330154	610342548M1	OSE-T	COMP	15	0	
STRESS: ADHESION OF LEAD FINISH							
CY62148BLL	4330154	610342548	OSE-T	COMP	3	0	
CY62148BLL	4330154	610342548M	OSE-T	COMP	3	0	
STRESS: EXTERNAL VISUAL							
CY62148BLL	4330154	610342548	OSE-T	COMP	15	0	
CY62148BLL	4330154	610342548M	OSE-T	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5 V), PRE COND 192 HR 30C/60%RH, MSL3							
CY62148BLL	4330154	610342548	OSE-T	128	50	0	
CY62148BLL	4330154	610342548M	OSE-T	128	45	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), PRE COND 192HRS 30C/60%RH, MSL3							
CY62148BLL	4330154	610342548	OSE-T	168	46	0	
STRESS: SOLDERABILITY							
CY62148BLL	4330154	610342548	OSE-T	COMP	3	0	
CY62148BLL	4330154	610342548M	OSE-T	COMP	3	0	
CY62148BLL	4330154	610342548M1	OSE-T	COMP	3	0	
STRESS: TC CONDITION C, -65C TO 150C, PRE COND 192 HRS 30C/60% RH, MSL3							
CY62148BLL	4330154	610342548	OSE-T	300	50	0	
CY62148BLL	4330154	610342548	OSE-T	500	50	0	
CY62148BLL	4330154	610342548	OSE-T	1000	50	0	
CY62148BLL	4330154	610342548	OSE-T	300	45	0	
CY62148BLL	4330154	610342548	OSE-T	500	45	0	
CY62148BLL	4330154	610342548	OSE-T	1000	45	0	
CY62148BLL	4330154	610342548M1	OSE-T	300	50	0	
CY62148BLL	4330154	610342548M1	OSE-T	500	50	0	
CY62148BLL	4330154	610342548M1	OSE-T	1000	50	0	