

Cypress Semiconductor Package Qualification Report

**QTP# 98356 VERSION 2.0 (G1)
July, 2004**

<p>44 Ld TSOP Type II Package Cypress Philippines Assembly (CML-R)</p>

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	ZS4444
Package Outline, Type, or Name:	44 lead TSOP II
Mold Compound Name/Manufacturer:	Hitachi CEL9200
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	>28%
Lead Frame Designation:	ZS
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Solder Plated 85%Sn, 15%Pb
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	8361H
Bond Diagram Designation	10-03101
Wire Bond Method:	Thermosonic
Wire Material/Size:	Gold, 1.0mil
Thermal Resistance Theta JA °C/W:	55
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	11-20007M
Name/Location of Assembly (prime) facility:	Cypress Philippines (CSPI-R)

RoHS PPM level:

Package	Package Weight	Solder Plating	Lead (Pb)	Mercury (Hg)	Chromium (CrVI)	Cadmium (Cd)
TSOP 44	0.49 gm	Sn/Pb	688.2 ppm	0.5 ppm	<0.01 ppm	1.8 ppm

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CSPI-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
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	P
High Accelerated Saturation Test	140°C/5.5V/85%RH Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs., 30°C/60%RH	P
Internal Visual	Cypress Spec 25-00017	P
External Visual	Cypress Spec 12-00102/12-00103	P
Physical Dimension	Cypress Spec. 25-00031	P
Solderability, Steam Aged	Cypress Spec. 25-00018	P
High Temperature Storage	165°C, no bias	P
Die Shear	Cypress Spec 24-00004	P
Ball Shear	Cypress Spec 24-00018	P
Bond Pull	Cypress Spec 24-00002	P
Thermal Shock	Cypress Spec 25-00014	P
X-Ray	Cypress Spec 12-000149	P
Acoustic Microscopy Test (C-SAM)	Cypress Spec 25-000104	P

RELIABILITY TEST DATA

QTP#: 98356

DEVICE	ASSY-LOC	FABLOT#	ASSYLOT#	DURATION	S/S	REJ	FAIL MODE
STRESS: AGE BALL SHEAR							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	COMP	10	0	
STRESS: BOND PULL							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	COMP	10	0	
STRESS: C-SAM							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809706	COMP	15	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	COMP	15	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619810470	COMP	15	0	
STRESS: PHYSICAL DIMENSIONS							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	COMP	5	0	
STRESS: HI-ACCEL SATURATION TEST (140C, 85%RH, 5.5V), PRECOND. 192 HRS 30C/60%RH							
CY7C1041-ZSC(7C1541A)	CSPI-R	4818840	619810469	128	45	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4818840	619810469	128	45	0	
STRESS: HIGH TEMPERATURE STORAGE (165C, NO BIAS)							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	336	49	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	1000	47	0	
STRESS: TC COND. C, -65 TO 150C, PRECOND. 192 HRS 30C/60%RH (MSL 3)							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809706	300	48	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	300	50	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	1000	50	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619810470	300	50	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619810470	1000	50	0	
STRESS: THERMAL SHOCK, CONDITION B							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	100	50	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	200	50	0	
STRESS: X-RAY							
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809706	COMP	15	0	
CY7C1041-ZSC(7C1541A)	CSPI-R	4820018	619809707	COMP	15	0	