Cypress Semiconductor
Package Qualification Report

QTP# 060905 VERSION 1.0
May 2006

≤44-Lead TSOP II (without down bonds) NiPdAu, MSL3, 260C Reflow CML-R

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

Rene Rodgers	Sabbas Daniel
Principal Reliability Engineer	VP Quality Engineering
(408) 943-2732	(408) 943-2685

PACKAGE QUALIFICATION HISTORY

QUAL REPORT		DESCRIPTION OF QUALIFICATION PURPOSE		DATE COMP.
060905		≤44-Lead TSOP II (without down bonds), NiPdAu, MSL3, 260C Reflow assembled at CML-R		May 06

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	ZW44
Package Outline, Type, or Name:	44-Lead Thin Small Outline. Type II
Mold Compound Name/Manufacturer:	CEL 9200CYR / Hitachi
Mold Compound Flammability Rating:	UL94 – V0
Oxygen Rating Index:	None
Leadframe Material:	Copper
Lead Finish, Composition / Thickness:	NiPdAu
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	100% Saw Through
Die Attach Supplier:	Dexter
Die Attach Material:	QMI509
Die Attach Method:	Silver Epoxy
Bond Diagram Designation	10-03634
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au. 1.0 mil
Thermal Resistance Theta JA C/W:	68.87 °C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	11-20047
Name/Location of Assembly (prime) facility:	CML-R

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

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 MSL3 192 Hrs 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Pressure Cooker Test	121°C, 100%RH Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
High Accelerated Saturation Test (HAST)	130°C, 3.63V, 85%RH Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Acoustics Microscopy	Cypress Spec. 25-00104	P
High Temperature Storage	150°C, no bias	P

Reliability Test Data

QTP #: 060905

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY7C1041BV33 (7C1341C)	4436950	610511269	CML-R	COMP	15	0	
CY7C1041BV33 (7C1341C)	4436950	610511569	CML-R	COMP	15	0	
CY7C1041BV33 (7C1341C)	4435627	610514432	CML-R	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST, 130C, 3.63V, 85%RH, PRE COND 192HR 30C/60%RH, MSL3							
CY7C1041BV33 (7C1341C)	4428378	610510764	CML-R	128	45	0	
STRESS: HIGH TEMPERATURE STORAGE, no bias							
CY7C1041CV33 (7C1341R)	4428378	610514205	CML-R	500	50	0	
CY7C1041CV33 (7C1341R)	4428378	610514205	CML-R	1000	50	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 192HR 30C/60%RH, MSL3							
CY7C1041BV33 (7C1341C)	4428378	610458652	CML-R	168	50	0	
STRESS: TC COND. C –65C TO 150C, PRE COND 192HR 30C/60%RH, MSL3							
CY7C1041BV33 (7C1341C)	4436950	610511269	CML-R	300	50	0	
CY7C1041BV33 (7C1341C)	4436950	610511269	CML-R	500	50	0	
CY7C1041BV33 (7C1341C)	4436950	610511569	CML-R	300	50	0	
CY7C1041BV33 (7C1341C)	4435627	610514432	CML-R	300	50	0	