Cypress Semiconductor
Package Qualification Report

QTP# 024106 VERSION 1.0
January, 2003

24-lead Quarter Size Outline Package (QSOP) using Hitachi CEL9200CYR / IV77 Molding Compound and Ni/Pd Leadframe at 260°C Solder Reflow peak, MSL1

Cypress Philippines (CML-R) Assembly

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

QUAL REPORT		DESCRIPTION OF QUALIFICATION PURPOSE		DATE COMP.
024106		24-lead QSOP package using Hitachi CEL9200 CYR/IV77 and Ni/Pd leadframe at 260C Solder Reflow peak, MSL1 with die size ≤ 143 x 120 mls		Sept 02

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	O2414
Package Outline, Type, or Name:	24 Lead Quarter size Outline Package (QSOP) 8 x 13.4mm)
Mold Compound Name/Manufacturer:	Hitachi CEL9200CYR/IV77
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	＞28%
Lead Frame Material:	Copper base with Ni/Pd and Gold Flash Plating
Lead Finish, Composition / Thickness:	Ni/Pd with Gold Flash
Die Backside Preparation Method/Metallization:	Backgrind to 14 mil thickness
Die Separation Method:	Wafer saw
Die Attach Supplier:	Dexter
Die Attach Material:	QMI 509
Bond Diagram Designation	10-03681
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1. 0 mil
Thermal Resistance Theta JA °C/W:	126.4°C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	11-20007
Name/Location of Assembly (prime) facility:	Cypress Philippines (CML-R)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Cypress Philippines (CML-R)
Fault Coverage:	100%

Note: Please contact a Cypress Representative for other packages availability.

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENT

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Temperature Cycle	Precondition: JESD22 Moisture Sensitivity MSL 1 168 Hrs., 85°C/85%RH+3IR-Reflow, 260°C+5, -0°C	P
High Accelerated Saturation Test	130°C, 3.63V Precondition: JESD22 Moisture Sensitivity MSL 1 192 Hrs., 85°C/85%RH+3IR-Reflow, 260°C+5, -0°C	P
Pressure Cooker	Precondition: JESD22 Moisture Sensitivity MSL 1 168 Hrs., 85°C/85%RH+3IR-Reflow, 260°C+5, -0°C	P
Acoustic Microscopy, MSL 1	Cypress Spec 25-00104	P

Reliability Test Data

QTP #: 024106

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL1							
CY7C63101A-OC (7C63101G)	2151728	*610205913*	CML-R	COMP	15	0	
CY7C63101A-OC (7C63101G)	2151728	*610205913M*	CML-R	COMP	15	0	
CY7C63101A-OC (7C63101G)	2151728	*610205913M1*	CML-R	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 3.63V, PRE COND 168 HR 85C/85%RH, MSL1							
CY7C63101A-OC (7C63101G)	2151728	*610205913*	CML-R	128	44	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 168 HR 85C/85%RH, MSL1							
CY7C63101A-OC (7C63101G)	2151728	*610205913*	CML-R	168	45	0	
STRESS: TC CONDITION C, -65C TO 150C, PRE COND. 168 HR 85C/85% RH, MSL1							
CY7C63101A-OC (7C63101G)	2151728	*610205913*	CML-R	300	45	0	
CY7C63101A-OC (7C63101G)	2151728	*610205913M*	CML-R	300	45	0	
CY7C63101A-OC (7C63101G)	2151728	*610205913M1*	CML-R	300	45	0	