

Cypress Semiconductor Package Qualification Report

**QTP# 014513 VERSION 1.0
March, 2002**

**32-lead PDIP (600mls) Package,
OSE Philippines**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
014513	32-lead (600mil) PDIP package with die size $\leq 248.6 \times 232.9.0$ mil, OSE Philippines	Mar 02

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	P326
Package Outline, Type, or Name:	32-lead Plastic Dual-In-Line package (PDIP)
Mold Compound Name/Manufacturer:	Sumitomo EME6300H
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	>28%
Lead Frame Material:	CDA 194, Spring Temper
Lead Finish, Composition / Thickness:	Solder Plate, 85%Pb, 15%Sn, / 300-700microinch
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	84-1LMISR4
Die Attach Method:	Silver Epoxy
Bond Diagram Designation	10-02900
Wire Bond Method:	Thermosonic
Wire Material/Size:	Gold, 1.0mil
Thermal Resistance Theta JA °C/W:	53°C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-65999
Name/Location of Assembly (prime) facility:	OSE Philippines (PHIL-OP)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	OSE Philippines (PHIL-OP)
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	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C	P
High Accelerated Saturation Test	130°C, 5.5V	P
Pressure Cooker Test	121°C, 100%,	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2,200V MIL-STD-883, Method 3015.7	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V Cypress Spec 25-00020	P
Internal Visual	Cypress Spec 12-00292	P
External Visual	Cypress Spec 12-00292	P
Ball Shear	Cypress Spec 12-00292	P
Bond Pull	Cypress Spec 12-00292	P
Die Shear	Cypress Spec 12-00292	P
High Temperature Storage	150°C, no bias	P
Thermal Shock	125C, -55C	P
Physical Dimensions	Cypress Spec 25-00031	P
Solderability	Cypress Spec 25-00018	P
X-Ray	MIL-STD-883C, Method 2012, Cypress Spec 12-00292	P

Reliability Test Data

QTP #: 014513

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: INTERNAL VISUAL							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	5	0	
STRESS: EXTERNAL VISUAL							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	15	0	
STRESS: PHYSICAL DIMENSIONS							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	5	0	
STRESS: SOLERABILITY							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	3	0	
STRESS: THERMAL SHOCK, 125C, -55C							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	100	48	0	
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	200	48	0	
STRESS: HIGH TEMPERATURE STORAGE, 150C							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	500	48	0	
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	1000	48	0	
STRESS: BALL SHEAR							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	10	0	
STRESS: BOND PULL							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	10	0	
STRESS: DIE SHEAR							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	15	0	
STRESS: STATIC LATCHUP, 125C, 12V,+/-300mA							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	3	0	
STRESS: X-RAY							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	15	0	

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STRESS: ESD-HBM DONE, 2,200V							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	9	0	
STRESS: ESD-CDM DONE, 500V							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	COMP	9	0	
STRESS: HI-ACCEL SATURATION TEST. 130C, 5.5V, 85%RH							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	128	47	0	
STRESS: STRESS: PRESSURE COOKER TEST, 121C, 100%RH							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	128	48	0	
CYM1465ALPD-PC (M1465C)		340100278M	PHIL-OP	128	48	0	
STRESS: TC COND. C -65C TO 150C							
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	300	48	0	
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	500	48	0	
CYM1465ALPD-PC (M1465C)		340100278	PHIL-OP	1000	48	0	
CYM1465ALPD-PC (M1465C)		340100278M	PHIL-OP	300	48	0	
CYM1465ALPD-PC (M1465C)		340100278M	PHIL-OP	500	47	0	
CYM1465ALPD-PC (M1465C)		340100278M	PHIL-OP	1000	47	0	
CYM1465ALPD-PC (M1465C)		340100278M1	PHIL-OP	300	48	0	
CYM1465ALPD-PC (M1465C)		340100278M1	PHIL-OP	500	48	0	
CYM1465ALPD-PC (M1465C)		340100278M1	PHIL-OP	1000	48	0	