

CYPRESS SEMICONDUCTOR

PRODUCT CHANGE NOTIFICATION

PCN: 020008

DATE: March 25, 2002

Subject: Package change for CYM1465PD/LPD, From Module to 32ld (600mil)PDIP

To:

Description of change:

A form change has been made to the CYM1465PD/LPD module. The current device uses four (4) 128K x 8 SRAMs mounted on a PCB substrate with pins. The revised design, the CYM1465APD/ALPD, is a 32 lead 600 mil plastic dip monolithic device. No change was made to the connector pin configuration of the device. The fit of the CYM1465APD/ALPD device into a system motherboard has not been affected.

Benefit of change:

The reason for the change is to provide a cost reduction solution for the current module device.

Qualification status:

Complete. Qualification Report # 014513 is attached.

Sample status:

Samples are available by contacting our local sales office.

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Cypress part numbers affected:

OLD PART#	NEW PART#
CYM1465PD	CYM1465APD
CYM1465LPD	CYM1465ALPD

Customer part numbers affected:

Approximate Implementation Date:

Production release of the new material will be phased in immediately or as agreed per your contract terms and conditions. The old material is available for last time buys. No more old revision builds will done.

Response Required:

Sincerely,

Mike Burke
Director of Quality

Al Laxman
PCN Process Manager

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:

**Ed Russell
Reliability Director
(408) 432-7069**

**Al Laxman
Quality Engineering
(408) 545-7120**

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

Device Mechanism	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure
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	

Reliability Test Data

QTP #: 014513

Device Mechanism	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure
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	