

Cypress Semiconductor Package Qualification Report

**QTP# 042901 VERSION 1.0
July, 2004**

**All Plastic Dual-In-Line (PDIP/300mils) Package
Amkor-Philippines Assembly**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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Principal Reliability Engineer
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PACKAGE QUALIFICATION HISTORY

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
042901	Qualify All Plastic Dual-In-Line Package (PDIP), 300mils with SnPb Lead Finish assembled @ Amkor-Philippines	Jul 04

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	P283
Package Outline, Type, or Name:	28-Pin Plastic Dual-In-Line Package (PDIP)
Mold Compound Name/Manufacturer:	Sumitomo 6300H
Mold Compound Flammability Rating:	V-O per UL 94
Oxygen Rating Index:	None
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Sn/Pb 300-800uinch
Die Backside Preparation Method/Metallization:	Grinding
Die Separation Method:	Sawing
Die Attach Supplier:	Ablestik
Die Attach Material:	84-1LMISR4
Bond Diagram Designation	10-03731
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au 1.3 mil
Thermal Resistance Theta JA °C/W:	66.7°C/W
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	49-24009
Name/Location of Assembly (prime) facility:	Amkor-Phil

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 REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Ball Shear	Cypress Spec 12-00292	P
Bond Pull	Cypress Spec 12-00292	P
Die Shear	Cypress Spec 12-00292	P
High Temperature Storage	150C, no bias	P
High Accelerated Saturation Test (HAST)	130°C, 3.63V, 85%RH	P
Physical Dimensions	Cypress Spec 25-00031	P
Pressure Cooker	121°C, 100%RH	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C	P
X-Ray	MIL-STD-883, Method 32012, Cypress Spec. 12-00292	P

Reliability Test Data

QTP #: 042901

Device	Fab Lot #	Assy Lot#	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: BALL SHEAR							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	COMP	20	0	
STRESS: BOND PULL							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	COMP	20	0	
STRESS: DIE SHEAR							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	COMP	4	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 3.63V)							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	128	45	0	
STRESS: HIGH TEMPERATURE STORAGE							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	500	50	0	
CY7C344B (7C344F)	2122592	610346278	PHIL-M	1000	50	0	
STRESS: PHYSICAL DIMENSION							
			PHIL-M	COMP	25	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH)							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	168	50	0	
STRESS: TC COND. C -65C TO 150C							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	300	50	0	
CY7C344B (7C344F)	2122592	610346278	PHIL-M	500	49	0	
CY7C344B (7C344F)	2122592	610346278	PHIL-M	1000	49	0	
CY7C344B (7C344F)	2122592	610337866	PHIL-M	300	49	0	
CY7C344B (7C344F)	2122592	610337866	PHIL-M	500	48	0	
CY7C344B (7C344F)	2118272	610304089	PHIL-M	300	50	0	
CY7C344B (7C344F)	2118272	610304089	PHIL-M	500	48	0	
CY7C344B (7C344F)	2118272	610304089	PHIL-M	1000	48	0	
STRESS: X-RAY							
CY7C344B (7C344F)	2122592	610346278	PHIL-M	COMP	15	0	