

Cypress Semiconductor Package Qualification Report

**QTP# 97457 VERSION 1.0
November, 2001**

**28-lead Ceramic Windowed J-Leaded Chip Carrier (WLCC)
Anam Philippines**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date Comp
97457	28-lead Ceramic Windowed J-Leaded Chip Carrier (WLCC) Package, with die size 236 x 134, Anam Philippines	Aug 98

HERMETIC PACKAGE/ASSEMBLY DESCRIPTION	
Package Designation:	H28
Package Outline, Type, or Name:	28-lead Ceramic Windowed J-Leaded Chip Carrier (WLCC)
Lead Seal Method/Material:	Glass Seal / KC700 or T187
Mold Compound Flammability Rating:	N/A
Oxygen Rating Index:	N/A
Lead Frame Material:	Kovar
Lead Finish, Composition / Thickness:	Solder Dip, 85%Sn / 15%Pb
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Method:	Ag / Glass paste
Die Attach Supplier:	QMI
Die Attach Material:	2419MA
Bond Diagram Designation	10-01806
Wire Bond Method:	Wedge
Wire Material/Size:	Al/ 1.25mil
Thermal Resistance Theta JA °C/W:	48.5°C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-14999
Name/Location of Assembly (prime) facility:	Anam Philippines (PHIL-M)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Anam Philippines (PHIL-M)
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 (Military)	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C	P
Internal Visual	Cypress Spec 25-00017	P
Physical Dimension	Cypress Spec. 25-00031	P
Military Life Test Group C	150C, 5.75V	P
External Visual	Cypress Spec 25-00038	P
Solderability	Cypress Spec 25-00018	P
Salt Atmosphere	Cypress Spec 25-00013/Cypress Spec 25-00038	P
Adhesion of Lead Finish	Cypress Spec. 25-00029	P
Lid Torque	Cypress Spec. 25-00035	P
Thermal Series	MIL-STD-883C, Method 5005	P
Die Shear	Cypress Spec. 12-00292	P
Solderability, Steam Aged	Cypress Spec. 25-00018	P
X-Ray	MIL-STD-883C, Method 2012 / Cypress Spec. 12-00292	P
Mechanical Series	MIL-STD-883C, Method 5005	P
Internal Water Vapor	MIL-STD-883C, Method 1018	P

Reliability Test Data

QTP #: 97457

<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: PHYSICAL DIMENSIONS							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	15	0	
STRESS: THERMAL SERIES							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	17	0	
STRESS: MECHANICAL SERIES							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	17	0	
STRESS: SALT ATMOSPHERE							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	15	0	
STRESS: INTERNAL WATER VAPOR							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	3	0	
STRESS: ADHESION OF LEAD FINISH							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	3	0	
STRESS: EXTERNAL VISUAL							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	15	0	
STRESS: DIE SHEAR							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	15	0	
STRESS: INTERNAL VISUAL							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	5	0	
STRESS: SOLERABILITY							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	3	0	
STRESS: MILITARY LIFE TEST GROUP C, 150C, 5.75V							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	184	50	0	

Reliability Test Data

QTP #: 97457

<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: X-RAY							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	15	0	
STRESS: LID TORQUE							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	COMP	5	0	
STRESS: TC CONDITION C, 150C TO -65C, MSL1							
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	100	46	0	
CY7C344-HMB (7C344A)	2719366	349705317	PHIL-M	1000	46	0	