

Cypress Semiconductor Package Qualification Report

**QTP# 97459 VERSION 1.0
January, 2002**

**68-lead Ceramic Leadless Chip Carrier Package (LCC)
Anam Philippines**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date Comp
97458	68-lead Ceramic Leadless Chip Carrier (LCC) package, with die size 177 x 204mils, assembled at Anam Philippines	Apr 98

HERMETIC PACKAGE/ASSEMBLY DESCRIPTION	
Package Designation:	L68
Package Outline, Type, or Name:	68-lead Ceramic Leadless (LCC)
Lead Seal Method/Material:	Av / Sn eutectic
Mold Compound Flammability Rating:	N/A
Oxygen Rating Index:	N/A
Lead Frame Material:	N/A
Lead Finish, Composition / Thickness:	Solder Dip Sn Pb
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Saw
Die Attach Method:	Wedge
Die Attach Supplier:	QMI
Die Attach Material:	QMI-2419MA
Bond Diagram Designation	10-00176
Wire Bond Method:	Aluminum Wire Bond
Wire Material/Size:	Al/ 1.25mil
Thermal Resistance Theta JA °C/W:	35.8°C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-24005
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
Lead Integrity	Cypress Spec 25-00004	P
Physical Dimension	Cypress Spec. 25-00031	P
Military Life Test Group C	150C, 5.75V	P
External Visual	Cypress Spec 25-00038	P
Salt Atmosphere	Cypress Spec 25-00013/Cypress Spec 25-00038	P
Thermal Series	MIL-STD-883C, Method 5005	P
Die Shear	Cypress Spec. 12-00292	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 #: 97459

<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							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	15	0	
STRESS: LEAD INTEGRITY							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	4	0	
STRESS: THERMAL SERIES							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	17	0	
STRESS: MECHANICAL SERIES							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	17	0	
STRESS: SALT ATMOSPHERE							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	15	0	
STRESS: INTERNAL WATER VAPOR							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	3	0	
STRESS: EXTERNAL VISUAL							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	15	0	
STRESS: DIE SHEAR							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	15	0	
STRESS: INTERNAL VISUAL							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	5	0	
STRESS: SOLERABILITY							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	3	0	
STRESS: MILITARY LIFE TEST GROUP C, 150C, 5.75V							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	184	49	0	
STRESS: X-RAY							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	COMP	15	0	

Reliability Test Data

QTP #: 97459

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: TC CONDITION C, 150C TO -65C, MSL1							
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	100	47	0	
CY7C9101-LMB (7C904Y)	2719477	349705366	PHIL-M	1000	47	0	