

Cypress Semiconductor Qualification Report

**QTP# 96302 VERSION 1.0
April, 1997**

14 Mil Wafer Thickness

(All package families except TSSOP and TSOP)

PLASTIC PACKAGE/ASSEMBLY DESCRIPTION			
Package Outline, Type, or Name:	52-pin PLCC (CY7C457) 84-pin PLCC (CY7384) 28-pin SOJ (CY7C199) 32-pin SOJ (CY7C109)		
Mold Compound Name/Manufacturer:	Sumitomo EME-9300 Nitto MP-8000		
Lead Frame material:	Copper		
Lead Finish, composition:	Solder Plated, 90%Sn, 10%Pb		
Die Attach Area Plating:	Silver Spot		
Die Attach Method:	Epoxy	Die Attach Material:	Ablestik 84-1MISR4
Wire Bond Method:	Thermosonic	Wire Material/Size:	Gold / 1.3 mil
JESD22-A112 Moisture Sensitivity Level	Level 1 & Level 3		
Assembly Line ID and Process ID:	CBI - Bangkok, Thailand (ALPHA-X) Anam, Korea (KOREA-L)		

HERMETIC PACKAGE/ASSEMBLY DESCRIPTION			
Package Outline, Type, or Name:	84-pin Cerquad (CY100E383)		
Lead Frame material:	Alloy 42		
Lead Finish, composition:	Solder Dipped, 63%Sn, 37%Pb		
Seal Material:	Glass		
Die Attach Method:	Paste	Die Attach Material:	Silver Glass
Wire Bond Method:	Ultrasonic	Wire Material/Size:	Aluminum / 1.25 mil
Assembly Line ID and Process ID:	Anam, Manilla (PHIL-M)		

Note: Please contact a Cypress Representative for other packages availability

RELIABILITY TESTS PERFORMED

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate	Dynamic Operating Condition, Vcc = 5.75V, 150°C	P
High Temperature Operating Life Latent Failure Rate	Dynamic Operating Condition, Vcc = 5.75V, 150°C	P
High Accelerated Saturation Test (HAST)	140°C, 5.5V Precondition: JESD22 Moisture Sensitivity Level 1 (168Hrs, 85C/85%RH)	P
High Accelerated Saturation Test (HAST)	140°C, 5.5V Precondition: JESD22 Moisture Sensitivity Level 3 (192Hrs, 30C/60%RH)	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level 1 (168Hrs, 85C/85%RH)	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level 3 (192Hrs, 30C/60%RH)	P
Moisture Resistance	MIL-STD-883C, Method 1004. Cypress Spec 25-00037	P

RELIABILITY TEST DATA

QTP#: 96302

DEVICE	ASSY-LOC	FABLOT#	ASSYLOT#	DURATION	S/S	REJ	FAIL MODE
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 5.75V)							
CY7C199-VC	ALPHA-X	4611121	219606653	48	513	0	
CY7C457-JC	KOREA-A	3613894	349605637	48	700	0	
CY7C457-JC	KOREA-A	3613894	349605637	48	800	0	
CY7C109-VC	SEOL-L	3621836	349608918	48	506	0	1 RETEST GOOD
STRESS: HI-ACCEL SATURATION TEST (140C, 5.5V), PRECOND. 168 HRS 85C/85%RH							
CY7C199-VC	ALPHA-X	4611121	219606653	128	46	0	
CY7C109-VC	SEOL-L	3621836	349608918	128	48	0	
STRESS: HI-ACCEL SATURATION TEST (140C, 5.5V), PRECOND. 192 HRS 30C/60%RH							
7C384BT-XJC	ALPHA-X	2616905	219610501	128	48	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 5.75V)							
CY7C199-VC	ALPHA-X	4611121	219606653	80	116	0	
CY7C199-VC	ALPHA-X	4611121	219606653	500	116	0	
CY7C457-JC	KOREA-A	3613894	349605637	80	205	0	
CY7C457-JC	KOREA-A	3613894	349605637	500	205	0	
CY7C109-VC	SEOL-L	3621836	349608918	80	120	0	
CY7C109-VC	SEOL-L	3621836	349608918	500	120	0	
STRESS: TC COND. C, -65 TO 150C, PRECOND. 168 HRS 85C/85%RH							
CY7C199-VC	ALPHA-X	4611121	219606653	300	48	0	
CY7C199-VC	ALPHA-X	4611121	219606653	1000	48	0	
CY7C109-VC	SEOL-L	3621836	349608918	300	48	0	
STRESS: TC COND. C, -65 TO 150C, PRECOND. 192 HRS 30C/60%RH							
7C384BT-XJC	ALPHA-X	2616905	219610501	300	48	0	