

Cypress Semiconductor Package Qualification Report

**QTP# 98369 VERSION 1.1
October, 2000**

**Ceramic Window Lid
(68-lead, 84-lead and 100-lead Pin Grid Arrays)
Alphatec, Thailand Assembly**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

Qual Report Version	Description of Qualification Purpose	Date
98369, V 1.0	Package Qualification	Feb 19
98369, V 1.1	Add 68-lead to QTP cover page	Oct 00

HERMETIC PACKAGE/ASSEMBLY DESCRIPTION	
Package Designation:	R100B
Package Outline, Type, or Name:	68-lead, 84-lead and 100-lead Windowed Pin Grid Arrays
Mold Compound Flammability Rating:	V-O per UL 94
Oxygen Rating Index:	> 28%
Lead Frame Designation:	R
Lead Seal Method / Material	Ceramic Lid, Glass (KC700 Seal)
Lead Frame Material:	Kovar
Lead Finish, Composition / Thickness:	Nickle/Gold Plate
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Supplier:	QMI
Die Attach Material:	QMI12419
Bond Diagram Designation	10-02011
Wire Bond Method:	Wedge/Ultrasonic
Wire Material/Size:	Al / 1.25mil
Thermal Resistance Theta JA °C/W:	N/A
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-15020
Name/Location of Assembly (prime) facility:	Alphatec, Thailand (ALPHA-X)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Alphatec, Thailand (ALPHA-X)
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
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level 1 168 Hrs., 80°C/85%RH+ 3IR-Reflow, 220°C+ 5, -0°C	P
Military Test Group C	MIL-STD-883, Method 1005.4, 150°C, Vcc = 5.75V	P
Internal Visual	Cypress Spec 25-00017 (5/0)	P
External Visual	Cypress Spec 12-00103 (15/0)	P
Physical Dimension	Cypress Spec. 25-00031 (15/0)	P
Solderability, Steam Aged	Cypress Spec. 25-00018 (12/0)	P
Bond Pull	Cypress Spec 24-00002 (15/0)	P
Mechanical Series	MIL-STD-883-5005 (17/0)	P
Salt Atmosphere	Cypress Spec 25-00013 (15/0)	P
Internal Water Vapor	MIL-STD-883 - 1018 (3/0)	P
Thermal Series	MIL-STD-883-5005 (17/0)	P
Lead Integrity	Cypress Spec 25-00004 (3/0)	P

RELIABILITY TEST DATA

QTP#: 98369

DEVICE	ASSY-LOC	FABLOT#	ASSYLOT#	DURATION	S/S	REJ	FAIL MODE
STRESS: GROUP C, SUBGROUP 1, LIFE TEST (150C, 5.75V)							
CY7C346-RMB	ALPHA-X	2833872	219807311	184	48	0	
STRESS: TC COND. C, -65 TO 150C, HERMETIC DEVICES							
CY7C346-RMB	ALPHA-X	2833872	219807311	100	47	0	
CY7C346-RMB	ALPHA-X	2833872	219807311	1000	47	0	