

Cypress Semiconductor Package Qualification Report

**QTP# 000805 VERSION 1.0
October 2000**

**32 Lead 400 mil TSOP type II package and Moisture Level 3
Chip Pac (Hyundai) Korea**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PRODUCT QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date
99233	Package Qualification MSL3 on CY62148 (R42)	Dec 99
000805	Different die Size and Bond Pad opening on CY62148V (R52LD-3)	May 00

Major Package Information Used in this Qualification	
Package Designation:	S324C
Package Outline, Type, or Name:	32-lead Thin Small Outline Package (TSOP II)
Mold Compound Name/Manufacturer:	Sumitomo 7351LS
Mold Compound Flammability Rating:	V-O per UL 94
Oxygen Rating Index:	> 28%
Lead Frame Designation:	ZS
Lead Frame Material:	Copper Alloy
Lead Finish, Composition / Thickness:	Tin Lead (63137)
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	8361H
Bond Diagram Designation	10-03536
Wire Bond Method:	Thermosonic
Wire Material/Size:	Gold, 1.0mil
Thermal Resistance Theta JA °C/W:	56
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-20023m
Name/Location of Assembly (prime) facility:	Chip Pac, Korea (KOREA-H)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Chip Pac, Korea (KOREA-H)
Fault Coverage:	100%

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Accelerated Saturation Test (HAST)	140°C, 85%RH, 5.5V (99233) 130C, 85%RH, 3.63V (000805) Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60% RH+ 3IR-Reflow, 220°C+ 5, -0°C	P
Pressure Cooker	121C, 100%RH (000805) Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60% RH+ 3IR-Reflow, 220°C+ 5, -0°C	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level 3 (99233/000805) 192 Hrs., 30°C/60% RH+ 3IR-Reflow, 220°C+ 5, -0°C	P

Reliability Test Data

QTP #: 000805

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp Rej</i>	<i>Failure Mechanism</i>
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STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 3.63V)PRE COND 192 HR 30C/60%RH

CY62148V-ZSCB	4932144	619935711	KOREA-H	128	48	0
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STRESS: PRESSURE COOKER TEST (121C, 100%RH), PRE COND 192HRS 30C/60%RH

CY62148V-ZSCB	4932144	619935711	KOREA-H	168	50	0
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STRESS: TC CONDITION C, -65C TO 150C, PRE COND. 192 HRS 30C/60% RH (MSL3)

CY62148V-ZSCB	4932144	619935711	KOREA-H	300	49	0
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CY62148V-ZSCB	4932144	619935711	KOREA-H	500	49	0
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CY62148V-ZSCB	4932144	619935711	KOREA-H	1000	49	0
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RELIABILITY TEST DATA

QTP#: 99233

DEVICE	ASSY-LOC	FABLOT#	ASSYLOT#	DURATION	S/S	REJ	FAIL MODE
STRESS: HI-ACCEL SATURATION TEST (140C/85%RH/5.5V), PRECOND. 192 HRS 30C/60%RH							
CY62148-ZSC	KOREA-H	4906986	619908966	128	48	0	
STRESS: TC COND. C, -65 TO 150C, PRECOND. 192 HRS 30C/60%RH (MSL 3)							
CY62148-ZSC	KOREA-H	4906986	619908966	300	48	0	
CY62148-ZSC	KOREA-H	4906986	619908966	300	90	0	
CY62148-ZSC	KOREA-H	4906986	619908966	500	48	0	
CY62148-ZSC	KOREA-H	4906986	619908966	500	89	0	
CY62148-ZSC	KOREA-H	4906986	619908966	1000	47	0	
CY62148-ZSC	KOREA-H	4906986	619908966	1000	89	0	
CY62148-ZSC	KOREA-H	4925273	619923897	300	47	0	
CY62148-ZSC	KOREA-H	4925273	619923897	500	47	0	
CY62148-ZSC	KOREA-H	4927535	619923900	300	48	0	
CY62148-ZSC	KOREA-H	4927535	619923900	500	48	0	