

# **Cypress Semiconductor Qualification Report**

**QTP# 99412 VERSION 1.0  
October, 1999**

**32 Ld, 450 mil SOIC Package  
Cypress Philippines Assembly**

**CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:**

Ed Russell  
Reliability Director  
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<b>PLASTIC PACKAGE/ASSEMBLY DESCRIPTION</b>			
Package Outline, Type, or Name:	32Ld, 450-mil SOIC		
Mold Compound Name/Manufacturer:	Nitto MP8000CH4-A2		
Lead Frame material:	Copper		
Lead Finish, composition:	Solder Plated, 85%Sn, 15%Pb		
Die Attach Area Plating:	Silver		
Die Attach Method:	Silver Epoxy	Die Attach Material:	Ablestick 8361H
Wire Bond Method:	Thermosonic	Wire Material/Size:	Gold / 1.0 mil
JESD22-A112 Moisture Sensitivity Level	Level 3		
Assembly Line ID and Process ID:	Cypress Philippines (CSPI-R)		

**Note:** Please contact a Cypress Representative for other packages availability.

**RELIABILITY TESTS PERFORMED**

<b>Stress/Test</b>	<b>Test Condition (Temp/Bias)</b>	<b>Result P/F</b>
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs., 30°C/60%RH	P
High Accelerated Saturation Test	140°C/85%RH/5.5V Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs., 30°C/60%RH	P
Internal Visual	Cypress Specification 25-00017	P
External Visual	Cypress Specification 12-00292/12-00103	P
Solderability	Cypress Specification 25-00018	P
High Temp Storage	150°C, no bias	P
Pressure Cooker Test	No bias, 121°C, 100%, 30 PSIA Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs., 30°C/60%RH	p
Ball Shear	Cypress Spec 24-00018	P
Bond Pull	Cypress Spec 24-00002	P
Thermal Shock	Cypress Spec 25-00014	P
X-Ray	MIL-STD-883-2012	P
Acoustic Microscopy Test (C-SAM)	Cypress Spec 25-00104	P

**RELIABILITY TEST DATA**

**QTP#: 99412**

DEVICE	ASSY-LOC	FABLOT#	ASSYLOT#	DURATION	S/S	REJ	FAIL MODE
<b>STRESS: ACOUSTIC LEVEL 3, PRECOND. 192 HRS 30C/60%RH</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	15	0	
CY62128-SC	CSPI-R	4920722	619922743M	COMP	15	0	
CY62128-SC	CSPI-R	4920722	619922743M2	COMP	15	0	
<b>STRESS: AGE BALL SHEAR</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	10	0	
<b>STRESS: BOND PULL</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	10	0	
<b>STRESS: PHYSICAL DIMENSIONS</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	5	0	
<b>STRESS: EXTERNAL VISUAL</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	15	0	
<b>STRESS: HI-ACCEL SATURATION TEST (140C/85%RH/5.5V), PRECOND. 192 HRS 30C/60%RH</b> ACTUAL CONDITION 140C /							
CY62128-SC	CSPI-R	4920722	619922743	128	50	0	
<b>STRESS: HIGH TEMP STORAGE (150C, NO BIAS)</b>							
CY62128-SC	CSPI-R	4920722	619922743	500	50	0	
CY62128-SC	CSPI-R	4920722	619922743	1000	50	0	
<b>STRESS: INTERNAL VISUAL</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	5	0	
<b>STRESS: PRESSURE COOKER TEST (121C, 100%RH, 30PSIA), PRECOND. 192 HRS 30C/60%RH</b>							
CY62128-SC	CSPI-R	4920722	619922743	PCT	49	0	
<b>STRESS: SOLDERABILITY</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	3	0	
<b>STRESS: TC COND. C, -65 TO 150C, PRECOND. 192 HRS 30C/60%RH (MSL 3)</b>							
CY62128-SC	CSPI-R	4920722	619922743	300	50	0	
CY62128-SC	CSPI-R	4920722	619922743	500	50	0	
CY62128-SC	CSPI-R	4920722	619922743M	300	50	0	
CY62128-SC	CSPI-R	4920722	619922743M	500	50	0	
CY62128-SC	CSPI-R	4920722	619922743M2	300	50	0	
<b>STRESS: THERMAL SHOCK, CONDITION B (150C /-55C)</b>							
CY62128-SC	CSPI-R	4920722	619922743	100	50	0	
CY62128-SC	CSPI-R	4920722	619922743	200	50	0	
<b>STRESS: X-RAY INSPECTION</b>							
CY62128-SC	CSPI-R	4920722	619922743	COMP	15	0	