

# **Cypress Semiconductor Qualification Report**

**QTP# 97514 VERSION 1.0  
July, 1998**

**28 Ld TSOP Package**

**(Sumitomo EME-7351 Molding Compound)**

**Cypress Philippines Assembly**

PLASTIC PACKAGE/ASSEMBLY DESCRIPTION			
Package Outline, Type, or Name:	28 Ld TSOP		
Mold Compound Name/Manufacturer:	Sumitomo EME-7351		
Lead Frame material:	Copper		
Lead Finish, composition:	Solder Plated, 85%Sn, 15%Pb		
Die Attach Area Plating:	Silver		
Die Attach Method:	Epoxy	Die Attach Material:	Ablestik 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 3 168 Hrs., 30°C/60%RH	P
High Accelerated Saturation Test	140°C/5.5V Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs., 30°C/60%RH	P
Internal Visual	Cypress Spec 25-00017	P
External Visual	Cypress Spec 12-00102/12-00103	P
Physical Dimension	Cypress Spec. 25-00031	P
Solderability, Steam Aged	Cypress Spec. 25-00018	P
Die Shear	Cypress Spec 24-00004	P
Ball Shear	Cypress Spec 24-00018	P
Bond Pull	Cypress Spec 24-00002	P
Thermal Shock	Cypress Spec 25-00014	P
X-Ray	Cypress Spec 12-000149	P
Acoustic Microscopy Test (C-SAM)	Cypress Spec 25-000104	P

**RELIABILITY TEST DATA**

**QTP#: 97514**

DEVICE	ASSY-LOC	FABLOT#	ASSYLOT#	DURATION	S/S	REJ	FAIL MODE
<b>STRESS: AGE BALL SHEAR</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	DATA	10	0	
<b>STRESS: BOND PULL</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	DATA	10	0	
<b>STRESS: C-SAM</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	192	15	0	
CY7C199-ZC	CSPI-R	3742054	619710271	DATA	15	0	
CY7C199-ZC	CSPI-R	3742054	619710272	192	15	0	
CY7C199-ZC	CSPI-R	3742054	619710272	DATA	15	0	
CY7C199-ZC	CSPI-R	3742054	619710273	DATA	15	0	
CY7C199-ZC	CSPI-R	3742054	619710273	192	15	0	
<b>STRESS: PHYSICAL DIMENSIONS</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	COMP	5	0	
<b>STRESS: DIE SHEAR</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	DATA	15	0	
<b>STRESS: EXTERNAL VISUAL</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	COMP	15	0	
<b>STRESS: HI-ACCEL SATURATION TEST (140C, 5.5V), PRECOND. 192 HRS 30C/60%RH</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	128	45	0	
<b>STRESS: HIGH TEMPERATURE STORAGE (165C, NO BIAS)</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	336	45	0	
<b>STRESS: INTERNAL VISUAL</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	COMP	5	0	
<b>STRESS: SOLDERABILITY</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	COMP	5	0	
<b>STRESS: TC COND. C, -65 TO 150C, PRECOND. 192 HRS 30C/60%RH (MSL 3)</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	300	45	0	
CY7C199-ZC	CSPI-R	3742054	619710272	300	45	0	
CY7C199-ZC	CSPI-R	3742054	619710273	300	45	0	
<b>STRESS: THERMAL SHOCK, CONDITION B</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	100	45	0	
CY7C199-ZC	CSPI-R	3742054	619710271	200	45	0	
<b>STRESS: X-RAY</b>							
CY7C199-ZC	CSPI-R	3742054	619710271	DATA	15	0	
CY7C199-ZC	CSPI-R	3742054	619710272	DATA	15	0	