Cypress Semiconductor
Package Qualification Report

QTP# 96275 VERSION 2.1
August 2008

28-Lead Plastic Outline J-Bend (SOJ)

28-Lead Narrow SOIC (SNC)

SnPb, MSL1, 220C Reflow

Omedata-Indonesia (INDNS-O)

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

QUAL REPORT		DESCRIPTION OF QUALIFICATION PURPOSE		DATE COMP.
030802		Qualify Omedata for the assembly of 28.3 SOJ & SNC using New Die Attach Adhesive, Ablestik 8361J, Low Alpha MP8000CHV Molding Compound @220°C Reflow, MSL1		Aug 96

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	V28
Package Outline, Type, or Name:	28-Lead Plastic Small Outline J-Bend (SOJ)
Mold Compound Name/Manufacturer:	NITTO MP-8000CHV
Mold Compound Flammability Rating:	V-O per UL94
Mold Compound Alpha Emission Rate:	N/A
Oxygen Rating Index:	>28%
Lead Frame/Substrate Material:	Copper base
Lead Finish, Composition / Thickness:	SnPb
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	8361J
Die Attach Method:	Epoxy
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1.0 mil
Assembly Process Flow:	49-70999
Name/Location of Assembly (prime) facility:	INDNS-O (Omedata)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R, INDNS-O

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

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENT

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Acoustic Microscopy Test (CSAM)	Cypress Spec 25-00104	P
High Temperature Operating Life Latent Failure Rate	Dynamic Operating Condition, Vcc =5.75V, 150°C	P
High Accelerated Saturation Test	140°C, 5.5V Precondition: JESD22 Moisture Sensitivity MSL1 168 Hrs., 85°C/85%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 MSL 1 168 Hrs., 85°C/85%RH+3IR-Reflow, 220°C+5, -0°C	P
Thermal Shock	Cypress Spec. 25-00014	P
External Visual	Cypress Spec 25-00038	P
Internal Visual	Cypress Spec 25-00017	P
X-Ray	Cypress Spec 12-000292	P

Reliability Test Data

QTP #: 96275

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL1							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	COMP	15	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 150C, 5.75V, Vcc Max							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	80	115	0	
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	500	115	0	
STRESS: HI-ACCEL SATURATION TEST, 140C, 85%RH, 5.5V, PRE COND 168 HR 85C/85%RH, MSL1							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	128	45	0	
CY7C1006D (7C1006D)	3608150	*519608354*	INDNS-O	128	45	0	
STRESS: EXTERNAL VISUAL							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	COMP	15	0	
STRESS: INTERNAL VISUAL							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	COMP	5	0	
CY7C1006D (7C1006D)	3608150	*519608354*	INDNS-O	COMP	5	0	
STRESS: TC CONDITION C, 150C TO -65C, PRE COND 168 HR 85C/85%RH, MSL1							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	300	45	0	
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	1000	45	0	
CY7C1006D (7C1006D)	3608150	*519608354*	INDNS-O	300	45	0	
CY7C1006D (7C1006D)	3608150	*519608354*	INDNS-O	1000	45	0	
STRESS: THERMAL SHOCK							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	100	48	0	
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	200	48	0	
STRESS: X-RAY							
CY7C1006D (7C1006D)	3616210	*519608261*	INDNS-O	COMP	15	0	
CY7C1006D (7C1006D)	3608150	*519608354*	INDNS-O	COMP	15	0	