

Cypress Semiconductor Package Qualification Report

**QTP# 022303 VERSION 1.0
November, 2002**

**24-lead (300mils) PDIP package using
NITTO MP8000CH Mold Compound, MSL1
OMEDATA Indonesia (INDNS-O)**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PRODUCT QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date Comp.
022303	24-lead (300mils) PDIP package with die size $\leq 143.0 \times 120.0$ mils, MSL1, OMEDATA Indonesia	Sep 02

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	P243
Package Outline, Type, or Name:	24-lead Plastic Dual-In-Line package (SOIC)
Mold Compound Name/Manufacturer:	NITTO MP-8000CH
Mold Compound Flammability Rating:	V-O per UL 94
Oxygen Rating Index:	> 28 %
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Solder Plated, 85%Sn, 15%Pb
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	8361H
Die Attach Method:	Epoxy
Bond Diagram Designation	10-01383
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1.0 Mil
Thermal Resistance Theta JA °C/W:	82.83°C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-70084
Name/Location of Assembly (prime) facility:	OMEDATA Indonesia (INDNS-O)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	OMEDATA Indonesia (INDNS-O)
Fault Coverage:	100%

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
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C	P
Pressure Cooker	121°C, 100%RH	P
High Temperature Storage	150°C, no bias	P
Resistance to Solvents	Cypress Spec. 25-00016	P
Solderability	Cypress Spec. 25-00018	P
Acoustic Microscopy	Cypress Spec. 25-00104	P
Physical Dimensions	Cypress Spec 25-00016	P

Reliability Test Data

QTP #: 022303

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: ACOUSTIC, MSL1							
CY7C128A-PC (7C128F)	2113880	510204453C1-EO	INDNS-O	COMP	15	0	
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	COMP	15	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	COMP	15	0	
STRESS: HIGH TEMPERATURE STORAGE, 150C							
CY7C128A-PC (7C128F)	2113880	510204453C1-EO	INDNS-O	500	45	0	
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	500	45	0	
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	1000	45	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	500	45	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	1000	45	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 168 Hrs							
CY7C128A-PC (7C128F)	2113880	510204453C1-EO	INDNS-O	168	45	0	
STRESS: RESISTANCE TO SOLVENTS							
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	COMP	15	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	COMP	15	0	
STRESS: SOLDERABILITY							
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	COMP	3	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	COMP	3	0	
STRESS: PHYSICAL DIMENSIONS							
CY7C128A-PC (7C128F)	2113880	510204453C1-EO	INDNS-O	COMP	30	0	

Reliability Test Data

QTP #: 022303

Device Fab Lot # Assy Lot # Assy Loc Duration Samp Rej Failure Mechanism

STRESS: TC CONDITION C, -65C TO 150C

CY7C128A-PC (7C128F)	2113880	510204453C1-EO	INDNS-O	300	45	0	
CY7C128A-PC (7C128F)	2113880	510204453C1-EO	INDNS-O	500	45	0	
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	300	45	0	
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	500	45	0	
CY7C128A-PC (7C128F)	2113880	510204453C1	INDNS-O	1000	45	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	300	45	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	500	45	0	
CY7C128A-PC (7C128F)	2113880	510204453	INDNS-O	1000	45	0	