Cypress Semiconductor
Package Qualification Report

QTP# 052803 VERSION 1.0
August 2005

32-Lead SOJ Package (400mils)
NiPdAu, MSL3, 220C Solder Reflow Peak
Cypress Philippines (CML-R)

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
052803	32-Lead (400mil) SOJ package using NITTO MP8500 Mold Compound, Ni/Pd /Au Lead frame, @ 220C Solder Reflow Peak, MSL3, CML-R	Aug 05

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	V32
Package Outline, Type, or Name:	32-Lead Plastic Small Outline J-Bend Package (SOJ)
Mold Compound Name/Manufacturer:	NITTO MP-8500
Mold Compound Flammability Rating:	UL-94V(0)
Oxygen Rating Index:	N/A
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	NiPdAu
Die Backside Preparation Method/Metallization:	Backgrinding
Die Separation Method:	100% Sawing
Die Attach Supplier:	Dexter
Die Attach Material:	QMI 509
Die Attach Method:	Epoxy
Bond Diagram Designation	10-04340
Wire Bond Method:	Thermosonic
Wire Material/Size:	0.8 mil
Thermal Resistance Theta JA °C/W:	57.21 °C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	11-20050
Name/Location of Assembly (prime) facility:	Cypress Philippines (CML-R)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Cypress Philippines (CML-R)
Fault Coverage:	100%

Note: Please contact a Cypress Representative for other packages availability

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+3IR-Reflow, 220°C+0, -5°C	P
Pressure Cooker	121°C, 100%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+3IR-Reflow, 220°C+0, -5°C	P
High Accelerated Saturation Test (HAST)	130°C, 3.63V, 85%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+3IR-Reflow, 220°C+0, -5°C	P
Solderability	Cypress Spec. 25-00018	P
Acoustic Microscopy	Cypress Spec. 25-00104	P

Reliability Test Data

QTP #: 052803

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC - MICROSCOPE, MSL3							
CY7C1019CV33 (7C1319G)	4407626	*610426865*	CML-R	COMP	15	0	
CY7C1019CV33 (7C1319G)	4407399	*610427094*	CML-R	COMP	15	0	
CY7C1019CV33 (7C1319G)	4410324	*610427097*	CML-R	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST. 130C, 3.63V, 85%RH, , PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1019CV33 (7C1319G)	4407626	*610426865*	CML-R	128	45	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1019CV33 (7C1319G)	4407626	*610426865*	CML-R	168	45	0	
STRESS: TC COND. C -65C TO 150C, , PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1019CV33 (7C1319G)	4407626	*610426865*	CML-R	300	45	0	
CY7C1019CV33 (7C1319G)	4407626	*610426865*	CML-R	500	45	0	
CY7C1019CV33 (7C1319G)	4407626	*610426865*	CML-R	1000	45	0	
CY7C1019CV33 (7C1319G)	4410324	*610427097*	CML-R	300	45	0	
CY7C1019CV33 (7C1319G)	4410324	*610427097*	CML-R	500	45	0	
CY7C1019CV33 (7C1319G)	4410324	*610427097*	CML-R	1000	45	0	
CY7C1019CV33 (7C1319G)	4407399	*610427094*	CML-R	300	45	0	
CY7C1019CV33 (7C1319G)	4407399	*610427094*	CML-R	500	45	0	
CY7C1019CV33 (7C1319G)	4407399	*610427094*	CML-R	1000	45	0	
STRESS: SOLDERABILITY							
CY7C1341 (7C1341C)	4329874	*610342922*	CML-R	COMP	3	0	
CY7C1341 (7C1341C)	4329874	*610342922M*	CML-R	COMP	3	0	