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The document following this cover page is marked as “Cypress” document as this is the company that originally developed the product. Please note that Infineon will continue to offer the product to new and existing customers as part of the Infineon product portfolio.

Continuity of document content
The fact that Infineon offers the following product as part of the Infineon product portfolio does not lead to any changes to this document. Future revisions will occur when appropriate, and any changes will be set out on the document history page.

Continuity of ordering part numbers
Infineon continues to support existing part numbers. Please continue to use the ordering part numbers listed in the datasheet for ordering.

Cypress Semiconductor Automotive Package Qualification Report

QTP# 042402 VERSION*C
August, 2014

Automotive 32L SOIC, Pb-Free
NiPdAu, MSL3, 260C Reflow
CML-R

FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PRODUCT QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
042402	32L (400mil) SOIC package Pb-Free with NiPd/Au plating, 260C Solder Reflow Peak, MSL3 for Automotive Application assembled at CML-R	Nov 2004

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	S32
Package Outline, Type, or Name:	32- Lead Plastic Small Outline IC Package (SOIC)
Mold Compound Name/Manufacturer:	NITTO MP-8500C
Mold Compound Flammability Rating:	V-0 per UL94
Oxygen Rating Index:	>28%
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Ni/Pd/Au
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Wafer Sawing
Die Attach Supplier:	Dexter
Die Attach Material:	QMI 509
Die Attach Method:	Silver Epoxy
Bond Diagram Designation	001-13601
Wire Bond Method:	Thermosonic
Wire Material/Size:	Gold, 1.0mil
Thermal Resistance Theta JA °C/W:	66.2 °C/W
Package Cross Section Yes/No:	No
Assembly Process Flow:	N/A (Obsoleted)
Name/Location of Assembly (prime) facility:	Cypress Philippines (CML-R)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R

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

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Bond Pull	Mil-Std 883, Method 2011	P
External Visual	MIL-PRF-38535, MILSTD-883, METHOD 2009	P
High Temp Storage	JESD22-A103: 150 C, no bias	P
Physical Dimensions	MIL-STD-1835, JESD22-B100	P
High Accelerated Saturation Test	JEDEC STD 22-A110: 130°C, 5.5V, 85%RH Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
Pressure Cooker	JESD22-A102, 121°C, 100%RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P
Solderability	J-STD-002, JESD22-B102 95% solder coverage minimum	P
Temperature Cycle	MIL-STD-883, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30°C, 60% RH, 260°C Reflow)	P

Reliability Test Data

QTP #: 042402

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: BOND PULL							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	COMP	30	0	
STRESS: EXTERNAL VISUAL							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	COMP	314	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH, MSL3							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	96	79	0	
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	128	79	0	
STRESS: HIGH TEMPERATURE STORAGE, 150C, NO BIAS							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	1000	50	0	
STRESS: PHYSICAL DIMENSIONS							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	COMP	10	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 192 HR 30C/60%RH, MSL3							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	96	80	0	
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	168	80	0	
STRESS: SOLDERABILITY							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	COMP	15	0	
STRESS: TC CONDITION C, 150C TO -65C, PRE COND 192 HR 30C/60%RH, MSL3							
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	500	50	0	
CY62128BLL (7C62128H)	4422472	*610442495*	CML-R	1000	45	0	

Document History Page

Document Title: 042402: AUTOMOTIVE 32L SOIC, PB-FREE NIPDAU, MSL3, 260C REFLOW, CML-R
Document Number: 001-71389

Rev.	ECN No.	Orig. of Change	Description of Change
**	3312903	HGA	Initial Spec Release - corrected wire size from 0.8mil to 1.0mil and bond diagram designation to 001-13601
*A	3694895	NSR	Removed Version 1.1 in the title page. Removed obsolete specs 11-21018 and 24-00002. Removed the reference Cypress specs in the reliability tests performed table and replaced with industry standards.
*B	4087924	JYF	Sunset Review: Updated Reliability Tests Performed table: -Deleted “3IR” in reflow steps of PCT, HAST and TCT. -Added referenced industry standard of HTS.
*C	4470790	JYF	Sunset Review: Updated QTP title page and Reliability Tests Performed table (HAST, PCT, TCT, Solderability Test, Physical Dimensions) for template alignment.

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