

## Please note that Cypress is an Infineon Technologies Company.

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 Package Qualification Report

QTP# 042902 VERSION\*A September 2014

## 48-Lead TSOP I & 54-Lead TSOP II MSL3, Pb-Free, 260C Reflow ASEK-Taiwan (G)

#### FOR ANY QUESTIONS ON THIS REPORT, PLEAE CONTACT reliability@cypress.com or via a CYLINK CRM CASE

Prepared By: Honesto Sintos Reliability Engineer Reviewed By: Rene Rodgers Reliability Manager

Approved By: Richard Oshiro Reliability Director

Company Confidential A printed copy of this document is considered uncontrolled. Refer to online copy for latest revision. Page 1 of 6



#### PRODUCT QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date
042902	48-Lead TSOP I & 54-Lead TSOP II, Pb-Free, MSL3, 260C Reflow using Cel 9200HF, 8340 Epoxy and 100% Tin (Sn) with Annealing Process (150C, 1 hour) assembled in ASEK- Taiwan	Jan 05



Major Package Information Used in this Qualification					
Package Designation:	ZW54				
Package Outline, Type, or Name:	54-Lead Thin Small Outline Package (TSOP II)				
Mold Compound Name/Manufacturer:	CEL9200HF				
Mold Compound Flammability Rating:	V-O per UL 94				
Oxygen Rating Index:	N/A				
Lead Frame Material:	Copper				
Lead Finish, Composition / Thickness:	100% Sn				
Die Backside Preparation Method/Metallization:	Grinding				
Die Separation Method:	Sawing				
Die Attach Supplier:	Ablestik				
Die Attach Material:	8340A				
Bond Diagram Designation	10-06018				
Wire Bond Method:	Thermosonic				
Wire Material/Size:	1.0mil				
Thermal Resistance Theta JA °C/W:	57.12° C/W				
Package Cross Section Yes/No:	Yes				
Assembly Process Flow:	49-41999M				
Name/Location of Assembly (prime) facility:	ASEK-Taiwan (G)				

# ELECTRICAL TEST / FINISH DESCRIPTION Test Location: 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)		
Acoustic Microscopy Test	J-STD-020	Р	
(C-SAM)			
Adhesion of Lead Finish	MIL-STD-883, Method 2025	Р	
External Visual	MIL-PRF-38535, MILSTD-883, METHOD 2009,	Р	
High Accelerated Saturation Test (HAST)	130C, 85%RH, 3.63V Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60% RH+3IR-Reflow, 260°C+0, -5°C	Р	
Pressure Cooker Test	No bias, 121°C, 100% RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	Ρ	
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65°C to 150°C	Р	
	Precondition: JESD22 Moisture Sensitivity Level 3		
	192 Hrs, 30°C/60% RH+3IR-Reflow, 260°C+0, -5°C		



## **Reliability Test Data**

#### QTP #:042902

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY7C1069AV33 (7C1069A)	4414223	610432942	TAIWAN-G	COMP	15	0	
CY7C1069AV33 (7C1069A)	4414223	610432943	TAIWAN-G	COMP	15	0	
STRESS: ADHESION OF LEAD	FINISH						
CY7C1069AV33 (7C1069A)	4414223	610432942	TAIWAN-G	COMP	3	0	
CY7C1069AV33 (7C1069A)	4414223	610432943	TAIWAN-G	COMP	3	0	
STRESS: EXTERNAL VISUAL							
CY7C1069AV33 (7C1069A)	4414223	610432943	TAIWAN-G	COMP	15	0	
STRESS: HI-ACCEL SATURAT	ION TEST (130C	c, 85%RH, 3.63V)F	PRE COND 192 H	IR 30C/60%RH	, MSL3		
CY7C1069AV33 (7C1069A)	4414223	610432943	TAIWAN-G	128	50	0	
STRESS: PRESSURE COOKE	R TEST, 121C, 1	100%RH,, PRE CC	OND 192 HR 30C	/60%RH, MSL3			
CY7C1069AV33 (7C1069A)	4414223	610432942	TAIWAN-G	168	50	0	
STRESS: TC CONDITION C, -6	5C TO 150C, PI	RE COND. 192 HR	RS 30C/60% RH,	MSL3			
CY7C1069AV33 (7C1069A)	4414223	610432942	TAIWAN-G	300	48	0	
CY7C1069AV33 (7C1069A)	4414223	610432943	TAIWAN-G	300	49	0	
CY7C1069AV33 (7C1069A)	4414223	610432943	TAIWAN-G	500	48	0	



## **Document History Page**

Document Title: QTP#042902: 48-Lead TSOP I & 54-Lead TSOP II MSL3, Pb-Free, 260C Reflow ASEK-Taiwan (G) Document Number: 001-89451

Rev.	ECN No.	Orig. of Change	Description of Change
**	4141014	HSTO	Initial Spec Release
			Initiate report as per memo LGQ-487.
*A	4517626	HSTO	Align qualification report based on the new template in the front page

Distribution: WEB

Posting: None