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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.

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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#042801 VERSION*A
September 2014**

**48/56/100-Ball VFBGA
(6 x 8 x 1.0mm), (5 x 5 x 1.0mm), (6 x 6 x 1.0mm)
MSL3, 260C Solder Reflow
Cypress Philippines (CML-RA)**

**FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PACKAGE QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date Comp
042801	Qualify all VFBGA (7mils Wafer Thickness) Packages at MSL3, 260C Reflow assembled in CML-RA	Dec 04
064702	Qualify 56/100-Ball VFBGA packages using KE-G2270M Mold Compound, QMI 506 Epoxy, BT-Kinsus Substrate assembled at CML-RA	Dec 06

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	BZ48
Package Outline, Type, or Name:	48-Ball VFBGA (6 x 8 x 1.0mm) Very thin and Fine Pitch Ball Grid
Mold Compound Name/Manufacturer:	KE-G2270M
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	>28%
Substrate Material:	BT Resin
Lead Finish, Composition / Thickness:	Sn/Ag/Cu
Die Backside Preparation Method/Metallization:	Backgrinding
Die Separation Method:	100%
Die Attach Supplier:	Dexter
Die Attach Material:	QMI506
Die Attach Method:	Silver Epoxy
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au. 0.8 mil
Thermal Resistance Theta JA °C/W:	74.8 °C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	11-21101
Name/Location of Assembly (prime) facility:	CML-RA
MSL Level	3
Reflow Profile	260C

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R, CML-RA, Chipmos-GO

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
Acoustic Microscopy Test	J-STD-020	P
Ball Shear	JESD22-B116A	P
Constructional Analysis	Meet external and internal characteristics of Cypress package	P
Dye Penetration	Test to determine the existence and extent of cracks	P
External Visual	MIL-PRF-38535, MILSTD-883, METHOD 2009	P
High Accelerated Saturation	130°C, 3.6V, 85%RH Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs., 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Pressure Cooker	121C, 100%RH, 15 Psig Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs., 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Temperature Cycle	JEDEC22, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs., 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Solderability	J-STD-002, JESD22-B102	P

Reliability Test Data

QTP #:042801

<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, MSL3							
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	COMP	15	0	
CY62157DV18LL (7R62357D)	4338727	610442000	CML-RA	COMP	15	0	
CY62157DV18LL (7R62357D)	4338727	610442001	CML-RA	COMP	15	0	
STRESS: BALL SHEAR							
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	COMP	10	0	
CY62157DV18LL (7R62357D)	4338727	610442000	CML-RA	COMP	10	0	
STRESS: EXTERNAL VISUAL							
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	COMP	15	0	
CY62157DV18LL (7R62357D)	4338727	610442000	CML-RA	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 3.6V), PRE COND 192 HR 30C/60%RH, MSL3							
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	128	45	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3							
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	168	45	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3							
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	300	45	0	
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	500	45	0	
CY62157DV18LL (7R62357D)	4338727	610441999	CML-RA	1000	44	0	
CY62157DV18LL (7R62357D)	4338727	610442000	CML-RA	300	48	0	
CY62157DV18LL (7R62357D)	4338727	610442000	CML-RA	500	48	0	
CY62157DV18LL (7R62357D)	4338727	610442000	CML-RA	300	47	0	
CY62157DV18LL (7R62357D)	4338727	610442001	CML-RA	300	50	0	
CY62157DV18LL (7R62357D)	4338727	610442001	CML-RA	500	50	0	
CY62157DV18LL (7R62357D)	4338727	610442001	CML-RA	1000	49	0	

Reliability Test Data

QTP #:064702

<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: CONSTRUCTIONAL ANALYSIS							
CYWB0124AB (7C07100A)	4636435	610664727M	CML-RA	COMP	5	0	
CYWB0124AB (7C07100A)	4636435	610664727M1	CML-RA	COMP	5	0	
CYWB0124AB (7C07100A)	4636435	610664727M2	CML-RA	COMP	5	0	
CY7C68053 (7C68053A)	4615637		CML-RA	COMP	5	0	
STRESS: DYE PENETRATION							
CYWB0124AB (7C07100A)	4636435	610664727M	CML-RA	COMP	1000	0	
CYWB0124AB (7C07100A)	4636435	610664727M1	CML-RA	COMP	1000	0	
CYWB0124AB (7C07100A)	4636435	610664727M2	CML-RA	COMP	1000	0	
CY7C68053 (7C68053A)	4615637		CML-RA	COMP	1000	0	
STRESS: SOLDERABILITY							
CYWB0124AB (7C07100A)	4636435	610664727M	CML-RA	COMP	5	0	
CYWB0124AB (7C07100A)	4636435	610664727M1	CML-RA	COMP	5	0	
CYWB0124AB (7C07100A)	4636435	610664727M2	CML-RA	COMP	5	0	
CY7C68053 (7C68053A)	4615637		CML-RA	COMP	5	0	

Document History Page

Document Title: QTP#042801: 48/56/100-Ball VFBGA (6 x 8 x 1.0mm), (5 x 5 x 1.0mm), (6 x 6 x 1.0mm) MSL3, 260C
Solder Reflow Cypress Philippines (CML-RA)
Document Number: 001-89450

Rev.	ECN No.	Orig. of Change	Description of Change
**	4141008	HSTO	Initial Spec Release Initiate report as per memo HGA-170.
*A	4516853	HSTO	Align qualification report based on the new template in the front page

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