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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# 005006 VERSION*A
November 2014

172-Thin Ball Grid Array (FBGA) 15mm x 15mm
MSL3
ASE- Taiwan (G)

FOR ANY QUESTIONS ON THIS REPORT, PLEAE CONTACT
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PACKAGE QUALIFICATION HISTORY

QUAL REPORT		DESCRIPTION OF QUALIFICATION PURPOSE		DATE COMP.
005006		172-ball PBGA (15mm x 15mm x 1.25mm), die size 271.2 x 415.5mls, ASE Taiwan Assembly, MSL3		Feb 02
021113		192-ball (15mm x 15mm x 1.5mm), Qualification by extension, smaller die size 318.0 x 258.3 mils.		Mar 02

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	BB172
Package Outline, Type, or Name:	172-ball, Thin Ball Grid Array (FBGA)
Mold Compound Name/Manufacturer:	PLASKON SMT-B-1
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	>28%
Substrate Material:	BT Resin
Lead Finish, Composition / Thickness:	Solder Ball, 63%Sn, 37%Pb
Die Backside Preparation Method/Metallization:	N/A
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	Ablestik 8355F
Die Attach Method:	Silver Epoxy
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1.0um
Thermal Resistance Theta JA °C/W:	40 C/W
Package Cross Section Yes/No:	N/A
Name/Location of Assembly (prime) facility:	ASE Taiwan

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	ASE Taiwan
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+5, -0 C	P
Pressure Cooker	121 C, 100%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30C/60%RH+3IR-Reflow, 220 C+5, 0 C	P
High Accelerated Saturation Test (HAST)	130 C, 3.63V, 85%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30C/60%RH+3IR-Reflow, 220 C+5, 0 C	P
High Temperature Storage	150ºC ± 5ºC	P
Ball Shear	JESD22-B116A	P
Bond Pull	MIL-STD-883 – Method 2011,	P
Die Shear	MIL-STD-883, Method 2019	P
Internal Visual	MIL-STD-883-2014	P
X-Ray	MIL-STD-883C, Method 2012	P
Thermal Shock	-55C to +125C MIL-STD-883C, Method 1011	P
Acoustic Microscopy, MSL 3	J-STD-020	P

Reliability Test Data

QTP #: 005006

Device	Fab Lot #	Assy Lot #	Ass Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY7C0852V-BBC (7C08523A)	4130707	*610133762*	TAIWN-G	COMP	15	0	
CY7C0852V-BBC (7C08523A)	4131840	*610135255*	TAIWN-G	COMP	15	0	
CY7C0852V-BBC (7C08523A)	4131840	*610135256L1*	TAIWN-G	COMP	15	0	
STRESS: THERMAL SHOCK, +125C/-55C							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	100	48	0	
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	200	48	0	
STRESS: HIGH TEMPERATURE STORAGE, +150C							
CY7C0852V-BBC (7C08523A)	4128335	*610130788*	TAIWN-G	500	48	0	
CY7C0852V-BBC (7C08523A)	4128335	*610130788*	TAIWN-G	1000	48	0	
STRESS: BALL SHEAR							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	COMP	10	0	
STRESS: BOND PULL							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	COMP	10	0	
STRESS: DIE SHEAR							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	COMP	10	0	
STRESS: INTERNAL VISUAL							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	COMP	5	0	
STRESS: X-RAY							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 3.63V, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C0852V-BBC (7C08523A)	4131840	*610135839*	TAIWN-G	128	44	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C0852V-BBC (7C08523A)	4130707	*610133763*	TAIWN-G	168	47	0	

Reliability Test Data

QTP #: 005006

Device	Fab Lot #	Assy Lot #	Ass Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: TC COND. C -65C TO 150C, PRECONDITION 192 HRS 30C/60%RH , MSL3							
CY7C0852V-BBC (7C08523A)	4128335	*610130788*	TAIWN-G	300	47	0	
CY7C0852V-BBC (7C08523A)	4128335	*610130788*	TAIWN-G	500	47	0	
CY7C0852V-BBC (7C08523A)	4128335	*610130788*	TAIWN-G	1000	47	0	
CY7C0852V-BBC (7C08523A)	4130707	*610133762*	TAIWN-G	300	50	0	
CY7C0852V-BBC (7C08523A)	4130707	*610133762*	TAIWN-G	500	50	0	
CY7C0852V-BBC (7C08523A)	4131840	*610135255*	TAIWN-G	300	49	0	
CY7C0852V-BBC (7C08523A)	4131840	*610135255*	TAIWN-G	500	48	0	
CY7C0852V-BBC (7C08523A)	4131840	*610135255*	TAIWN-G	1000	47	0	

Document History Page

Document Title: QTP# 005006: 172-Thin Ball Grid Array (FBGA) 15mm x 15mm MSL3 ASE- Taiwan (G)
Document Number: 001-90010

Rev.	ECN No.	Orig. of Change	Description of Change
**	4188168	HSTO	Initial Spec Release.
*A	4572613	HSTO	Align qualification report based on the new template in the front page

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