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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# 041103 VERSION*A
September 2014

ALL Plastic Ball Grid Array Package (PBGA)
SnAgCu, MSL 3, 260C Solder Reflow
ASEK- Taiwan

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

Qual Report		Description of Qualification Purpose		Date Comp
041103		ALL PBGA, SnAgCu, MSL3, 260C Reflow, ASEK-Taiwan Assembly		Mar 05

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	BY119
Package Outline, Type, or Name:	119-ball Plastic Ball Grid Array (PBGA)
Mold Compound Name/Manufacturer:	Sumitomo G770J
Mold Compound Flammability Rating:	V-O per UL94
Oxygen Rating Index:	None
Substrate Material:	BT
Lead Finish, Composition / Thickness:	SnAg (4%), Cu (0.5%)
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Sawing
Die Attach Supplier:	Ablestik
Die Attach Material:	Ablestik 2100A
Die Attach Method:	Epoxy
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1.0mil
Thermal Resistance Theta JA °C/W:	21.50°C/W
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	49-41999
Name/Location of Assembly (prime) facility:	ASEK Taiwan (G)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R
Fault Coverage:	100%

RELIABILITY TESTS PERFORMEDPER 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, 260°C+0, -5°C	P
Pressure Cooker	121C, 100%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs., 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
High Accelerated Saturation Test	130°C/85%RH 3.63V Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs., 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
High Temperature Storage	150°C, no bias	P
Ball Shear	JESD22-B116A	P
External Visual	MIL-PRF-38535, MILSTD-883, METHOD 2009,	P
Acoustic Microscopy	J-STD-020	P
X-Ray	MIL-STD-883 - 2012	P

Reliability Test Data

QTP #:041103

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	COMP	15	0	
CY7C1370C (7R1370C)	4352800	610417326	TAIWN-G	COMP	15	0	
CY39100V388B (7C39485E)	9205915	610412646	TAIWN-G	COMP	15	0	
STRESS: BALL SHEAR							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	COMP	15	0	
STRESS: EXTERNAL VISUAL							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	COMP	15	0	
CY7C1370C (7R1370C)	4352800	610417326	TAIWN-G	COMP	15	0	
STRESS: HIGH TEMPERATURE STORAGE, no bias							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	500	49	0	
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	1000	49	0	
CY39100V388B (7C39485E)	9205915	610412646	TAIWN-G	500	48	0	
CY39100V388B (7C39485E)	9205915	610412646	TAIWN-G	1000	48	0	
STRESS: HI-ACCEL SATURATION TEST. 130C, 3.63V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1370C (7R1370C)	4433051	610451813	TAIWN-G	128	47	0	
CY7C1370C (7R1370C)	4433051	610451814	TAIWN-G	128	48	0	
CY39100V388B (7C39485E)	9205915	610412646	TAIWN-G	128	48	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	168	48	0	
CY7C1370C (7R1370C)	4352800	610417326	TAIWN-G	168	50	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	300	50	0	
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	500	50	0	
CY7C1370C (7R1370C)	4352800	610417326	TAIWN-G	300	45	0	
CY7C1370C (7R1370C)	4352800	610417326	TAIWN-G	500	45	0	
CY39100V388B (7C39485E)	9205915	610412646	TAIWN-G	300	48	0	
CY39100V388B (7C39485E)	9205915	610412646	TAIWN-G	500	48	0	
STRESS: X-RAY							
CY7C1370C (7R1370C)	4352800	610417325	TAIWN-G	COMP	15	0	
CY7C1370C (7R1370C)	4352800	610417326	TAIWN-G	COMP	15	0	

Document History Page

Document Title:QTP#041103: ALL Plastic Ball Grid Array Package (PBGA) SnAgCu, MSL 3, 260C Solder Reflow ASEK- Taiwan
Document Number:001-89447

Rev.	ECN No.	Orig. of Change	Description of Change
**	4140912	HSTO	Initial Spec Release Initiate report as per memo LGQ-253
*A	4517577	HSTO	Align qualification report based on the new template in the front page

Distribution: WEB

Posting: None