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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# 034602 VERSION*A
September 2014

32-Lead TQFP (7 x 7 x 1.0mm)
52-Lead TQFP (10 x 10 x 1.0mm)
Pb-Free, MSL3, 260C Reflow
Amkor Bupyeong Korea Assembly

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

QUAL REPORT		DESCRIPTION OF QUALIFICATION PURPOSE		DATE COMP.
034602		Qualify Amkor Bupyeong-Korea for 32-Lead (7x7x1.0mm), 52-Lead (10x10x1.0mm) Pb-Free, MSL3, 260C Reflow, using G700L Mold Compound and 3230 Epoxy and Matte Tin Plating with Annealing Process (150C, 1hr)		Mar 04

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	A52
Package Outline, Type, or Name:	52-lead Thin Quad Flat Pack (TQFP)
Mold Compound Name/Manufacturer:	G700L
Mold Compound Flammability Rating:	V-O per UL 94
Oxygen Rating Index:	N/A
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Pure Sn
Die Backside Preparation Method/Metallization:	Grinding
Die Separation Method:	Wafer Saw
Die Attach Supplier:	BT
Die Attach Material:	3230
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au 1.2 mil
Thermal Resistance Theta JA °C/W:	55°C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-10997
Name/Location of Assembly (prime) facility:	Korea-Q (Amkor Bupyeong-Korea)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Cypress Philippines (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)	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	121°C, 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 (HAST)	130°C, 3.63V, 85%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Acoustic Microscopy	J-STD-020	P
External Visual	MIL-PRF-38535, MILSTD-883, METHOD 2009	P
Solderability	J-STD-002, JESD22-B102	P
Adhesion of Lead Finish	MIL-STD-883, Method 2025	P

Reliability Test Data

QTP #:034602

Device	Fab Lot #	Assy Lot #	Ass Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	COMP	15	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	COMP	15	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M1	KOREA-Q	COMP	15	0	
STRESS: EXTERNAL VISUAL							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	COMP	15	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 3.63V), PRE COND 192 HRS 30C/60%RH, MSL3							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	128	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	128	50	0	
STRESS: ADHESION OF LEAD FINISH							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	COMP	3	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	COMP	3	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), PRE COND 192 HRS 30C/60%RH, MSL3							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	168	50	0	
STRESS: SOLDERABILITY							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	COMP	3	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3							
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	300	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	500	47	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345	KOREA-Q	1000	47	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	300	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	500	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M	KOREA-Q	1000	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M1	KOREA-Q	300	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M1	KOREA-Q	500	50	0	
IMIZ9974CA (7C8Z9974C)	9140661	610346345M1	KOREA-Q	1000	50	0	

Document History Page

Document Title:QTP#034602:32-Lead TQFP (7 x 7 x 1.0mm) 52-Lead TQFP (10 x 10 x 1.0mm) Pb-Free, MSL3, 260C Reflow Amkor Bupyeong Korea Assembly
Document Number: 001-89445

Rev.	ECN No.	Orig. of Change	Description of Change
**	4140922	HSTO	Initial Spec Release Initiate report as per memo LGQ-315.
*A	4516872	HSTO	Align qualification report based on the new template in the front page

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