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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# 032101 VERSION*A
September 2014**

**8-28 lead TSSOP Package, Pb-Free,
MSL1, 260C Solder Reflow Peak
Anam - Philippines (PHIL-M)**

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

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
032101	8-28 lead (4.4mm) TSSOP package, Pb-Free, @ 260C Solder Reflow Peak, MSL1 @ ANAM-PHIL using G700K , 8290 DA Material and Pure Tin	Sep 03
032101	Cypress established policy requiring MSL and Reflow Peak Temperature alignment for Cypress and its Assembly Subcontractors. Downgrade from MSL1 to MSL3	July 07

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	Z2414
Package Outline, Type, or Name:	24-lead Thin Small Outline Package (TSSOP)
Mold Compound Name/Manufacturer:	Sumitomo G700K
Mold Compound Flammability Rating:	V-0 per UL94
Oxygen Rating Index:	>28%
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Pure Sn
Die Backside Preparation Method/Metallization:	Grinding
Die Separation Method:	Wafer Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	8290
Die Attach Method:	Silver Epoxy
Wire Bond Method:	Thermosonic
Wire Material/Size:	Gold 1.0mil
Thermal Resistance Theta JA °C/W :	94.73
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-14999
Name/Location of Assembly (prime) facility:	ANAM Philippines (PHIL-M)

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 150C Precondition: JESD22 Moisture Sensitivity MSL1 168 Hrs 85°C/85%RH+3IR-Reflow, 260°C+0, -5°C	P
Pressure Cooker Test	121°C, 100%RH Precondition: JESD22 Moisture Sensitivity MSL1 168 Hrs 85°C/85%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 1 168 Hrs, 85C/85%RH+3IR-Reflow, 260°C+5, 0°C	P
External Visual	MIL-PRF-38535, MILSTD-883, METHOD 2009	P
Adhesion of lead finish	MIL-STD-883, Method 2025	
Solderability	J-STD-002, JESD22-B102	P
Acoustic Microscopy, MSL 1	J-STD-020	P
X-ray	MIL-STD-883, Method 32012	P



Reliability Test Data

QTP #: 032101

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC - MICROSCOPE, MSL1							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	COMP	15	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	COMP	15	0	
CY22313LFZC (7C822313B)	4221029	610319402	PHIL-M	COMP	15	0	
STRESS: ADHESION OF LEAD FINISH							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	COMP	3	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	COMP	3	0	
STRESS: EXTERNAL VISUAL							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	COMP	15	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	COMP	15	0	
STRESS: SOLDERABILITY							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	COMP	3	0	
CY22313LFZC (7C822313B)	4221029	10319402M1	PHIL-M	COMP	3	0	
CY22313LFZC (7C822313B)	4221029	610319402	PHIL-M	COMP	3	0	
STRESS: X-RAY							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	COMP	15	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	COMP	15	0	
CY22313LFZC (7C822313B)	4221029	610319402	PHIL-M	COMP	15	0	
STRESS: HI-ACCEL SATURATION TEST. 130C, 3.63V, 85%RH, PRE COND 168 HR 85C/85%RH, MSL 1							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	128	45	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	128	44	0	
STRESS: PRESSURE COOKER TEST, 121C, 100%RH, PRE COND 168 HR 85C/85%RH, MSL 1							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	168	50	0	
STRESS: TC COND. C -65C TO 150C, PRECONDITION 168 HRS 85C/85%RH, MSL 1							
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	300	49	0	
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	500	49	0	
CY22313LFZC (7C822313B)	4221029	610319402M	PHIL-M	1000	49	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	300	50	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	500	49	0	
CY22313LFZC (7C822313B)	4221029	610319402M1	PHIL-M	1000	49	0	
CY22313LFZC (7C822313B)	4221029	610319402	PHIL-M	300	50	0	
CY22313LFZC (7C822313B)	4221029	610319402	PHIL-M	500	50	0	
CY22313LFZC (7C822313B)	4221029	610319402	PHIL-M	1000	50	0	



Document History Page

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Rev.	ECN No.	Orig. of Change	Description of Change
**	4140885	HSTO	Initial Spec Release Initiate report as per memo HGA-112.
*A	4516853	HSTO	Align qualification report based on the new template in the front page

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