

# Cypress Semiconductor Package Qualification Report

QTP# 174303 VERSION \*B  
MAR 2018

**64L TQFP (14x14x1.4)  
Pure Sn, CuPdAu Wire  
MSL3, 260°C Reflow  
ASE (G) - Taiwan**

**FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT  
[reliability@cypress.com](mailto:reliability@cypress.com) or via a CYLINK CRM CASE**

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### PACKAGE QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
120201	Qualification of TQFP packages built at ASE(G)-Taiwan using 0.8mil Copper Wire, G631 mold compound, CRM1076 epoxy and Pure Sn Lead finish.	June 2012
141404	Qualification PSoC4® 4100 and PSoC4® 4200 in TQFP44 10x10x1.4mm package in ASEK Taiwan assembly using CuPd wire, G631 mold compound, FH900 Die Attach Film and Pure Sn Lead finish at MSL3,260C Reflow Temperature	June 2014
162301	Qualification of New Lead frame for 128L-TQFP (14x20x1.4mm), 64L-TQFP (14x14x1.4mm) and 32L-TQFP (7x7x1.4mm) package at MSL3, 260C Reflow Temperature	Dec 2016
174303	Qualification of ASEK for 64L-TQFP (14x 14 x 1.4mm) package at MSL3, 260C Reflow Temperature	Jan 2018

<b>MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION</b>	
Package Designation:	AZ64
Package Outline, Type, or Name:	64-Lead Thin Quad Flat Pack (TQFP), 1.4mm
Mold Compound Name/Manufacturer:	G631H / Sumitomo
Mold Compound Flammability Rating:	V-0 / UL94
Mold Compound Alpha Emission Rate:	N/A
Oxygen Rating Index: >28%	50%
Lead Frame Designation:	FMP
Lead Frame Material:	Copper
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure Sn
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	SAW Process
Die Attach Supplier:	Hitachi
Die Attach Material:	FH-900
Bond Diagram Designation	002-21353
Wire Bond Method:	Thermalsonic Bonding
Wire Material/Size:	CuPdAu/ 0.8mil (20um)
Thermal Resistance Theta JA °C/W:	41°C/W
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	49-41001
Name/Location of Assembly (prime) facility:	ASE(G)-Taiwan
MSL LEVEL	3
REFLOW PROFILE	260C

<b>ELECTRICAL TEST / FINISH DESCRIPTION</b>	
Test Location:	CML-R

**Note:** Please contact a Cypress Representative for other package availability.

### RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate	Dynamic Operating Condition, Vcc = 2.8, 150 C JESD22-A108	P
High Temperature Operating Life Early Failure Rate	Dynamic Operating Condition, Vcc = 2.8, 150 C JESD22-A108	P
High Accelerated Saturation Test (HAST)	JEDEC STD 22-A110, 130 C, 85%RH, 3.63V/3.3V Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 C°, 60% RH, 260C Reflow)	P
Pressure Cooker Test	JESD22-A102, 121 C, 100%RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 C°, 60% RH, 260C Reflow)	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65 C to 150 C Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 C°, 60% RH, 260C Reflow)	P
High Temp Storage	JESD22-A103, 150 C, no bias Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 C°, 60% RH, 260C Reflow)	P
Acoustic Microscopy	J-STD-020 Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 C°, 60% RH, 260C Reflow)	P
Ball Shear	JESD22-B116A, Cpk : 1.33, Ppk : 1.66	P
Bond Pull	MIL-STD-883 – Method 2011, Cpk : 1.33, Ppk : 1.66	P
Constructional Analysis	Criteria: Meet external and internal characteristics of Cypress package	P
Dye Penetrant Test	Test to determine the existence and extent of cracks, Criteria: No Package Crack	P
Internal Visual	MIL-STD-883-2014	P
Final Visual Inspection	JESD22-B101B	P
Physical Dimension	MIL-STD-1835, JESD22-B100	P
Solderability	J-STD-002, JESD22-B102	P
Thermal Shock	MIL-STD-883C, Method 1011, Condition B, -55 C to 125C and JESD22-A106B, Condition C, -55 C to 125C	P
X-Ray	MIL-STD-883 - 2012	P
Post Stress Ball Shear	JESD22-A116	P
Post Stress Bond Shear	MIL-STD-883 - 2011	P
Electrical Characterization	AEC-Q100-009	P



## Reliability Test Data

### QTP #: 120201

<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>
<b>STRESS: ACOUSTIC, MSL3</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	15	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	15	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	15	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	15	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	15	0	
<b>STRESS: BALL SHEAR</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	10	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	10	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	10	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	10	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	10	0	
<b>STRESS: BOND PULL</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	10	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	10	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	10	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	10	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	10	0	
<b>STRESS: CONSTRUCTIONAL ANALYSIS</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	5	0	
<b>STRESS: CROSS SECTION</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	5	0	



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<b>STRESS: DYE PENETRATION TEST</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	15	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	15	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	15	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	15	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	15	0	
<b>STRESS: FINAL VISUAL</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	2466	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	618	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	605	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	2412	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	989	0	
<b>STRESS: ELECTRICAL CHARACTERIZATION</b>							
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	10	0	
<b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.8V, Vcc Max)</b>							
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	48	1000	0	
<b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.8V, Vcc Max)</b>							
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	80	116	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	116	0	
<b>STRESS: HI-ACCEL SATURATION TEST, 130C, 3.63V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	128	80	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	192	25	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	128	80	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	192	25	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	128	80	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	192	25	0	
<b>STRESS: HI-ACCEL SATURATION TEST, 130C, 3.3V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	128	80	0	



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<b>STRESS: INTERNAL VISUAL</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	5	0	
<b>STRESS: HIGH TEMP STORAGE, 150C</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	500	95	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	1000	85	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	1500	75	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	2000	75	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	500	95	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	1000	85	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	1500	75	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	500	95	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	1000	85	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	1500	75	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	2000	75	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	500	95	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1000	85	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1500	75	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	95	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	1000	85	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	1500	75	0	
CY7C64713(7CC681030BC)	4249029	611316756	G-TAIWAN	500	45	0	
CY7C64713(7CC681030BC)	4249029	611316756	G-TAIWAN	1000	45	0	
CY7C64713(7CC681030BC)	4249029	611316756	G-TAIWAN	3000	45	0	



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<b>STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)</b>						
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	168	94	0
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	288	84	0
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	168	95	0
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	168	92	0
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	288	82	0
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	168	95	0
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	168	95	0
CY7C64713(7CC681030BC)	4249029	611316756	G-TAIWAN	168	45	0
CY7C64713(7CC681030BC)	4249029	611316756	G-TAIWAN	500	39	0
<b>STRESS: PHYSICAL DIMENSION</b>						
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	30	0
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	30	0
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	30	0
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	30	0
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	30	0
<b>STRESS: POST MSL3 BALL SHEAR</b>						
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	4	0
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	4	0
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	4	0
<b>STRESS: POST MSL3 BOND PULL</b>						
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	4	0
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	4	0
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	4	0
<b>STRESS: POST MSL3 CONSTRUCTIONAL ANALYSIS</b>						
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	3	0
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	3	0
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	3	0





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<b>STRESS: POST HI-ACCEL SATURATION TEST BALL SHEAR</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	128	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	128	5	0	
<b>STRESS: POST HIGH TEMP STORAGE BALL SHEAR</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	500	5	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	1000	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	500	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1000	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	1000	5	0	
<b>STRESS: POST PRESSURE COOKER TEST BALL SHEAR TEST</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	168	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	168	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	168	5	0	
CY7C64713(7CC681030BC)	4249029	6111316756	G-TAIWAN	500	5	0	
<b>STRESS: POST TC BALL SHEAR</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	500	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	500	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	5	0	
<b>STRESS: POST HIGH TEMP STORAGE BOND PULL</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	500	5	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	1000	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	500	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1000	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	1000	5	0	
<b>STRESS: POST HI-ACCEL SATURATION TEST BOND PULL</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	128	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	128	5	0	



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<b>STRESS: POST PRESSURE COOKER TEST BOND PULL TEST</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	168	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	168	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	168	5	0	
<b>STRESS: POST TC BOND PULL</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	500	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	500	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	5	0	
<b>SOLDERABILITY TEST</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	5	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	5	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	5	0	
<b>STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	500	94	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	1000	84	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	1500	74	0	
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	2000	74	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	500	94	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	1000	84	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	500	95	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	1000	84	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	1500	74	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	2000	74	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	500	95	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1000	85	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1500	75	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	500	95	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	1000	85	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	1500	75	0	



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<b>STRESS: THERMAL SHOCK</b>							
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	200	100	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	1000	90	0	
<b>STRESS: X-RAY</b>							
CY7C68013A (7C681000B)	4131065	611157091	G-TAIWAN	COMP	15	0	
CY7C68013A (7C681000B)	4131065	611157737	G-TAIWAN	COMP	15	0	
CY7C68013A (7C681000B)	4131065	611157739	G-TAIWAN	COMP	15	0	
CY29940AXC (7C829940BR)	8052001	611157742	G-TAIWAN	COMP	15	0	
CY7C136 (7C136G)	2831581	611158148	G-TAIWAN	COMP	15	0	



## Reliability Test Data

### QTP #: 141404

<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>
<b>STRESS: ACOUSTIC, MSL3</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	COMP	15	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	COMP	15	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	COMP	15	0	
<b>STRESS: BALL SHEAR</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	COMP	10	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	COMP	10	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	COMP	10	0	
<b>STRESS: BOND PULL</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	COMP	10	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	COMP	10	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	COMP	10	0	
<b>STRESS: CONSTRUCTIONAL ANALYSIS</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	COMP	5	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	COMP	5	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	COMP	5	0	
<b>STRESS: HI-ACCEL SATURATION TEST, 130C, 5.5V, 85%RH, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	128	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	128	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	128	80	0	
<b>STRESS: HIGH TEMP STORAGE, 150C</b>							
CY8C5468AXI(8C561001AC)	4304019	611314007	ASEK, Taiwan	500	80	0	
CY8C5468AXI(8C561001AC)	4304019	611314007	ASEK, Taiwan	1000	80	0	
CY8C5468AXI(8C561001AC)	4304019	611314009	ASEK, Taiwan	500	60	0	
CY8C5468AXI(8C561001AC)	4304019	611314009	ASEK, Taiwan	1000	60	0	
<b>STRESS: INTERNAL VISUAL</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	COMP	5	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	COMP	5	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	COMP	5	0	



## Reliability Test Data

### QTP #: 141404

<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>
<b>STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	168	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	288	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	168	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	288	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	168	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	288	80	0	
<b>STRESS: TC COND. C -65C TO 150C, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	500	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	1000	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	500	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	1000	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	500	80	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	1000	80	0	
<b>STRESS: X-RAY</b>							
CY8C4245AX(8CP44200AC)	4318437	611408847	ASEK, Taiwan	COMP	15	0	
CY8C4245AX(8CP44200AC)	4318437	611408848	ASEK, Taiwan	COMP	15	0	
CY8C4245AX(8CP44200AC)	4318437	611408849	ASEK, Taiwan	COMP	15	0	



## Reliability Test Data

**QTP #: 162301**

<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>
<b>STRESS: ACOUSTICS</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	COMP	22	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	15	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	15	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	15	0	
<b>STRESS: BALL SHEAR</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	COMP	150	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	100	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	100	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	100	0	
<b>STRESS: BOND PULL</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	COMP	150	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	100	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	100	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	100	0	
<b>STRESS: CONSTRUCTIONAL ANALYSIS</b>							
CYAT81688 (8A206803AH)	5532014	611534014	ASEK-G	COMP	5	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	5	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	5	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	5	0	
<b>STRESS: DIE SHEAR</b>							
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	15	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	15	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	15	0	
<b>STRESS: DYE PENETRANT</b>							
CYAT81688 (8A206803AH)	5532014	611534014	ASEK-G	COMP	15	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	15	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	15	0	



## Reliability Test Data

**QTP #: 162301**

<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>
<b>STRESS: FINAL VISUAL</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	COMP	7761	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	974	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	5588	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	862	0	
<b>STRESS: PHYSICAL DIMENSION</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	COMP	10	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	10	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	10	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	10	0	
<b>STRESS: SOLDERABILITY</b>							
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	3	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	3	0	
CY7C006AV (7C0063NFC)	4521965	611617888	ASEK-G	COMP	3	0	
<b>STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	500	84	0	
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	1000	79	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	500	77	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	500	77	0	
<b>STRESS: X-RAY</b>							
CYAT81688 (8A206803AH)	5532014	611534015	ASEK-G	COMP	77	0	
CY7C006AV (7CC0063NFC)	4431911	611617889	ASEK-G	COMP	77	0	
CY29940AXC (7CC829940BR)	8444015	611617887	ASEK-G	COMP	77	0	



## Reliability Test Data

**QTP #: 174303**

<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>
<b>STRESS: ACOUSTIC, MSL3</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	77	0	
<b>STRESS: BALL SHEAR</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	5	0	
<b>STRESS: BOND PULL</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	5	0	
<b>STRESS: CONSTRUCTIONAL ANALYSIS</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	5	0	
<b>STRESS: FINAL VISUAL</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	1705	0	
<b>STRESS: PHYSICAL DIMENSION</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	30	0	
<b>STRESS: X-RAY</b>							
CY8C4125AXI2 (8CP46003B)	3710134	611740357	G-TAIWAN	COMP	160	0	





## Document History Page

Document Title: QTP#174303 : Qualification of ASEK for 64L-TQFP (14x 14 x 1.4mm) package at MSL3, 260C Reflow Temperature  
Document Number: 002-22917

Rev.	ECN No.	Orig. of Change	Description of Change
**	6045777	EKNG	Initial spec release.
*A	6050361	EKNG	Updated the Wire material and Wire Size
*B	6093403	EKNG	Updated Reliability Stress Summary Table and Test data