Cypress Semiconductor
Package Qualification Report

QTP# 082206 VERSION 1.0
November 2008

≤160-Leads TQFP
SnPb, MSL3, 220°C Reflow
Amkor-Korea

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
082206	Qualify G700L mold compound and 3230 die attach epoxy for TQFP package, SnPb, MSL3, 220C/235C Reflow at Amkor, Korea	Nov 08

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	A32/AS64/A128
Package Outline, Type, or Name:	32/64/128-Lead Thin Quad Flat Pack (TQFP)
Mold Compound Name/Manufacturer:	Sumitomo G700L
Mold Compound Flammability Rating:	V-0 UL-94
Mold Compound Alpha Emission Rate:	N/A
Oxygen Rating Index:	N/A
Lead Finish, Composition / Thickness:	SnPb
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Saw
Die Attach Supplier:	Ablestik
Die Attach Material:	3230
Die Attach Method:	Epoxy
Bond Diagram Designation:	10-03090
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au/ 1.2 mil
Thermal Resistance Theta JA °C/W :	31°C /W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	49-10011
Name/Location of Assembly (prime) facility:	Amkor-Korea
MSL Level:	3
Reflow Profile:	220C/ 235C

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	R-CML

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Temperature Cycle	JEDEC22, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs, 30°C/60% RH+3IR-Reflow, **220°C**+0, -5°C 192 Hrs, 30°C/60% RH+3IR-Reflow, **235°C**+0, -5°C	P
Acoustic Microscopy Test	Cypress Spec. 25-00104	P
Final Visual Inspection	Cypress Spec. 12-00292/12-00103	P
Solderability	Cypress Spec. 25-00018	P

Reliability Test Data

QTP #: 082206

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL3							
CS5916AA (7C02694N)	4809884	610834130	L-KOREA	COMP	77	0	
CY7C4255V (7C4355NB)	4749002	610828680	L-KOREA	COMP	77	0	
CY29942AI (7C829942B)	8808024	610832056	L-KOREA	COMP	77	0	
STRESS: FINAL VISUAL INSPECTION							
CS5916AA (7C02694NB)	4809884	610834130	L-KOREA	COMP	159	0	
CY7C4255V (7C4355N)	4749002	610828680	L-KOREA	COMP	236	0	
CY29942AI (7C829942B)	8808024	610832056	L-KOREA	COMP	236	0	
STRESS: SOLDERABILITY							
CS5916AA (7C02694NB)	4809884	610834130	L-KOREA	COMP	5	0	
CY7C4255V (7C4355N)	4749002	610828680	L-KOREA	COMP	5	0	
CY29942AI (7C829942B)	8808024	610832056	L-KOREA	COMP	5	0	
STRESS: TC COND. C –65C TO 150C PRE COND 192 HR 30C/60%RH, MSL3							
CS5916AA (7C02694NB)	4809884	610834130	L-KOREA	500	77	0	
CY7C4255V (7C4355N)	4749002	610828680	L-KOREA	500	77	0	
CY29942AI (7C829942B)	8808024	610832056	L-KOREA	500	77	0	