

Date Created : 2009/06/17
Date Issued On : 2009/07/02
PCN# : Q2092502

DESIGN/PROCESS CHANGE NOTIFICATION -- FINAL

This is to inform you that a design and/or process change will be made to the following product(s). This notification is for your information and concurrence.

If you require data or samples to qualify this change, please contact **Fairchild Semiconductor within 30 days of receipt of this notification.**

Updated process quality documentation, such as FMEAs and Control Plans, are available for viewing upon request.

If you have any questions concerning this change, please contact:

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PCN Originator:
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Implementation of change:
Expected 1st Device Shipment Date: 2009/09/28

Earliest Year/Work Week of Changed Product: 0940

Change Type Description: Alternate Fab Location

Description of Change (From): Bump process for WLCSP is currently performed at Amkor - Korea (K4 site)

Description of Change (To): Fairchild Maine will be qualified for the bump process of WLCSP. All pitch sizes of WLCSP product will be qualified: 0.5mm pitch with 300um solder sphere, 0.4mm pitch with 250um solder sphere, 0.5mm pitch with 250um solder sphere

Reason for Change : To allow dual-sourcing to better service customers and support future demand for WLCSP packages

Qual/REL Plan Numbers : Q20080503; Q20090388

Qualification :

All legs for both qualification plans passed. Board Level Reliability testing was performed on the 0.5mm pitch / 300uM solder sphere and 0.4mm pitch / 250uM solder sphere packages. The results are comparable to the existing Amkor Korea bump process.

Results/Discussion for Qual Plan Number Q20080503

Test: (Autoclave) Conditions: 100%RH, 121C Standard: JESD22-A102			
Lot	Device	96-HOURS	Failure Code
Q20080503AAACLVD	FAN2560UCX	0/77	
Q20080503ABACLVD	FAN2560UCX	0/77	

Q20080503ACACLVD	FAN2560UCX	0/77			
Q20080503ADACLVD	FAN2560UCX	0/77			
Test: (Dynamic Op Life) Conditions: 125C, 0V Standard: JESD22-A108					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20080503AADOPLD	FAN2560UCX	0/77	0/77		
				0/77	
Q20080503ADDOPLD		0/77	0/77		
				0/77	
Test: (High Temperature Storage Life) Conditions: 150C Standard: JESD22-A103					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20080503AAHTSLD		0/77	0/77		
				0/77	
Q20080503ABHTSLD		0/77	0/77		
				0/77	
Q20080503ACHTSLD		0/77	0/77		
				0/77	
Q20080503ADHTSLD		0/77	0/77		
				0/77	
Test: (Highly Accelerated Stress Test) Conditions: 85%RH, 130C, 0V Standard: JESD22-A110					
Lot	Device	96-HOURS			Failure Code
Q20080503AAHAST1D	FAN2560UCX	0/45			
Q20080503ABHAST1D	FAN2560UCX	0/45			
Q20080503ACHAST1D	FAN2560UCX	0/45			
Q20080503ADHAST1D	FAN2560UCX	0/45			
Test: (Temperature Cycle) Conditions: -40C, 125C Standard: JESD22-A104					
Lot	Device	100-CYCLES	500-CYCLES	1000	Failure Code
Q20080503AATMCL2D		0/77	0/77		
				0/77	
Q20080503ABTMCL2D		0/77	0/77		
				0/77	
Q20080503ACTMCL2D		0/77	0/77		
				0/77	
Q20080503ADTMCL2D		0/77	0/77		
				0/77	

Results/Discussion for Qual Plan Number Q20090388

Test: (Autoclave) Conditions: 100%RH, 121C Standard: JESD22-A102					
Lot	Device	96-HOURS			Failure Code
Q20090388AAACLVD	FSA839UCX	0/77			
Q20090388ABACLVD	FSA839UCX	0/77			
Q20090388ACACLVD	FSA839UCX	0/77			
Test: (High Temperature Storage Life) Conditions: 150C Standard: JESD22-A103					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20090388AAHTSL	FSA839UCX	0/77	0/77		
				0/77	
Q20090388ABHTSL		0/77	0/77		
				0/77	
Q20090388ACHTSL		0/77	0/77		
				0/77	
Test: (Highly Accelerated Stress Test) Conditions: 85%RH, 130C, 0V Standard: JESD22-A110					
Lot	Device	96-HOURS			Failure Code

Q20090388AAHAST1	FSA839UCX	0/45	
Q20090388ABHAST1	FSA839UCX	0/45	
Q20090388ACHAST1	FSA839UCX	0/45	

Test: (Static Op Life) Conditions: 150C, 0V Standard: JESD22-A108					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20090388AASOPL1		0/77			
			0/77		
				0/77	
Q20090388ABSOP1		0/77			
			0/77		
				0/77	
Q20090388ACSOPL1		0/77			
			0/77		
				0/77	

Test: (Temperature Cycle) Conditions: -40C, 125C Standard: JESD22-A104				
Lot	Device	500-CYCLES	1000-CYCLES	Failure Code
Q20090388AATMCL2	FSA839UCX	0/77		
Q20090388AATMCL2	FSA839UCX		0/77	
Q20090388ABTMCL2	FSA839UCX	0/77		
Q20090388ABTMCL2	FSA839UCX		0/77	
Q20090388ACTMCL2	FSA839UCX	0/77		
Q20090388ACTMCL2	FSA839UCX		0/77	

Product Id Description :

Affected FSIDs :

FAN2560UC13X	FAN2560UC15X	FAN2564UC12X
FAN2564UC13X	FAN2564UC15X	FAN2564UC18X
FAN5350UCX	FAN5355UC00X	FAN5355UC02X
FAN5361UC123X	FAN5361UC182X	FAN5665UCX
FAN5902UCX	FPF1003A	FPF1004
FPF1004_F065	FPF1013	FPF1014
FPF2024	FPF2025	FPF2026
FPF2027	FSA2859UCX	FSA839UCX
FSA839UCX_SB82278	FSA859UCX	