

DESIGN/PROCESS CHANGE NOTIFICATION -- FINAL

This is an update of the final PCN #20043505-B to include devices with "_NL" suffix (lead-free products) in the Affected FSID Section. Devices with no suffix and devices with "_NL" suffix are identical products which uses Pb-free lead finish.

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:

Technical Contact:

Name: Rivero, Douglas
E-mail: Doug.Rivero@fairchildsemi.com
Phone: 1-408-822-2143

PCN Originator:

Name: Oyao, Sheila Marie
E-mail: Sheila.Marie.Oyao@fairchildsemi.com
Phone: (63 32) 3400534 loc 384

Implementation of change:

Expected 1st Device Shipment Date: 2007/11/24

Earliest Year/Work Week of Changed Product: 07/47

Change Type Description: Bond Wire Material Composition

Description of Change (From): Bonding wire material is Gold (Au)

Description of Change (To): Bonding wire material is Copper (Cu).

Reason for Change : Change to Cu wire to help reduce resistance and improve thermal performance.

Qual/REL Plan Numbers : Q20070335

Qualification :

Based on the results gathered, copper bonding is a qualified process in SSOT-6lds package.

Results/Discussion

Test: (Autoclave)			
Lot	Device	96-HOURS	Failure Code
Q20070335AAACLV	FDC640P	0/77	
Q20070335ABACLV	FDC640P	0/77	
Q20070335BAACLV	FDC655AN	0/77	
Q20070335BBACLV	FDC655AN	0/77	
Q20070335CAACLV	FDC654P	0/77	

Q20070335CBACLV	FDC654P	0/77		
Test: (High Temperature Reverse Bias)				
Lot	Device	168-HOURS	500-HOURS	1000-HOURS
Q20070335AAHTRB	FDC640P	0/77	0/77	0/77
Q20070335ABHTRB		0/77	0/77	0/77
Q20070335BAHTRB	FDC655AN	0/77	0/77	0/77
Q20070335BBHTRB		0/77	0/77	0/77
Q20070335CAHTRB	FDC654P		0/77	0/77
Q20070335CBHTRB			0/77	0/77
Test: (Power Cycle)				
Lot	Device	5000-CYCLES	10000-CYCLES	Failure Code
Q20070335AAPRCL	FDC640P	0/77	0/77	
Q20070335ABPRCL	FDC640P	0/77	0/77	
Q20070335BAPRCL	FDC655AN	0/77	0/77	
Q20070335BBPRCL	FDC655AN	0/77	0/77	
Q20070335CAPRCL	FDC654P	0/77	0/77	
Q20070335CBPRCL	FDC654P	0/77	0/77	
Test: -65C, 150C (Temperature Cycle)				
Lot	Device	100-CYCLES	500-CYCLES	Failure Code
Q20070335AATMCL1	FDC640P	0/77	0/77	
Q20070335ABTMCL1	FDC640P	0/77	0/77	
Q20070335BATMCL1	FDC655AN	0/77	0/77	
Q20070335BBTMCL1	FDC655AN	0/77	0/77	
Q20070335CATMCL1	FDC654P	0/77	0/77	
Q20070335CBTMCL1	FDC654P	0/77	0/77	
Test: 130C (Highly Accelerated Stress Test)				
Lot	Device	96-HOURS	Failure Code	
Q20070335AAHAST1	FDC640P	0/77		
Q20070335ABHAST1	FDC640P	0/77		
Q20070335BAHAST1	FDC655AN	0/77		
Q20070335BBHAST1	FDC655AN	0/77		
Q20070335CAHAST1	FDC654P	0/77		
Q20070335CBHAST1	FDC654P	0/77		
Test: MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)				
Lot	Device	Results	Failure Code	
Q20070335AAPCNL1A	FDC640P	0/231		
Q20070335ABPCNL1A	FDC640P	0/231		
Q20070335BAPCNL1A	FDC655AN	0/231		
Q20070335BBPCNL1A	FDC655AN	0/231		
Q20070335CAPCNL1A	FDC654P	0/231		
Q20070335CBPCNL1A	FDC654P	0/231		

Product Id Description : This change will affect products currently assembled in

SuperSOT6 package at Cebu, Philippines factory. The products affected by this change are listed in the "Affected FSIDs" Section.

Affected FSIDs :

FDC2512_NL	FDC2612_NL	FDC3512_NL
FDC3612_NL	FDC5612_NL	FDC5614P_NL
FDC602P_NL	FDC604P_NL	FDC606P_NL
FDC633N_NL	FDC634P_NL	FDC637AN_NL
FDC638P_NL	FDC640P_NL	FDC642P_NL
FDC645N_NL	FDC653N_NL	FDC654P_NL
FDC655AN_NL	FDC658P_NL	NDC631N_NL
NDC632P_NL	NDC651N_NL	NDC652P_NL
SI3457DV_NL		