



Date Created: 2/12/2004

Date Issued: 3/4/2004

PCN # 20033704-A

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.**

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

Name: Fraser, Dodet
E-Mail: Dodet.Fraser@notes.fairchildsemi.com
Phone: (408)822-2124

PCN Originator

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

REL Engineer

Name: Uy, Lester O.
E-mail: Lester.Uy@notes.fairchildsemi.com
Phone: 63-32-3415636

PCN Type: Mask Changes (other than Metallization Mask)

Effectivity

Expected 1st Device Shipment Date: 4/19/2004
Earliest Year/Work Week of Changed Product: 0414
(Note: Package marking may differ from this format)

Product ID (Description):

Applicable to all devices using the current DTMLB MASK in FLMP, SO8WL, TO 220/263 and TO 252 (DPAK) packages.

Description of Change:

DTYLA is a modified mask for the DTMLB. The modification involves the following: increase bump pad size from 180 to 220 um, increase BCB (Bizbenzocyclobutene) opening from 160 to 210 um, and increase bump diameter from 217 to 246um.

Effect of Change:

The replacement of DTMLB mask to DTYLA mask will standardize the pad size for wire bonded Cu Stud, modify gate pad size for 2 mil Al wire on DPAK devices and improve the bump to UBM (Under Bump Metallization) adhesion.

Qualification:

Final release criteria is based on the successful completion of all reliability and ALR tests as per the qualification plan, successful results of pre-production lots, team review and approval of manufacturability requirements and other requirements to successfully support mass production. (Reference Qual Plan # PD03240081)

Qual/REL Plan Numbers

Qual Results: FCB20040012

Test: Autoclave(ACLV)with preconditioning						
<u>Test Request</u>	<u>Device</u>	<u>Sbgrp</u>	<u>TP</u>	<u>Duration</u>	<u>SS</u>	<u>Reject</u>
230656	FDS2170N7	AS6	1	96	77	0
Test: Temperature Cycle(TMCL)						
<u>Test Request</u>	<u>Device</u>	<u>Sbgrp</u>	<u>TP</u>	<u>Duration</u>	<u>SS</u>	<u>Reject</u>
230656	FDS2170N7	AS6	1	100	77	0
			2	500	77	0
Test: Highly Accelerated Stress Test(HAST)						
<u>Test Request</u>	<u>Device</u>	<u>Sbgrp</u>	<u>TP</u>	<u>Duration</u>	<u>SS</u>	<u>Reject</u>
230656	FDS2170N7	AS6	1	96	77	0
Test: Power Cycle(PRCL)						
<u>Test Request</u>	<u>Device</u>	<u>Sbgrp</u>	<u>TP</u>	<u>Duration</u>	<u>SS</u>	<u>Reject</u>
230656	FDS2170N7	AS6	1	5000	77	0
			2	10000	77	0
Test: High Temperature Gate Bias Test(HTGB)						
<u>Test Request</u>	<u>Device</u>	<u>Sbgrp</u>	<u>TP</u>	<u>Duration</u>	<u>SS</u>	<u>Reject</u>
230656	FDS2170N7	AS6	1	168	77	0
			2	500	77	0
			3	1000	77	0
Test: High Temperature Reverse Bias Test(HTRB)						
<u>Test Request</u>	<u>Device</u>	<u>Sbgrp</u>	<u>TP</u>	<u>Duration</u>	<u>SS</u>	<u>Reject</u>
230656	FDS2170N7	AS6	1	168	77	0
			2	500	77	0
			3	1000	77	0

Conclusion

Based on reliability result obtained, the DTYLA mask is recommended for Code R release.

Affected FSIDs

DAS6_BDA001B

FDB2570

FDB2670

FDD2570
FDP2670
FDS2074N3
FDS2170N7

FDD2670
FDS2070N3
FDS2074N7
FDS2570

FDP2570
FDS2070N7
FDS2170N3
FDS2670