Date Created : **2010/10/25**
Date Issued On : **2010/11/11**
PCN# : **Q4104401**

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:

Technical Contact:
Name: Lumauag, Roselle
E-mail: roselle.lumauag@fairchildsemi.com
Phone: (65) 6496 8908

PCN Originator:
Name: Rulona, Benjo
E-mail: benjo.rulona@fairchildsemi.com
Phone: (65) 6496 8911

Implementation of change:
Expected 1st Device Shipment Date: 2011/02/19

Earliest Year/Work Week of Changed Product: 0811

Change Type Description: Final Die Thickness, Metallization Material, Wafer Diameter

Description of Change (From): Affected products fabricated on 4" diameter wafers using the D3D process.

Description of Change (To): Affected products fabricated on 5" diameter wafers using the 5DS19B process.

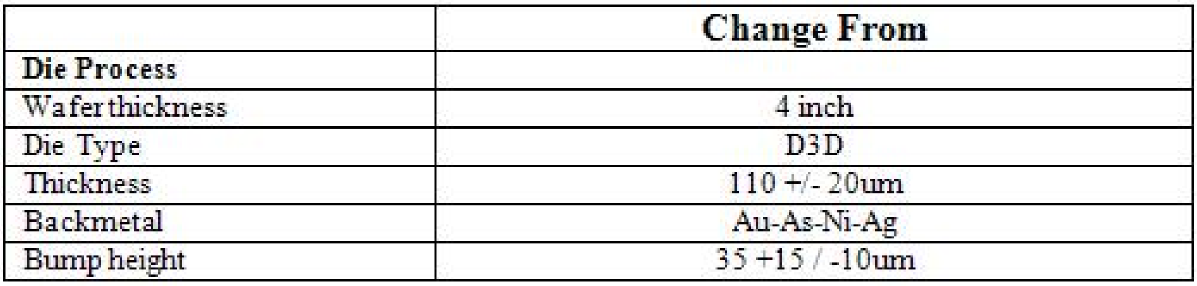
Reason for Change : Closure of 4" substrate line using the D3D process and qualification of 5" wafer and 5DS19B process for transition. This change will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will remain fully compliant to all published specifications. Products incorporating this change may be shipped interchangeably with existing unchanged products. Please contact your local Customer Quality Engineer within 30 days of receipt of this notification if you require any additional data or samples. This change is planned to take effect in 90 calendar days from the date of this notification. Please work with your local Fairchild Sales representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days.

Qual/REL Plan Number(s): Q20100547

Qualification :

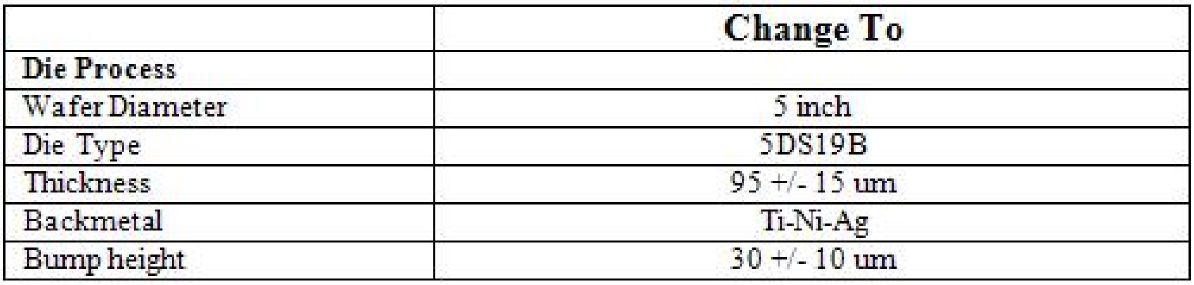
Products manufactured on 5" diameter wafers using the 5DS19B process have successfully met Fairchild's qualification requirements.

Change From



	Change From
Die Process	
Wafer thickness	4 inch
Die Type	D3D
Thickness	110 +/- 20um
Backmetal	Au-As-Ni-Ag
Bump height	35 +15 / -10um

Change To



	Change To
Die Process	
Wafer Diameter	5 inch
Die Type	5DS19B
Thickness	95 +/- 15 um
Backmetal	Ti-Ni-Ag
Bump height	30 +/- 10 um

Results/Discussion for Qual Plan Number(s): Q20100547

Test: (High Temperature Reverse Bias) | Conditions: 150C, 80% rated BV | Standard: JESD22-A108

Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20100547AAHTRB	FDLL4448	0/77			
			0/77		
				0/77	
Q20100547BAHTRB	LL4148	0/77			
			0/77		
				0/77	
Q20100547CAHTRB	1N914	0/77			
			0/77		
				0/77	

Test: (High Temperature Storage Life) | Conditions: 200C | Standard: JESD22-A103

Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20100547AAHTSL	FDLL4448	0/77			
			0/77		
				0/77	
Q20100547BAHTSL	LL4148	0/77			
			0/77		
				0/77	
Q20100547CAHTSL	1N914	0/77			
			0/77		
				0/77	

Test: (Power Cycle) | Conditions: Delta 100C, 2 Min cycle | Standard: MIL-STD-750-1036

Lot	Device	2520-CYCLES	7500-CYCLES	15000-CYCLES	Failure Code
Q20100547AAPRCL	FDLL4448	0/77			
			0/77		
				0/77	
Q20100547BAPRCL	LL4148	0/77			
			0/77		
				0/77	
Q20100547CAPRCL	1N914	0/77			
			0/77		
				0/77	

Test: (Resistance to Solder Heat) | Conditions: | Standard: JESD22-B106

Lot	Device	Results	Failure Code
Q20100547AARSDH	FDLL4448	0/30	
Q20100547BARSDH	LL4148	0/30	
Q20100547CARSDH	1N914	0/30	

Test: (Temperature Cycle) | Conditions: -65C, 150C | Standard: JESD22-A104

Lot	Device	100-CYCLES	500-CYCLES	1000	Failure Code
Q20100547AATMCL1	FDLL4448	0/77			
			0/77		
				0/77	
Q20100547BATMCL1	LL4148	0/77			
			0/77		
				0/77	
Q20100547CATMCL1	1N914	0/77			
			0/77		
				0/77	

Product Id Description : This change will affect Fairchild's Switching Diode products assembled in DO-35, SOD-80 and LL-34 packages. The products affected by this change are listed below in the "Affected FSIDs" section.

Affected FSIDs :

1N3064TR	1N4148TA	1N4148TR
1N4148	1N4148_T26A	1N4148_T50A
1N4148_T50R	1N4149TR	1N4149
1N4447	1N4448TR	1N4448
1N4454TR	1N4454	1N914ATR
1N914BTR	1N914B	1N914TR
1N914	1N914_T50A	1N916A
1N916B	1N916TR	1N916
BAW62	BAW76TR	BAW76
D3D7_FDH6308C	FDLL4148	FDLL4148_D87Z
FDLL4148_NBD3001	FDLL4448	FDLL4448_D87Z
FDLL914A	FDLL914B	FDLL914
LL4148		