Date Created : **2007/11/01**
Date Issued On : **2007/11/09**
PCN# : **Q4074402**

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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Implementation of change:
Expected 1st Device Shipment Date: 2008/01/31

Earliest Year/Work Week of Changed Product: 0805 (weekly date code)

Change Type Description: Alternate Assembly Site Location / Qualification, Package Change (Lead Frame), Plating Material Change

Description of Change (From): Fairchilds uMLP10L is currently assembled at UTAC. This package is currently assembled as follows - Substrate: Copper Leadframe EFTEC64T with NiPdAu pre-plated, Die attach material: Non conductive epoxy 8006NS, Wire: 0.8mils Au, Compound: G770HCD, Lead Finish: NiPdAu flash. Package Dimension remains unchanged. Also refer to the tables below for comparisons of this change.

Description of Change (To): Add FSPM (Fairchild Malaysia) as an additional assembly location for uMLP10L. The package material details for the FSPM location are as follows: LeadFrame : Copper leadframe A194 Full hard with NiPdAu pre-plated, Die attach material: Die attach film LE5003, Wire: 0.8mils Au, Compound: CK203P (Premold) and CK203M (Final mold), Lead Finish: Matte Sn. The external package dimensions will remain unchanged. Additionally, the parts produced on FSPM assembly line will be identified by an _F113 suffix on Fairchild part number.

Reason for Change : Increase manufacturing capacity and increase package's flexibility where premolded frame is more tolerable of different die sizes compared to the Chip On Lead package.

Qual/REL Plan Numbers : Q20070436

A qualification matrix consisting of three devices to be assembled in the new assembly location has been defined. This will result in a total of three assembly lot to qualify the alternate assembly site for the affected product list per the reliability tests outlined in the Qualification Plan.

Qualification :

All the reliability tests as defined in Q20070436 qualification plan completed the release time point with no valid failure detected. Therefore, FSPM (Fairchilld Malaysia) is qualified as alternate assembly site for this package with the above affected FSID listing.

Change From

Assembly Site	UTAC
Leadframe	Copper Leadframe EFTEC64T, NiPdAu flash pre-plated
Die Attach	Non-conductive epoxy, 8006NS
Wire	0.8mils Au
Mold Compound	G770HCD
Lead Finish	NiPdAu flash pre-plated
Product ID	per existing nomenclature

Change To

Assembly Site	Add FSPM (Fairchild Malaysia) as additional assembly site
Lead Frame	Copper Leadframe A194, FH, NiPdAu flash pre-plated
Die Attach	Die Attach Film, LE5003
Wire	0.8mils Au
Mold Compound	CK203P (Premolded) , CK203M (Final Mold)
Lead Finish	Matte Sn (Post Plating)
Product ID	a suffix of F113 will be used to identify product assembled at FSPM

Results/Discussion

Test: (Gate Leakage Negative)

Lot	Device	Results	Failure Code
Q20070436AAGATE-	FSA2269UMX	0/3	
Q20070436BAGATE-	FSA221UMX	0/3	
Q20070436CAGATE-	FSA2268TUMX	0/3	

Test: (Gate Leakage Positive)

Lot	Device	Results	Failure Code
Q20070436AAGATE+	FSA2269UMX	0/3	
Q20070436BAGATE+	FSA221UMX	0/3	
Q20070436CAGATE+	FSA2268TUMX	0/3	

Test: (High Temperature Storage Life)

Lot	Device	168-HOURS	1000-HOURS	Failure Code
Q20070436AAHTSL	FSA2269UMX	0/77		
Q20070436AAHTSL	FSA2269UMX		0/77	
Q20070436BAHTSL	FSA221UMX	0/77		
Q20070436BAHTSL	FSA221UMX		0/77	
Q20070436CAHTSL	FSA2268TUMX	0/77		
Q20070436CAHTSL	FSA2268TUMX		0/77	

Test: (Static Op Life)

Lot	Device	168-HOURS	1000-HOURS	Failure Code
Q20070436AASOPL1	FSA2269UMX	0/77		
Q20070436AASOPL1	FSA2269UMX		0/77	
Q20070436BASOPL1	FSA221UMX	0/77		
Q20070436BASOPL1	FSA221UMX		0/77	
Q20070436CASOPL1	FSA2268TUMX	0/77		
Q20070436CASOPL1	FSA2268TUMX		0/77	

Test: -65C, 150C (Temperature Cycle)

Lot	Device	500-CYCLES	Failure Code
Q20070436AATMCL1	FSA2269UMX	0/77	
Q20070436BATMCL1	FSA221UMX	0/77	
Q20070436CATMCL1	FSA2268TUMX	0/77	

Test: 130C (Highly Accelerated Stress Test)			
Lot	Device	96-HOURS	Failure Code
Q20070436AAHAST1	FSA2269UMX	0/45	
Q20070436BAHAST1	FSA221UMX	0/45	
Q20070436CAHAST1	FSA2268TUMX	0/45	

Test: MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)			
Lot	Device	Results	Failure Code
Q20070436AAPCNL1A	FSA2269UMX	0/276	
Q20070436BAPCNL1A	FSA221UMX	0/276	
Q20070436CAPCNL1A	FSA2268TUMX	0/276	

Product Id Description : This notification covers Fairchild Semiconductor Premolded uMLP 10Leads, 1.4mmx1.8mm. For a complete listing of products covered in this PCN release, please refer to the Affected FSID listing. The products covered by this notification will also be assembled in Fairchild Semiconductor Penang Malaysia (FSPM) offering increased source of supply for these devices.

Affected FSIDs :

FSA221UMX	FSA223UMX	FSA2268TUMX
FSA2268UMX	FSA2269TSUMX	FSA2269UMX
FSA2270TUMX	FSA2271TUMX	FSUSB30UMX
FSUSB40UMX	FSUSB42UMX	