

Date Created : 2008/07/21
Date Issued On : 2008/08/27
PCN# : Q3083001

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:

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PCN Originator:

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Implementation of change:

Expected 1st Device Shipment Date: 2008/11/14

Earliest Year/Work Week of Changed Product: 0847

Change Type Description: Mold Compound

Description of Change (From): NMSON 8L and NQSOP 16/20/24L packages assembly at all FSC approved manufacturing locations (Unisem) using non Green mold compound as shown in table 1.

Description of Change (To): NMSON 8L and NQSOP 16/20/24L packages assembly at all FSC approved manufacturing locations (Unisem) using Green mold compound as shown in table 2.

Reason for Change : 1. Current mold compound supplier has announce the discontinuance of LSA mold compound EME6730B. Based on current run rates there is a potential for a mold compound material shortage if this PCN is not approved within the timeframe noted above. 2. Green initiative by Fairchild Semiconductor. Fairchild Semiconductor is dedicated to being a good corporate citizen. All Fairchild Semiconductor products are 2nd level interconnect lead-free and RoHS compliance. The referenced material changes have been made to provide a 'Full Green' (Halogen Free Flame Retardant) package. For additional details on the corporate wide green initiative please visit our Web site at : <http://www.fairchildsemi.com/company/green/index.html> Manufacturing will occur at the same assembly facilities producing the current non-green products. Package outline drawings of the affected products remain un-changed. Green products will be fully compliant to all published data sheet specifications and will be interchangeable with current non-green product. Quality and reliability will remain at the highest standards already demonstrated with Fairchild's existing products.

Qual/REL Plan Numbers : Q20070249

Qualification :

All the reliability tests defined in this qual plan completed with no failures. Therefore Unisem is qualified to assembly NMSON 8L and NQSOP 16/20/24L packages.

Change From

Table 1:

Assembly site	Unisem
Lead Frame	Cu Alloy A194 (Ag plated)
Die Attach	Ablebond 8290
Wire	1.0 mil Au
Mold Compound	EME6730B
Lead Finish	Matte Sn

Change To

Table 2:

Assembly site	Unisem
Lead Frame	Cu Alloy A194 (Ag plated)
Die Attach	Ablebond 8290
Wire	1.0 mil Au
Mold Compound	G600
Lead Finish	Matte Sn

Results/Discussion for Qual Plan Number Q20070249

Test: (Autoclave)				
Lot	Device	96-HOURS	Failure Code	
Q20070249AAACLVB	74F543PC	0/77		
Q20070249BAACLVB	FAN5009MX	0/77		
Q20070249CAACLVB	FSAL200QSCX	0/77		
Test: (Gate Leakage Negative)				
Lot	Device	Results	Failure Code	
Q20070249AAGATE-B	74F543PC	0/3		
Q20070249CAGATE-B	FSAL200QSCX	0/3		
Test: (Gate Leakage Positive)				
Lot	Device	Results	Failure Code	
Q20070249AAGATE+B	74F543PC	0/3		
Q20070249CAGATE+B	FSAL200QSCX	0/3		
Test: (High Temperature Storage Life)				
Lot	Device	168-HOURS	1000-HOURS	Failure Code
Q20070249AAHTSLB	74F543PC	0/77		
Q20070249AAHTSLB	74F543PC		0/77	
Q20070249BAHTSLB	FAN5009MX	0/77		
Q20070249BAHTSLB	FAN5009MX		0/77	

Q20070249CAHTSLB	FSAL200QSCX	0/77		
Q20070249CAHTSLB	FSAL200QSCX		0/77	
Test: (Static Op Life)				
Lot	Device	168-HOURS	1000-HOURS	Failure Code
Q20070249AASOPL1B	74F543PC	0/77		
Q20070249AASOPL1B	74F543PC		0/77	
Q20070249CASOPL1B	FSAL200QSCX	0/77		
Q20070249CASOPL1B	FSAL200QSCX		0/77	
Test: -65C, 150C (Temperature Cycle)				
Lot	Device	500-CYCLES	1000-CYCLES	Failure Code
Q20070249AATMCL1B	74F543PC	0/77		
Q20070249AATMCL1B	74F543PC		0/77	
Q20070249BATMCL1B	FAN5009MX	0/77		
Q20070249BATMCL1B	FAN5009MX		0/77	
Q20070249CATMCL1B	FSAL200QSCX	0/77		
Q20070249CATMCL1B	FSAL200QSCX		0/77	
Test: 110C (Highly Accelerated Stress Test)				
Lot	Device	264-HOURS	528-HOURS	Failure Code
Q20070249AAHAST2B	74F543PC	0/45		
Q20070249AAHAST2B	74F543PC		0/45	
Q20070249BAHAST2B	FAN5009MX	0/45		
Q20070249CAHAST2B	FSAL200QSCX	0/45		
Test: MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)				
Lot	Device	Results		Failure Code
Q20070249BAPCNL1AB	FAN5009MX	0/276		
Q20070249CAPCNL1AB	FSAL200QSCX	0/353		
Test: MSL(3), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)				
Lot	Device	Results		Failure Code
Q20070249AAPCNL3AB	74F543PC	0/353		

Product Id Description : This Final PCN covers Fairchild Semiconductor NMSON 8L and NQSOP 16/20/24L packages. For a complete listing of products covered in this PCN release, please refer to the Affected FSID listing.

Affected FSIDs :

100EL11MX	100EL11M	100EL16MX
100EL16M	100ELT22MX	100ELT22M
100LVEL11MX	100LVEL11M	100LVEL16MX
100LVEL16MX_NL	100LVEL16M	100LVELT22MX
100LVELT22M	74ACTQ543QSCX	74ACTQ543QSC
74LVX3245QSCX	74LVX3245QSC	74LVX4245QSCX
74LVX4245QSC	74LVXC3245QSCX	74LVXC3245QSC
74LVXC4245QSCX	74LVXC4245QSC	CGS3311MX
CGS3311M	CGS3312MX	CGS3312M
CGS3318MX	CGS3318M	CGS3321MX
CGS3321M	FAN5009MX	FAN5009MX_F108
FIN1017MX	FIN1018MX	FIN1018M
FIN1027AMX	FIN1027MX	FIN1027M
FIN1028MX	FIN1028M	FIN1101MX
FIN1101M	FMS6141CSX	FMS6141CS
FSAL200QSCX	FSAL200QSC	FSAV330QSCX
FSAV330QSC	FSAV331QSCX	FSAV332QSC
FSAV430QSCX	FSAV450QSCX	FSAV450QSC
FST3125QSCX	FST3125QSC	FST3244QSCX
FST3245QSCX	FST3245QSC	FST3253QSCX
FST3253QSC	FST3257QSCX	FST3257QSC

FST3384QSCX	FST3384QSC	FST6800QSCX
FSUSB22QSCX	FSUSB22QSC	GTLP1B151MX
GTLP1B151M	GTLP2T152MX	GTLP2T152M