

Date Created : 2008/01/25  
Date Issued On : 2008/03/17  
PCN# : Q4074601-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.**

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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Implementation of change:

Expected 1st Device Shipment Date: 2008/03/20

Earliest Year/Work Week of Changed Product: 0813

Change Type Description: Mold Compound

Description of Change (From): 8L MLP3x3 package assembly at all FSC approved manufacturing location(s) (Carsem) using non Green mold compound as shown in table 1.

Description of Change (To): 8L MLP 3x3 package assembly at all FSC approved manufacturing location(s) (Carsem) using Green mold compound as shown in table 2.

Reason for Change : 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 : Q20070296

Qualification :

All the reliability tests defined in this qual plan completed with no failures. Therefore Carsem is qualified to assemble MLP 3x3 8L package.

Change From

Table 1:

Assembly Site	Carsem
Lead Frame	DCI C194 with Ag Plated
Die Attach	84-1LMISNB
Wire	2 mils Au
Mold Compound	MP8000CSM-F1
Lead Finish	Tin plating (matte finish)

Change To

Table 2:

Assembly Site	Carsem
Lead Frame	DCI C194 with Ag Plated
Die Attach	84-1LMISNB
Wire	2 mils Au
Mold Compound	G600
Lead Finish	Tin plating (matte finish)

## Results/Discussion

Test: (Autoclave)				
Lot	Device	96-HOURS		Failure Code
Q20070296BAACLV	FDMC2674	0/77		
Q20070296CAACLV	FDMC8854	0/77		
Test: (High Temperature Gate Bias)				
Lot	Device	500-HOURS	1000-HOURS	Failure Code
Q20070296BAHTGB	FDMC2674	0/77		
Q20070296BAHTGB	FDMC2674		0/77	
Q20070296CAHTGB	FDMC8854	0/77		
Q20070296CAHTGB	FDMC8854		0/77	
Test: (High Temperature Reverse Bias)				
Lot	Device	500-HOURS	1000-HOURS	Failure Code
Q20070296BAHTRB	FDMC2674	0/77		
Q20070296BAHTRB	FDMC2674		0/77	
Q20070296CAHTRB	FDMC8854	0/77		
Q20070296CAHTRB	FDMC8854		0/77	
Test: (Power Cycle)				
Lot	Device	5000-CYCLES	10000-CYCLES	Failure Code
Q20070296AAPRCL	FDM6296	0/77		
Q20070296AAPRCL	FDM6296		0/77	
Q20070296BAPRCL	FDMC2674	0/77		
Q20070296BAPRCL	FDMC2674		0/77	
Q20070296CAPRCL	FDMC8854	0/77		
Q20070296CAPRCL	FDMC8854		0/77	
Test: -65C, 150C (Temperature Cycle)				
Lot	Device	100-CYCLES	500-CYCLES	Failure Code

Q20070296AATMCL1	FDM6296	0/77	
Q20070296AATMCL1	FDM6296		0/77
Q20070296BATMCL1	FDMC2674	0/77	
Q20070296BATMCL1	FDMC2674		0/77
Q20070296CATMCL1	FDMC8854	0/77	
Q20070296CATMCL1	FDMC8854		0/77
<b>Test: 110C (Highly Accelerated Stress Test)</b>			
Lot	Device	264-HOURS	Failure Code
Q20070296AAHAST2	FDM6296	0/77	
Q20070296BAHAST2	FDMC2674	0/77	
Q20070296CAHAST2	FDMC8854	0/77	
<b>Test: MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)</b>			
Lot	Device	Results	Failure Code
Q20070296AAPCNL1A	FDM6296	0/154	
Q20070296BAPCNL1A	FDMC2674	0/231	
Q20070296CAPCNL1A	FDMC8854	0/231	

Product Id Description : This Final PCN covers Fairchild Semiconductor MLP3x3 8L packages. For a complete listing of products covered in this PCN release, please refer to the affected FSID listing.

**Affected FSIDs :**

FDM3300NZ	FDM3300NZ_NL	FDM3622
FDM3622_NL	FDM6296	FDM6296_NL
FDMC2523P	FDMC2610	FDMC2674
FDMC3300NZA	FDMC5614P	FDMC8554
FDMC8854	FDMC8878	FDMC8878_NBSE003