

Date Created : 2008/02/28  
Date Issued On : 2008/04/08  
PCN# : Q4074811-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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PCN Originator:

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Implementation of change:

Expected 1st Device Shipment Date: 2008/05/09

Earliest Year/Work Week of Changed Product: D0819

Change Type Description: Mold Compound

Description of Change (From): SSOT-3 and SSOT-6 package assembly in FSC approved manufacturing locations using non-Green mold compound as shown in table 1:

Description of Change (To): SSOT-3 and SSOT-6 package assembly at all FSC approved manufacturing locations 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 : Q20070473

Qualification :

The qualification for SSOT-3 & SSOT-6 Green EMC passed the Qualification Requirements as defined in iRel QP Q20070473.

## Change From

<b>For SS0T-3:</b>	
Assembly Site	FSCP (Cebu, Philippines)
Leadframe	Alloy 194
Die Attach	Eutectic
Wire	Gold
Mold Compound	Cookson AMC-2RC
Lead Finish	Matte Sn

<b>For SS0T-6:</b>	
Assembly Site	FSCP (Cebu, Philippines)
Leadframe	Alloy 194
Die Attach	Eutectic / Adhesive (QMI519)
Wire	Gold / Copper
Mold Compound	Cookson AMC-2RC
Lead Finish	Matte Sn

## Change To

<b>For SS0T-3:</b>	
Assembly Site	FSCP (Cebu, Philippines)
Leadframe	Alloy 194
Die Attach	Eutectic
Wire	Gold
Mold Compound	KTMC 5200G
Lead Finish	Matte Sn

<b>For SS0T-6:</b>	
Assembly Site	FSCP (Cebu, Philippines)
Leadframe	Alloy 194
Die Attach	Eutectic / Adhesive (QMI519)
Wire	Gold / Copper
Mold Compound	Cookson CK5000A
Lead Finish	Matte Sn

## Results/Discussion

<b>Test: (Autoclave)</b>					
Lot	Device	96-HOURS	Failure Code		
Q20070473AAACLV	FDC637BNZ	0/77			
Q20070473ABACLV	FDC637BNZ	0/77			
Q20070473ACACLV	FDC637BNZ	0/77			
Q20070473BAACLV	FDC638APZ	0/77			
Q20070473BBACLV	FDC638APZ	0/77			
Q20070473BCACLV	FDC638APZ	0/77			
Q20070473CAACLV	FDC658AP	0/77			
Q20070473DAACLV	FAN2558SX	0/77			
Q20070473EAACLV	FDC365P	0/77			
Q20070473FAACLV	FDN338P	0/77			

  

<b>Test: (High Humidity, High Temp, Rev. Bias)</b>					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070473CAH3TRB	FDC658AP	0/77			
			0/77		
				0/77	
Q20070473FAH3TRB	FDN338P	0/77			
			0/77		
				0/77	
Q20070473FBH3TRB		0/77			
			0/77		
				0/77	

  

<b>Test: (High Temperature Gate Bias)</b>					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070473AAHTGB	FDC637BNZ	0/77			
			0/77		
				0/77	
Q20070473BAHTGB	FDC638APZ	0/77			

			0/77		
				0/77	
Q20070473BBHTGB			0/77		
				0/77	
Q20070473BCHTGB		0/77			
			0/77		
				0/77	
Q20070473CAHTGB	FDC658AP	0/77			
			0/77		
				0/77	
Q20070473FAHTGB	FDN338P	0/77			
			0/77		
				0/77	
Q20070473FBHTGB		0/77			
			0/77		
				0/77	
Q20070473GAHTGB	FDN371N		0/77		
				0/77	

**Test: (High Temperature Reverse Bias)**

Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070473AAHTRB	FDC637BNZ	0/77			
				0/77	
Q20070473BAHTRB	FDC638APZ	0/77			
				0/77	
Q20070473BBHTRB		0/77			
				0/77	
Q20070473BCHTRB		0/77			
				0/77	
Q20070473CAHTRB	FDC658AP		0/77		
				0/77	
Q20070473FAHTRB	FDN338P	0/77			
			0/77		
				0/77	
Q20070473FBHTRB		0/77			
			0/77		
				0/77	
Q20070473GAHTRB	FDN371N	0/77			
			0/77		
				0/77	

**Test: (Power Cycle)**

Lot	Device	5000-CYCLES	10000-CYCLES	Failure Code
Q20070473AAPRCL	FDC637BNZ	0/77		
Q20070473AAPRCL	FDC637BNZ		0/77	
Q20070473BAPRCL	FDC638APZ	0/77		
Q20070473BAPRCL	FDC638APZ		0/77	
Q20070473BBPRCL	FDC638APZ	0/77		
Q20070473BBPRCL	FDC638APZ		0/77	
Q20070473BCPRCL	FDC638APZ	0/77		
Q20070473BCPRCL	FDC638APZ		0/77	
Q20070473CAPRCL	FDC658AP	0/77		
Q20070473CAPRCL	FDC658AP		0/77	
Q20070473EAPRCL	FDC365P	0/77		
Q20070473EAPRCL	FDC365P		0/77	
Q20070473FAPRCL	FDN338P	0/77		
Q20070473FAPRCL	FDN338P		0/77	
Q20070473FBPRCL	FDN338P	0/77		
Q20070473FBPRCL	FDN338P		0/77	
Q20070473GAPRCL	FDN371N	0/77		
Q20070473GAPRCL	FDN371N		0/77	

**Test: (Static Op Life)**

Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070473DASOPL1	FAN2558SX	0/77			
			0/77		
				0/77	

**Test: (Temperature Humidity Biased Test)**

Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
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Q20070473DATHBT		0/77		
			0/77	
				0/77
<b>Test: -65C, 150C (Temperature Cycle)</b>				
Lot	Device	100-CYCLES	500-CYCLES	Failure Code
Q20070473AATMCL1	FDC637BNZ	0/77		
Q20070473AATMCL1	FDC637BNZ		0/77	
Q20070473ABTMCL1	FDC637BNZ	0/77		
Q20070473ABTMCL1	FDC637BNZ		0/77	
Q20070473ACTMCL1	FDC637BNZ	0/77		
Q20070473ACTMCL1	FDC637BNZ		0/77	
Q20070473BATMCL1	FDC638APZ	0/77		
Q20070473BATMCL1	FDC638APZ		0/77	
Q20070473BBTMCL1	FDC638APZ	0/77		
Q20070473BBTMCL1	FDC638APZ		0/77	
Q20070473BCTMCL1	FDC638APZ	0/77		
Q20070473BCTMCL1	FDC638APZ		0/77	
Q20070473CATMCL1	FDC658AP	0/77		
Q20070473CATMCL1	FDC658AP		0/77	
Q20070473DATMCL1	FAN2558SX	0/77		
Q20070473DATMCL1	FAN2558SX		0/77	
Q20070473EATMCL1	FDC365P	0/77		
Q20070473EATMCL1	FDC365P		0/77	
Q20070473FATMCL1	FDN338P	0/77		
Q20070473FATMCL1	FDN338P		0/77	
Q20070473FBTMCL1	FDN338P	0/77		
Q20070473FBTMCL1	FDN338P		0/77	
Q20070473GATMCL1	FDN371N	0/77		
Q20070473GATMCL1	FDN371N		0/77	
<b>Test: 110C (Highly Accelerated Stress Test)</b>				
Lot	Device	132-HOURS	264-HOURS	Failure Code
Q20070473AAHAST2	FDC637BNZ	0/77		
Q20070473AAHAST2	FDC637BNZ		0/77	
Q20070473BAHAST2	FDC638APZ	0/77		
Q20070473BAHAST2	FDC638APZ		0/77	
Q20070473BBHAST2	FDC638APZ	0/77		
Q20070473BBHAST2	FDC638APZ		0/77	
Q20070473BCHAST2	FDC638APZ	0/77		
Q20070473BCHAST2	FDC638APZ		0/77	
Q20070473CAHAST2	FDC658AP	0/77		
Q20070473CAHAST2	FDC658AP		0/77	
Q20070473FAHAST2	FDN338P	0/77		
Q20070473FAHAST2	FDN338P		0/77	
Q20070473GAHAST2	FDN371N	0/77		
Q20070473GAHAST2	FDN371N		0/77	
<b>Test: 130C (Unbiased HAST)</b>				
Lot	Device	96-HOURS		Failure Code
Q20070473FBUHAST1	FDN338P	0/77		
Q20070473GAUHAST1	FDN371N	0/77		
<b>Test: MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)</b>				
Lot	Device	Results		Failure Code
Q20070473AAPCNL1A	FDC637BNZ	0/231		
Q20070473ABPCNL1A	FDC637BNZ	0/154		
Q20070473ACPCNL1A	FDC637BNZ	0/154		
Q20070473BAPCNL1A	FDC638APZ	0/231		
Q20070473BBPCNL1A	FDC638APZ	0/231		
Q20070473BCPCNL1A	FDC638APZ	0/231		
Q20070473CAPCNL1A	FDC658AP	0/308		
Q20070473DAPCNL1A	FAN2558SX	0/231		
Q20070473EAPCNL1A	FDC365P	0/154		
Q20070473FAPCNL1A	FDN338P	0/308		
Q20070473FBPCNL1A	FDN338P	0/231		
Q20070473GAPCNL1A	FDN371N	0/231		

Product Id Description : This final notification covers Fairchild Semiconductor SSOT-3

& SSOT-6 packages. For complete listing of products covered in this PCN release, please refer to the Affected FSID listing.

Affected FSIDs :

FDC2512	FDC2512_F073	FDC2512_F095
FDC2612	FDC2612_F073	FDC2612_F095
FDC2612_NL	FDC3512	FDC3512_F073
FDC3512_F095	FDC3601N	FDC3601N_NL
FDC3612	FDC3612_F073	FDC3612_F095
FDC365P	FDC5612	FDC5612_F073
FDC5612_F095	FDC5614P	FDC5614P_D87Z
FDC5614P_F073	FDC5614P_F095	FDC5614P_NL
FDC602P	FDC602P_F073	FDC602P_F095
FDC602P_NL	FDC604P	FDC604P_F073
FDC604P_F095	FDC604P_NL	FDC606P
FDC606P_F073	FDC606P_F095	FDC606P_G
FDC606P_NBCE003A	FDC606P_NL	FDC608PZ
FDC610PZ	FDC6301N	FDC6301N_NL
FDC6302P	FDC6303N	FDC6304P
FDC6305N	FDC6305N_NL	FDC6306P
FDC6306P_NL	FDC6310P	FDC6312P
FDC6312P_NL	FDC6318P	FDC6320C
FDC6321C	FDC6321C_NL	FDC6322C
FDC6322C_NL	FDC6323L	FDC6324L
FDC6324L_NL	FDC6325L	FDC6326L
FDC6326L_NL	FDC6327C	FDC6327C_NL
FDC6329L	FDC6329L_NL	FDC6330L
FDC6330L_NL	FDC6331L	FDC6331L_NL
FDC6333C	FDC6333C_NL	FDC633N
FDC633N_F073	FDC633N_F095	FDC633N_NL
FDC634P	FDC634P_F073	FDC634P_F095
FDC634P_G	FDC634P_NL	FDC636P
FDC636P_F073	FDC636P_F095	FDC637AN
FDC637AN_F073	FDC637AN_F095	FDC637AN_NB5E023A
FDC637AN_NB5E044	FDC637AN_NL	FDC637BNZ
FDC638APZ	FDC638P	FDC638P_F073
FDC638P_F095	FDC638P_G	FDC638P_NBAD009
FDC638P_NF073	FDC638P_NL	FDC6392S
FDC6392S_NL	FDC6401N	FDC6401N_NBHS003
FDC6401N_NL	FDC640P	FDC640P_F073
FDC640P_F095	FDC640P_NBAD004A	FDC640P_NL
FDC6420C	FDC642P	FDC642P_F073
FDC642P_F095	FDC642P_NL	FDC6432SH
FDC645N	FDC645N_F073	FDC645N_F095
FDC645N_NL	FDC6506P	FDC6506P_NB4S006A
FDC6506P_NL	FDC653N	FDC653N_F073
FDC653N_F095	FDC653N_NB3E005A	FDC653N_NL
FDC654P	FDC654P_F073	FDC654P_F095
FDC654P_NBGT006	FDC654P_NBGT007	FDC654P_NF073

FDC654P_NL	FDC655AN	FDC655AN_F095
FDC655AN_NL	FDC655BN	FDC655BN_F073
FDC655BN_G	FDC655BN_NBNN007	FDC655BN_NL
FDC655N_NB5E016B	FDC6561AN	FDC6561AN_NB5S007A
FDC6561AN_NL	FDC658AP	FDC658P
FDC658P_F095	FDC658P_NB4E009A	FDC658P_NB4E011
FDC658P_NB4E012	FDC658P_NL	FDC6901L
FDC855N	FDFC2P100	FDFC3N108
FDN302P	FDN302P_NL	FDN304P
FDN304PZ	FDN304PZ_NL	FDN304P_NBAD003A
FDN304P_NL	FDN306P	FDN306P_NL
FDN308P	FDN327N	FDN327N_NL
FDN335N	FDN335N_NL	FDN336P
FDN336P_NL	FDN337N	FDN337N_NL
FDN338P	FDN338P_NL	FDN339AN
FDN3400	FDN3401	FDN340P
FDN340P_NL	FDN342P	FDN342P_NL
FDN352AP	FDN352AP_NBAL001	FDN352AP_NL
FDN357N	FDN357N_NL	FDN358P
FDN358P_NL	FDN359AN	FDN359AN_NL
FDN359BN	FDN360P	FDN360P_NBG T003B
FDN360P_NL	FDN361AN	FDN361AN_NL
FDN361BN	FDN371N	FDN372S
FDN5618P	FDN5618P_NL	FDN5630
FDN5630_NB5N008A	FDN5630_NL	FMB100
FMB200	FMB2222A	FMB2227A
FMB2907A	FMB3904	FMB3906
FMB3946	FMB5551	FMB857B
FMBA06	FMBA14	FMBA56
FMBM5401	FMBM5551	FMBS5401
FMBS549	FMBS5551	FMBSA06
FMBSA56	FMMT449	FMMT549
FSB560	FSB560A	FSB619
FSB649	FSB660A	FSB6714
FSB6726	FSB749	FSBCW30
FSD4148	MMBF5434	MMBFJ108
MMBTA28	NDC631N	NDC631N_F095
NDC632P	NDC632P_F095	NDC632P_NL
NDC651N	NDC651N_F073	NDC651N_F095
NDC652P	NDC652P_F073	NDC652P_F095
NDC7001C	NDC7002N	NDC7002N_NL
NDC7003P	NDS331N	NDS331N_D87Z
NDS331N_ND87Z	NDS331N_NL	NDS332P
NDS332P_NL	NDS335N	NDS335N_D87Z
NDS335N_NL	NDS336P	NDS336P_NL
NDS351AN	NDS351AN_NL	NDS351N
NDS352AP	NDS352AP_NL	NDS355AN
NDS355AN_NB9L007A	NDS355AN_NL	NDS355N

NDS356AP	NDS356AP_NB8L005A	NDS356AP_NL
SI3442DV_F073	SI3443DV	SI3443DV_F095
SI3456DV_NL	SI3457DV	SI3457DV_F073
SI3457DV_F095	SI3457DV_NL	