

Date Created : 2008/03/12
Date Issued On : 2008/03/27
PCN# : Q4075102-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: 2008/04/25

Earliest Year/Work Week of Changed Product: D0817

Change Type Description: Mold Compound

Description of Change (From): SOIC-8 FLMP, SSOT-6 FLMP and SC75-6L FLMP package assembly in FSC approved manufacturing locations using non-Green mold compound as shown in table 1:

Description of Change (To): SOIC-8 FLMP, SSOT-6 FLMP and SC75-6L FLMP package assembly in 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 leadfree 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 unchanged. 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 : Q20070442

Qualification :

The Qualification for FLMP Green EMC passed the Reliability Requirements as defined in iRel QP Q20070442.

Change From

BILL OF MATERIALS:	
PACKAGE: SOIC-8 FLMP (EMSON)	
Location	FSCP
Pin count	8-Leads
Leadframe	C194 SH (Pre-plated NiPd + Au Flash)
Backmetal	TiNiAgAu
Flip Attach	88Pb 10Sn 2Ag NC-SMG75 FLIP CHIP
Bump	95Pb 5Sn
EMC	Cookson AMC-2RD
Lead Finish	NiPd + Au Flash

PACKAGE: SSOT-6 FLMP (TTR23)	
Location	FSCP
Pin count	6-Leads
Leadframe	C194 FH (pre-plated NiPd + Au Flash)
Backmetal	TiNiAgAu
Flip Attach	88Pb 10Sn 2Ag NC-SMG75 FLIP CHIP
Bump	Pure Copper / 95Pb 5Sn
EMC	Cookson AMC-2RD
Lead Finish	NiPd + Au Flash

PACKAGE: SC75-6L FLMP (TTS23)	
Location	FSCP
Pin count	6-Leads
Leadframe	C194 FH (pre-plated NiPd + Au Flash)
Backmetal	TiNiAgAu
Flip Attach	88Pb 10Sn 2Ag NC-SMG75 FLIP CHIP
Bump	Pure Copper / 95Pb 5Sn
EMC	Cookson AMC-2RD
Lead Finish	NiPd + Au Flash

Change To

BILL OF MATERIALS:

PACKAGE: SOIC-8 FLMP (EMSON)

Location	FSCP
Pin count	8-Leads
Leadframe	C194 SH (Pre-plated NiPd + Au Flash)
Backmetal	TiNiAgAu
Flip Attach	88Pb 10Sn 2Ag NC-SMG75 FLIP CHIP
Bump	95Pb 5Sn
EMC	Cookson CK5000A
Lead Finish	NiPd + Au Flash

PACKAGE: SSOT-6 FLMP (TTR23)

Location	FSCP
Pin count	6-Leads
Leadframe	C194 FH (pre-plated NiPd + Au Flash)
Backmetal	TiNiAgAu
Flip Attach	88Pb 10Sn 2Ag NC-SMG75 FLIP CHIP
Bump	Pure Copper / 95Pb 5Sn
EMC	Cookson CK5000A
Lead Finish	NiPd + Au Flash

PACKAGE: SC75-6L FLMP (TTS23)

Location	FSCP
Pin count	6-Leads
Leadframe	C194 FH (pre-plated NiPd + Au Flash)
Backmetal	TiNiAgAu
Flip Attach	88Pb 10Sn 2Ag NC-SMG75 FLIP CHIP
Bump	Pure Copper / 95Pb 5Sn
EMC	Cookson CK5000A
Lead Finish	NiPd + Au Flash

Results/Discussion

Test: (Autoclave)					
Lot	Device	96-HOURS	Failure Code		
Q20070442AAACLV	FDS2170N7	0/77			
Q20070442BAACLV	FDC796N	0/77			
Q20070442CAACLV	FDJ129P	0/77			
Q20070442DAACLV	FDC6036P_F077	0/77			
Q20070442EAACLV	FDJ1027P	0/77			

Test: (High Temperature Gate Bias)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070442AAHTGB	FDS2170N7	0/77			
			0/77		
				0/77	
Q20070442BAHTGB	FDC796N		0/77		
				0/77	
Q20070442CAHTGB	FDJ129P		0/77		
				0/77	
Q20070442DAHTGB	FDC6036P_F077	0/77			
			0/77		
Q20070442EAHTGB	FDJ1027P	0/77			
			0/77		
				0/77	

Test: (High Temperature Reverse Bias)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070442AAHTRB	FDS2170N7		0/77		
				0/77	
Q20070442BAHTRB	FDC796N	0/77			
			0/77		
				0/77	

Q20070442CAHTRB	FDJ129P		0/77		
				0/77	
Q20070442DAHTRB	FDC6036P_F077	0/77			
			0/77		
Q20070442EAHTRB	FDJ1027P	0/77			0/77
			0/77		
				0/77	

Test: (Power Cycle)

Lot	Device	5000-CYCLES	10000-CYCLES	Failure Code
Q20070442AAPRCL	FDS2170N7	0/77		
Q20070442AAPRCL	FDS2170N7		0/77	
Q20070442BAPRCL	FDC796N	0/77		
Q20070442BAPRCL	FDC796N		0/77	
Q20070442CAPRCL	FDJ129P	0/77		
Q20070442CAPRCL	FDJ129P		0/77	
Q20070442DAPRCL	FDC6036P_F077	0/77		
Q20070442DAPRCL	FDC6036P_F077		0/77	
Q20070442EAPRCL	FDJ1027P	0/77		
Q20070442EAPRCL	FDJ1027P		0/77	

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

Lot	Device	100-CYCLES	500-CYCLES	Failure Code
Q20070442AATMCL1	FDS2170N7	0/77		
Q20070442AATMCL1	FDS2170N7		0/77	
Q20070442BATMCL1	FDC796N	0/77		
Q20070442BATMCL1	FDC796N		0/77	
Q20070442CATMCL1	FDJ129P	0/77		
Q20070442CATMCL1	FDJ129P		0/77	
Q20070442DATMCL1	FDC6036P_F077	0/77		
Q20070442DATMCL1	FDC6036P_F077		0/77	
Q20070442EATMCL1	FDJ1027P	0/77		
Q20070442EATMCL1	FDJ1027P		0/77	

Test: 110C (Highly Accelerated Stress Test)

Lot	Device	132-HOURS	264-HOURS	Failure Code
Q20070442AAHAST2	FDS2170N7	0/77		
Q20070442AAHAST2	FDS2170N7		0/77	
Q20070442BAHAST2	FDC796N	0/77		
Q20070442BAHAST2	FDC796N		0/77	
Q20070442CAHAST2	FDJ129P	0/45		
Q20070442CAHAST2	FDJ129P		0/45	
Q20070442DAHAST2	FDC6036P_F077	0/77		
Q20070442DAHAST2	FDC6036P_F077		0/77	
Q20070442EAHAST2	FDJ1027P	0/45		
Q20070442EAHAST2	FDJ1027P		0/45	

Test: MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)

Lot	Device	Results	Failure Code
Q20070442AAPCNL1A	FDS2170N7	0/308	
Q20070442BAPCNL1A	FDC796N	0/308	
Q20070442CAPCNL1A	FDJ129P	0/276	
Q20070442DAPCNL1A	FDC6036P_F077	0/308	
Q20070442EAPCNL1A	FDJ1027P	0/276	

Product Id Description : This final notification covers Fairchild Semiconductor SOIC-8 FLMP, SSOT-6 FLMP and SC75-6L FLMP packages. For a complete listing of products covered in this PCN release, please refer to the Affected FSID listing.

Affected FSIDs :

BAS6_BBA002B	FDC3616N	FDC6000NZ
FDC6000NZ_F077	FDC6020C	FDC6020C_F077
FDC6036P	FDC6036P_F077	FDC697P
FDC697P_F077	FDC699P	FDC699P_F077
FDC796N	FDC796N_F077	FDJ1027P

FDJ1028N	FDJ1032C	FDJ127P
FDJ128N	FDJ128N_F077	FDJ129P
FDJ129P_F077	FDS2070N3	FDS2070N7
FDS2170N3	FDS2170N7	FDS3170N7
FDS3170N7_NL	FDS4070N3	FDS4070N7
FDS4072N3	FDS4072N7	FDS4080N3
FDS4080N7	FDS5170N7	FDS6064N3
FDS6064N7	FDS6162N3	FDS6162N7
FDS7060N7	FDS7064N	FDS7064N7
FDS7064SN3	FDS7066ASN3	FDS7066N3
FDS7066N7	FDS7079ZN3	FDS7079ZN3_NL
FDS7082N3	FDS7088N3	FDS7088N7
FDS7088SN3	FDS7088SN3_NL	FDS7096N3
FDS7288N3	FDS7296N3	