



Date Created: 4/21/2004
Date Issued: 5/3/2004
PCN # 20033907-B

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.**

If you have any questions concerning this change, please contact:

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PCN Originator

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REL Engineer

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PCN Type: Manufacturing Location

Effectivity

Expected 1st Device Shipment Date: 5/28/2004
Earliest Year/Work Week of Changed Product: 0422
(Note: Package marking may differ from this format)

Product ID (Description):

All TSSOP (high pin count) logic assembled in Amkor Technologies, Korea.

Description of Change:

Fairchild Semiconductor is qualifying the assembly location transfer from Amkor Technologies Korea facility to Amkor Technologies Philippines facility. Fairchild will no longer source these products from Amkor Technologies Korea facility after December 31, 2003.

There is no change on bill of materials, assembly process and assembly process equipments utilized at either assembly location.

Bill of materials are as below.

	Amkor Korea	Amkor Philippines
Wire Type - Diameter	Au 1.0mils	Au 1.0mils
D/A Epoxy	Ablestik 84-1 LMISR4	Ablestik 84-1 LMISR4
Mold Compound	Sumitomo 7351T	Sumitomo 7351T

Leadframe Type
Stamped

Cu C7025 Stamped

Cu C7025

Effect of Change:

There is no change to the physical dimension and device specification. Product quality and reliability will be maintained.

Qualification:

Amkor Technologies Philippines HPC TSSOP assembly process has been reviewed and found to meet or exceed Fairchild's quality system requirements. Fairchild has performed reliability stress testing to qualify Amkor Technologies Philippines assembly facility as shown in the Qual section below.

Qual/REL Plan Numbers

Additional Qualification Data

FAIRCHILD *Fairchild Semiconductor*
SEMICONDUCTOR™

Reliability Test Report

File Number:

FEP20040020

Originator:

Eng Teik Poh

Date: April 13, 2004

Description

Test Request	Device Name	Sbgrp	Wafer Die Run	Fab Loc	Fab Line	Pkg Code	# Leads	Assy Loc	Date Cd	Mold Cmpnd
REP200300668	74VCX16722MTDX	A	CH212300	FM		N1MTD0	64	ATP	0342	EME7351T
REP200300669	GTLP16T1655MTD	A	MG00103691	FM		N1MTD0	64	ATP	0342	EME7351T
REP200300670	SSTV16859MTDX	A	V330881	FM		N1MTD0	64	ATP	0342	EME7351T

Tests Performed

Test: Autoclave Test (ACLV)

Test Request	Device	Sbgrp	Rel Humidity	Pressure	High Temp	LowTemp
REP200300668	74VCX16722MTDX	A	100	15	121	
REP200300669	GTLP16T1655MTD	A	100	15	121	
REP200300670	SSTV16859MTDX	A	100	15	121	

Timepoints:	Test Request	TP	Duration
	REP200300668	1	96
	REP200300669	1	96
	REP200300670	1	96

Test: Highly Accelerated Stress Test (HAST)

Test Request	Device	Sbgrp	Rel Humidity	Pressure	High Temp	LowTemp
Q20030082AA	74VCX16722MTDX	A	85	2	110	
Q20030082BA	GTLP16T1655MTD	A	85	2	110	
Q20030082CA	SSTV16859MTDX	A	85	2	110	

Timepoints:	Test Request	TP	Duration			
	Q20030082AA	1	264			
	Q20030082BA	1	264			
	Q20030082CA	1	264			
Test: High Temperature Storage test (bake) (HTSL)						
Test Request	Device	Sbgrp	Rel Humidity	Pressure	High Temp	LowTemp
REP200300668	74VCX16722MTDX	A			150	
REP200300669	GTLP16T1655MTD	A			150	
REP200300670	SSTV16859MTDX	A			150	
Timepoints:	Test Request	TP	Duration			
	REP200300668	1	168			
	REP200300668	2	1000			
	REP200300669	1	168			
	REP200300669	2	1000			
	REP200300670	1	168			
	REP200300670	2	1000			
Test: Temperature Cycle (TMCL)						
Test Request	Device	Sbgrp	Rel Humidity	Pressure	High Temp	LowTemp
REP200300668	74VCX16722MTDX	A			150	-65
REP200300669	GTLP16T1655MTD	A			150	-65
REP200300670	SSTV16859MTDX	A			150	-65
Timepoints:	Test Request	TP	Duration			
	REP200300668	1	500			
	REP200300669	1	500			
	REP200300670	1	500			

Results/Discussion

Test: Autoclave Test (ACLV) Precon level 3 at 260 deg C							
Test Request	Device	Sbgrp	TP	Duration	Sample Size	Rejects	
REP200300668	74VCX16722MTDX	A	1	96	77	0	
REP200300669	GTLP16T1655MTD	A	1	96	77	0	
REP200300670	SSTV16859MTDX	A	1	96	77	0	
Test: High Temperature Storage test (bake) (HTSL)							
Test Request	Device	Sbgrp	TP	Duration	Sample Size	Rejects	
REP200300668	74VCX16722MTDX	A	1	168	77	0	
REP200300668	74VCX16722MTDX	A	2	1000	77	0	
REP200300669	GTLP16T1655MTD	A	1	168	77	0	
REP200300669	GTLP16T1655MTD	A	2	1000	77	0	
REP200300670	SSTV16859MTDX	A	1	168	77	0	
REP200300670	SSTV16859MTDX	A	2	1000	77	0	
Test: Temperature Cycle (TMCL) Precon level 3 at 260 deg C							
Test Request	Device	Sbgrp	TP	Duration	Sample Size	Rejects	
REP200300668	74VCX16722MTDX	A	1	500	77	0	
REP200300669	GTLP16T1655MTD	A	1	500	77	0	
REP200300670	SSTV16859MTDX	A	1	500	77	0	
Test: Highly Accelerate Stress Test (HAST) Precon level 3 at 260 deg C							

Test Request	Device	Sbgrp	TP	Duration	Sample Size	Rejects
Q20030082AA	74VCX16722MTDX	A	1	264	45	0
Q20030082BA	GTLP16T1655MTD	A	1	264	45	0
Q20030082CA	SSTV16859MTDX	A	1	264	45	0
Pull Test:						
	Device	Min	Max	Ave	Std Dev	
	74VCX16722MTDX	8.60	10.00	9.25	0.41	
	GTLP16T1655MTD	8.70	10.00	9.34	0.35	
	SSTV16859MTDX	8.30	10.80	9.60	0.79	
Ball Shear:						
	Device	Min	Max	Ave	Std Dev	
	74VCX16722MTDX	48.80	50.70	45.68	3.21	
	GTLP16T1655MTD	41.00	50.30	45.32	2.61	
	SSTV16859MTDX	40.90	48.90	44.38	2.37	
Die Shear:						
	Device	Min	Max	Ave	Std Dev	
	74VCX16722MTDX	10.40	12.60	11.60	0.73	
	GTLP16T1655MTD	23.10	28.30	25.14	1.69	
	SSTV16859MTDX	10.60	12.50	11.68	0.57	
Mold Void, Solderability, Lead Fatigue:						
	Device	Mold Void	Solderability	Lead Fatigue		
	74VCX16722MTDX	0/100	0/11	0/10		
	GTLP16T1655MTD	0/100	0/11	0/10		
	SSTV16859MTDX	0/100	0/11	0/10		

Affected FSIDs

74ABT162244CMTD	74ABT162244MTDX	74ABT16244CMTD
74ABT16244CMTDX	74ABT16245CMTD	74ABT16245CMTDX
74ABT16373CMTD	74ABT16373CMTDX	74ABT16374CMTD
74ABT16374CMTDX	74ABT16500CMTD	74ABT16500CMTDX
74ABT16501CMTD	74ABT16501CMTDX	74ABT16541CMTD
74ABT16541CMTDX	74ABT16543CMTD	74ABT16543CMTDX
74ABT16646CMTD	74ABT16646CMTDX	74ABT16652CMTD
74ABT16652CMTDX	74ABT16952CMTD	74ABT16952CMTDX
74ACT16240MTD	74ACT16240MTDX	74ACT16244MTD
74ACT16244MTDX	74ACT16245MTD	74ACT16245MTDX
74ACT16373MTD	74ACT16373MTDX	74ACT16374MTD
74ACT16374MTDX	74ACT16540MTD	74ACT16540MTDX
74ACT16541MTD	74ACT16541MTDX	74ACT16543MTD
74ACT16543MTDX	74ACT16646MTD	74ACT16646MTDX
74ACT18823MTD	74ACT18823MTDX	74ACT18825MTD
74ACT18825MTDX	74ACTQ16240MTD	74ACTQ16240MTDX

74ACTQ16244MTD
74ACTQ16245MTDX
74ACTQ16374MTD
74ACTQ16540MTDX
74ACTQ16543MTD
74ACTQ16646MTDX
74ACTQ18825MTD
74ALVC162240TX
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74ALVC162373TX
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74ALVC16244MTDX
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74ALVC162839TX
74ALVC16373MTD
74ALVC16374MTDX
74ALVC16501MTD
74ALVC16601MTDX
74ALVC16722MTD
74ALVC16821MTDX
74ALVC16835MTD
74ALVC16838MTDX
74ALVC16841MTD
74LCX162244MTDX
74LCX162374MTD
74LCX16240MTDX
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74LCXP16245MTDX
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74LCXZ16240MTD
74LCXZ16244MTDX
74LVT162240MTD
74LVT162244MTDX
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74LVT16245MTDX
74LVT16374MTD
74LVTH162240MTX
74LVTH162245MTD
74LVTH162373MTX
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74LVTH16244MTDX
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74ACTQ16244MTDX
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74ACTQ16541MTD
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74ALVC162244T
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FST34171MTDX
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FSTU32160MTD
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FSTUD16450MTD
GTL P10B320MTDX
GTL P16616MTD

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74LVX161284MTD
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FST16861MTD
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