



Date Created: 12/30/2003
Date Issued: 1/15/2004
PCN # 20040002

FORECAST CHANGE NOTIFICATION

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. This is a preliminary notification. A final PCN will be issued when qualification is complete and data is available.

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 Type: Alternate Assembly/Test Location/Qualification

Effectivity

Expected 1st Device Shipment Date: 4/15/2004
Earliest Year/Work Week of Changed Product: 0412
(Note: Package marking may differ from this format)

Product ID (Description):

This change will affect certain Power Discrete products assembled in TO-262/263 packages. The products affected by this change are listed below in the "Affected FSIDs" section.

Description of Change:

Fairchild Semiconductor (Suzhou) Co., LTD is being qualified as an additional assembly and test site as part of Fairchild Semiconductor's ongoing effort to increase manufacturing capacity for our various products assembled in the TO-262/263 packages.

This new facility is located at 1 Sutong Road, China-Singapore Suzhou Industrial Park Suzhou, Jiangsu P. R. of China.

The following are the package dimensional, process and material differences between the qualified sites and the additional Fairchild assembly and test facility to be qualified.

1.0 Material/ Process Comparison

TABLE 1 – Material Comparison

		Site 1-Qualified	Site 2-Qualified	Site 3-Qualified	Site 4-Test
		ChipPAC Malaysia	PSI Technologies	Fairchild-Cebu	Fairchild-Suzhou
Location		Kuala Lumpur, Malaysia	Manila, Philippines	Cebu, Philippines	Suzhou, PRC
Leadframe	Plating	Full Ni	Selective Ni (Ni plating on LeadPost)	Selective Ni (Ni plating on LeadPost)	Selective Ni (Ni plating on LeadPost)
	Matl	Cu (Tamac4)	Cu(PMC-90)	Cu (Tamac2/ 12SnOFC/ KFC1/2H)	Cu (12SnOFC)
Wire		Al	Al	Al	Al
D/A Solder	Composition	92.5Pb5Sn2.5Ag	92.5Pb5Sn2.5Ag/ 95Pb5Sn	92.5Pb5Sn2.5Ag	92.5Pb5Sn2.5Ag
Marking	Method	Laser	Laser	Laser	Laser
Plating	Composition	82Sn18Pb	85Sn15Pb	85Sn15Pb	Pure Sn
	Method	Electroplating	Electroplating	Electroplating	Electroplating
Fairchild Fab Site		MountainTop/ Salt Lake	Salt Lake	Salt Lake/ MountainTop	Salt Lake/ MountainTop

Note : Fairchild Suzhou is plan to be a Pb-Free Plating Finish Facility.

2.0 Package Dimensional Comparison

TABLE 2 – TO-263 Package Outline Information.

DIMENSION SUMMARY							
REF	DESCRIPTION	JEDEC STANDARD			FAIRCHILD MKT OUTLINE (CURRENT)		
		TO-263 variation AB			MKT-TO263A02 rev. B		
		MIN	NOM	MAX	MIN	NOM	MAX
E	Package width	9.65	9.97	10.29	9.65	---	10.29
L2	Heat sink height	---	---	1.40	1.00	---	1.40
D	Package height	8.64	9.14	9.65	8.53	---	9.65
L	Total package height	14.61	15.24	15.88	14.61	---	15.88
e	Lead pitch	2.54		BSC	2.54		BSC
b2	Lead shoulder width	1.14	1.27	1.40	1.14	---	1.60
b	Lead mounting width	0.51	0.75	0.99	0.51	---	0.99
E1	Back metal heat sink width	6.22	---	---	6.22	---	---
D1	Back metal heat sink height	8.00	---	---	6.35	---	---
L3	Center lead cut length	1.27	1.52	1.78	1.27	---	1.90
A	Package thickness	4.06	4.45	4.83	4.06	---	4.83
c2	Heat sink thickness	1.14	1.27	1.40	1.14	---	1.40
L4	Gage plane	0.25			0.25		BSC
L1	Foot length	2.29	2.54	2.79	2.29	---	2.79
c	Lead thickness	0.46	---	0.74	0.36	---	0.56
ANG	Foot landing angle	0	---	8	0	---	8
aaa	Lead position tolerance	---	---	0.25	---	---	0.25

Fairchild Suzhou TO-263 is following Fairchild Standard Marketing Outline and conforming to Jedec TO-263 AB general molded package outline dimensional measurement.

Effect of Change:

This change will have no impact on any of the electrical parameters of the products involved. The product test conditions, test limits and performance will remain unchanged. The Suzhou facility will produce products with the same level of quality and reliability as the existing manufacturing sites.

Products manufactured at the Suzhou site will provide Fairchild Semiconductor the ability to meet the increase in customer demand on TO-262/263 packages. Once qualified, products may be supplied from any of our qualified manufacturing locations.

Qualification:

The qualification of this change will consist of key silicon vehicles in a broad range of products.

Qual/REL Plan Numbers

Additional Qualification Data

ATTACHMENT 1
RELIABILITY TEST RESULT SUMMARY

COMPONENT LEVEL

TEST	CONDITION	DUR	DEVICE	FDB7042L	NDB7051	FDB8030L	HUF75945 S3	FDB2532	ISL9N306 AS3
			CHIP	70CDA	9JB	5RCM	75945L	82884	83360
			PKG	TO263/2	TO263/2	TO263/2	TO263/2	TO263/2	TO263/2
			SAMPLE SIZE	# OF FAILURES	# OF FAILURES	# OF FAILURES	# OF FAILURES	# OF FAILURES	# OF FAILURES
ACLV W/ L1 Precon	121°C, 15 psig	96 hrs	77						
TMCL W/ L1 Precon	-55°C TO 150°C, 15MIN DWELL	1000 cyc	77						
H3TRB Or HAST W/ L1 Precon	85°C/85%RH or 130C/85%RH Vr=80% Bvdss	1000 or 96hrs	77						
HTGB	175°C, Vg=100% Vgs	1000 hrs	77						See Note 1.
HTRB	175°C, Vr=80% Bvdss	1000 hrs	77						See Note 1.
PRCL W/ L1 Precon	Tj DELTA 100°C	10000 cyc	77						

Note: 1) HTRB and HTGB condition is 150°C.

Affected FSIDs

BA45_BBA003A	BQ45_BBM001A	CDB603AL
FDB15N50	FDB2532	FDB2552
FDB2570	FDB2572	FDB2670
FDB3632	FDB3652	FDB3682
FDB4020P	FDB5645	FDB5680
FDB5690	FDB6021P	FDB6030BL
FDB6030L	FDB6035AL	FDB6035L
FDB603AL	FDB6644	FDB6644S
FDB6670AL	FDB6670S	FDB6676
FDB6676S	FDB6690S	FDB7030BL
FDB7030BLS	FDB7030L	FDB7042L
FDB7045L	FDB8030L	FDI2532
FDI3632	FDI3652	HUF75321S3S
HUF75329S3	HUF75329S3ST	HUF75332S3ST
HUF75333S3	HUF75333S3ST	HUF75337S3S
HUF75343S3	HUF75343S3S	HUF75343S3ST
HUF75344S3ST	HUF75345S3	HUF75345S3S
HUF75345S3ST	HUF75542S3S	HUF75542S3ST
HUF75545S3	HUF75545S3S	HUF75545S3ST
HUF75623S3ST	HUF75631S3S	HUF75631S3ST
HUF75637S3S	HUF75637S3ST	HUF75637S3_R4895
HUF75639S3	HUF75639S3S	HUF75639S3ST
HUF75645S3S	HUF75645S3ST	HUF75842S3S
HUF75842S3ST	HUF76121S3ST	HUF76129S3
HUF76129S3ST	HUF76129S3STK	HUF76132S3ST
HUF76137S3ST	HUF76139S3	HUF76139S3ST
HUF76143S3	HUF76143S3S	HUF76143S3ST
HUF76145S3	HUF76145S3S	HUF76145S3ST
HUF76419S3S	HUF76419S3ST	HUF76429S3S
HUF76429S3ST	HUF76432S3S	HUF76437S3S
HUF76437S3ST	HUF76439S3S	HUF76439S3ST
HUF76445S3S	HUF76445S3ST	HUF76633S3S
HUF76633S3ST	HUF76639S3S	HUF76639S3ST
HUF76645S3S	HUF76645S3ST	ISL9N302AS3
ISL9N302AS3ST	ISL9N303AS3	ISL9N303AS3ST
ISL9N304AS3ST	ISL9N306AS3ST	ISL9N307AS3ST
ISL9N308AS3ST	ISL9N310AS3	ISL9N310AS3ST
ISL9N312AS3ST	ISL9N322AS3ST	NDB4050L
NDB4060	NDB5060L	NDB6020P
NDB6030L	NDB6030PL	NDB6060L
NDB7051	NDB7052L	NDB7060
RF1S40N10SM9A	RF1S50N06SM9A	RF1S640SM
RF1S640SM9A	RF3S49092SM9A	TO263ENG