



Date Created: 3/9/2004  
Date Issued: 3/24/2004  
PCN # 20041003

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 Type: Package Change (Lead Frame)

Effectivity

Expected 1st Device Shipment Date: 6/20/2004  
Earliest Year/Work Week of Changed Product: 0425  
(Note: Package marking may differ from this format)

Product ID (Description):

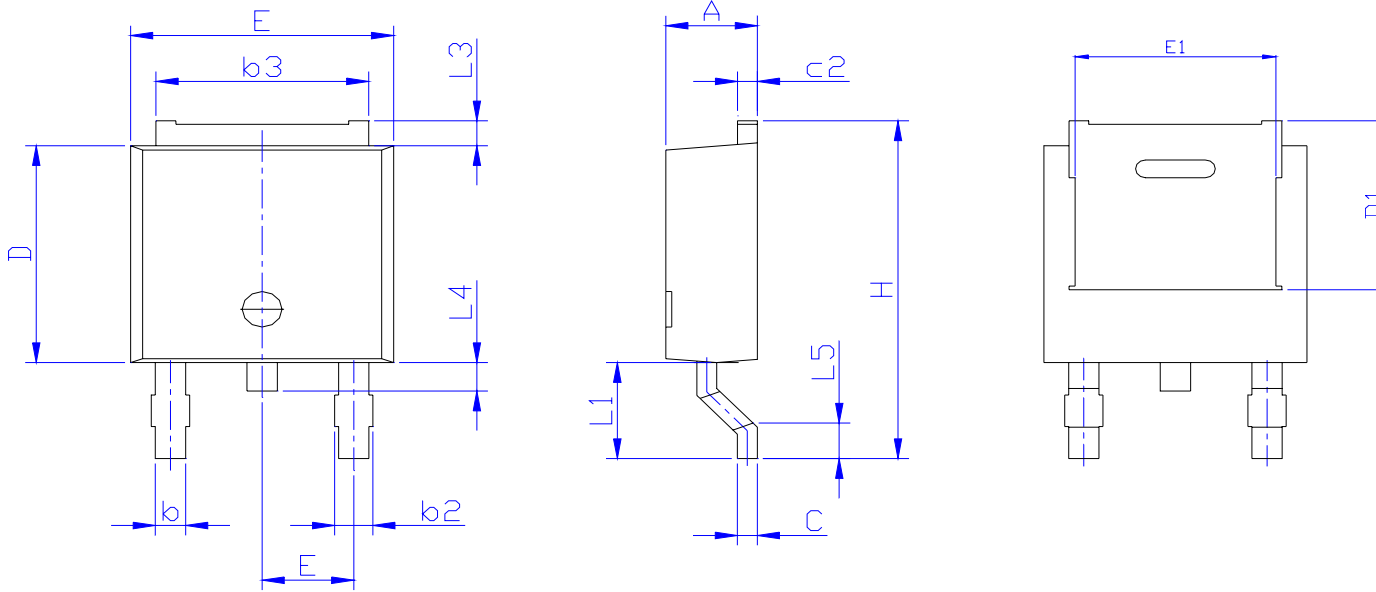
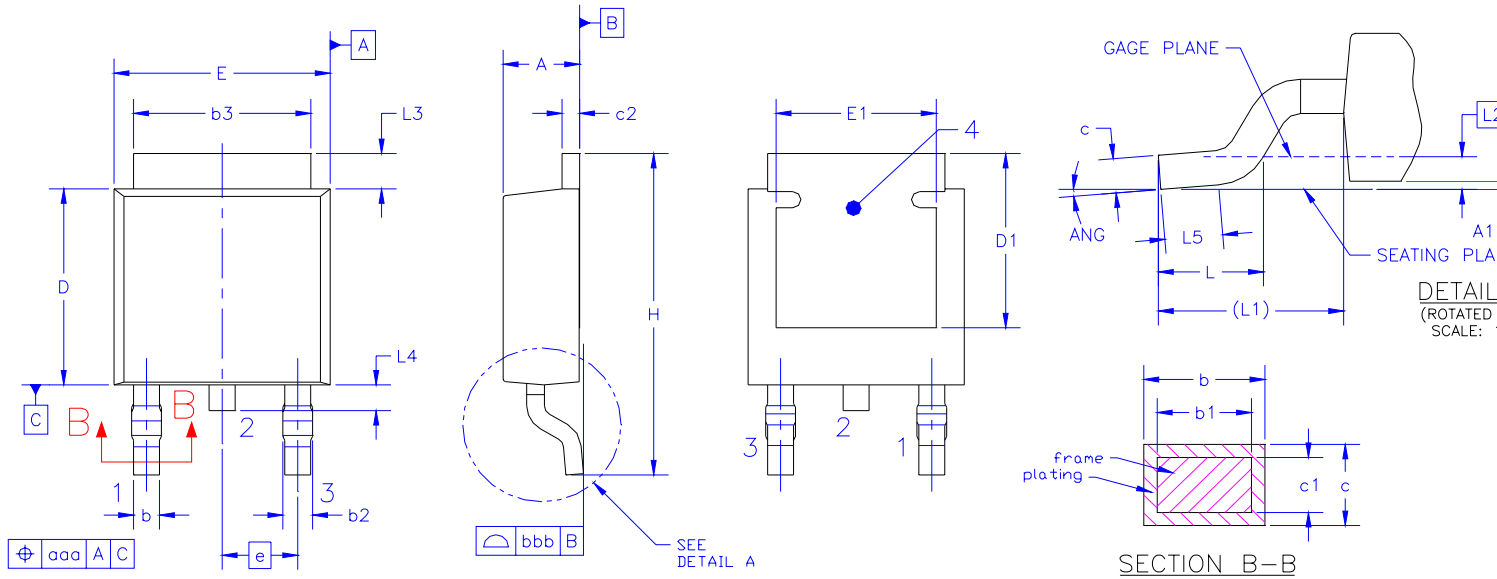
TO-252(DPAK)

Description of Change:

Fairchild will have two types of TO-252(DPAK) package dimensions. It looks similar each other, but there are some different dimensions like belows,

Current : one type of package dimension  
Future : two types of package dimension

## Comparison of Package Dimensions



### DIMENSION SUMMARY

REF	DESCRIPTION	Alternative dimension			Current dimension		
		MIN	NOM	MAX	MIN	NOM	MAX
A	Package thickness	2.18	---	2.39	2.20	2.30	2.40
A1	Profile height	---	---	0.127	---	---	---
b	Lead width	0.64	---	0.89	0.66	0.76	0.86
b2	Dambar cutting width	0.76	---	1.14	---	---	0.96
b3	Heat sink width	5.21	---	5.46	5.04	5.34	5.64
c	Lead thickness	0.46	---	0.61	0.40	0.50	0.60
c2	Heat sink thickness	0.46	---	0.58	0.40	0.50	0.60
D	Package length	5.97	---	6.22	5.90	6.10	6.30
D1	Back metal length	5.21	---	---	---	4.75	---
E	Package width	6.35	---	6.73	6.40	6.60	6.80
E1	Back metal width	4.32	---	---	---	5.04	---
e	Lead pitch	---	2.29	BSC		2.30	
H	Total package length	9.40	---	10.41	9.20	9.50	9.80
L	Foot length	1.40	---	1.78	---	---	---
L1	Lead length	2.90 Reference			2.50	2.70	2.90
L2	Gage plane	---	0.51	BSE	---	---	---
L3	Heat sink height	0.89	---	1.27	0.50	0.70	0.90
L4	Center lead cut length	0.64	---	1.02	0.60	0.80	1.00
L5	Foot landing distance	---	---	---	0.55	---	---
ANG	Foot angle	0	---	10	---	---	---
aaa	Lead position tolerances	---	---	0.25	---	---	---
bbb	Foot landing co planarity	---	---	0.10	---	---	---

Effect of Change:

This change will not affect any electrical characteristics & reliability.  
The change will enlarge the production capacity to meet customer's needs

Qualification:

The qualification plan is intended to meet our criteria for qualifying an alternative package dimension, the overall quality and reliability of our products.

Qual/REL Plan Numbers

Additional Qualification Data

## RELIABILITY TEST RESULT SUMMARY

### COMPONENT LEVEL

TEST	CONDITION	DEVICE	FDD2572	HUFA76629D3	ISL9N306AD3
		CHIP	82860	76629	83360
		PKG	TO251/2	TO251/2	TO251/2
ACLV	12I C, 15 psi	96 hrs	<b>0/77</b>	<b>0/77</b>	<b>0/77</b>
TMCL	-55°C TO 150°C, 15MIN DWELL	1000cyc	<b>0/77</b>	<b>0/77</b>	<b>0/77</b>
H3TRB	85°C, 85%RH Vr=80% Bvdss	1000hrs	<b>0/77</b>	<b>0/77</b>	<b>0/77</b>
HTGB	175°C, Vg=100% Vgs	1000hrs	<b>0/77</b>	<b>0/77</b>	<b>0/77</b>
HTRB	175°C, Vr=80% Bvdss	1000hrs	<b>0/77</b>	<b>0/77</b>	<b>0/77</b>
PRCL	Tj DELTA 100°C	15000cyc	<b>0/77</b>	<b>0/77</b>	<b>0/77</b>

#### Affected FSIDs

FCD7N60TF	FCD7N60TM	FFD04U40STM
FFD10U30TM	FFD10UP20TM	FGD3N120ANTM
FGD3N60LSDTF	FGD3N60LSDTM	FJD3076TF
FJD3076TM	FQD10N20CTF	FQD10N20CTM
FQD10N20LTF	FQD10N20LTM	FQD10N20TF
FQD10N20TM	FQD11P06TF	FQD11P06TM
FQD12N20LTF	FQD12N20LTM	FQD12N20TF
FQD12N20TM	FQD12P10TF	FQD12P10TM
FQD13N06LTF	FQD13N06LTM	FQD13N06TF
FQD13N06TM	FQD13N10LTF	FQD13N10LTM
FQD13N10TF	FQD13N10TM	FQD14N15TF
FQD14N15TM	FQD16N15TF	FQD16N15TM
FQD17N08LTF	FQD17N08LTM	FQD17N08TF
FQD17N08TM	FQD17P06TF	FQD17P06TM
FQD18N20V2TF	FQD18N20V2TM	FQD19N10LTF
FQD19N10LTM	FQD19N10TF	FQD19N10TM
FQD1N50TF	FQD1N50TM	FQD1N60CTF
FQD1N60CTM	FQD1N60TF	FQD1N60TM
FQD1N80TF	FQD1N80TM	FQD1P50TF
FQD1P50TM	FQD20N06LETF	FQD20N06LETM
FQD20N06LTF	FQD20N06LTM	FQD20N06TF
FQD20N06TM	FQD24N08TF	FQD24N08TM
FQD2N100TF	FQD2N100TM	FQD2N30TF
FQD2N30TM	FQD2N40TF	FQD2N40TM
FQD2N50TF	FQD2N50TM	FQD2N60CTF
FQD2N60CTM	FQD2N60TF	FQD2N60TM
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