FAIRCHILD
SEMICONDUCTOR®

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PCN# : P174A
Issue Date : 22/07/2011

DESIGN/PROCESS CHANGE NOTIFICATION

This is to inform you that a change is being made to the products listed below.

Unless otherwise indicated in the details of this notification, the identified change will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will remain fully compliant to all published specifications. Products incorporating this change may be shipped interchangeably with existing unchanged products.

This change is planned to take effect in 90 calendar days from the date of this notification. Please work with your local Fairchild Sales Representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days.

Please contact your local Customer Quality Engineer within 30 days of receipt of this notification if you require any additional data or samples. Alternatively, you may send an email request for data, samples or other information to PCNSupport@fairchildsemi.com.

Implementation of change:

Expected First Shipment Date for Changed Product : 20/10/2011

Expected First Date Code of Changed Product :1122

Last Date for Shipment of Unchanged Product : 20/10/2011

Description of Change (From) :

Fairchild Semiconductor Suzhou China as the only manufacturing site

Description of Change (To) :

Fairchild Semiconductor Suzhou China and Fairchild Semiconductor Cebu Philippines as qualified manufacturing sites

Reason for Change:

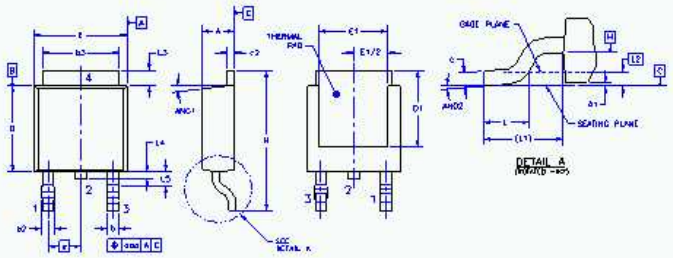
Fairchild Semiconductor has qualified Fairchild Cebu as additional Assembly and Test site to build below listed Discrete Power products. Currently Fairchild Suzhou exclusively assembles these products to support customer demand. Fairchild's ability to respond to the increasing demand will be significantly improved by releasing Cebu as an additional manufacturing location.

Both of the sites are currently qualified and utilized in high volume production by Fairchild for very similar products. The Fairchild Semiconductor assembly and test site in Cebu is fully qualified and has produced millions of similar AUTOMOTIVE products over a number of years.

These devices are still within the marketing outline specification and unit marking will just follow current plant code designation which is D for Cebu built and 1 for Suzhou built.

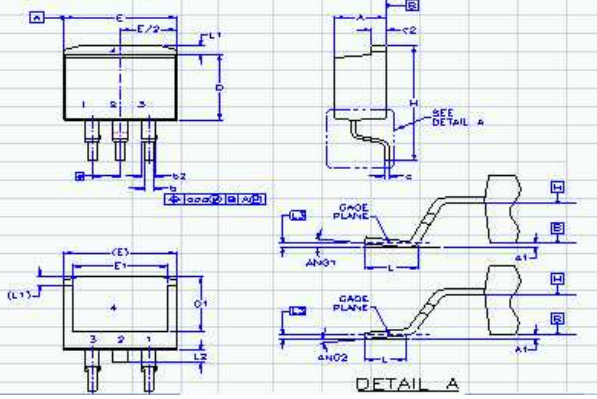
PACKAGE OUTLINE COMPARISON
TO-252 (units are in mm)

REF	DESCRIPTION	OFFICIAL FSC MKT-TO252A03REV8			Package Dimensional Spec - Cebu			Package Dimensional Spec - Suzhou			Package Dimensional Data - Cebu			Package Dimensional Data - Suzhou		
		MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	Package thickness	2.18	---	2.39	2.18	---	2.39	2.18	---	2.39	2.31	2.34	2.37	2.27	2.30	2.34
A1	Profile height	---	---	0.127	---	---	0.127	0	---	0.127	0.07	0.10	0.120	0.04	0.07	0.09
b	Lead width	0.64	---	0.89	0.64	---	0.89	0.64	---	0.89	0.70	0.75	0.80	0.76	0.78	0.81
b2	Dambar cutting width	0.76	---	1.14	0.76	---	1.14	0.76	---	1.14	0.84	0.93	0.99	0.85	0.88	0.90
b3	Heat sink width	5.21	---	5.46	5.21	---	5.46	5.21	---	5.46	5.24	5.38	5.45	5.35	5.39	5.42
c	Lead thickness	0.46	---	0.61	0.46	---	0.61	0.46	---	0.61	0.46	0.52	0.59	0.49	0.51	0.53
c2	Heat sink thickness	0.46	---	0.58	0.46	---	0.58	0.46	---	0.58	0.47	0.50	0.57	0.48	0.52	0.55
D	Package length	5.97	---	6.22	5.97	---	6.22	5.97	---	6.22	5.98	6.09	6.20	6.04	6.08	6.13
D1	Back metal length	5.21	---	---	5.21	---	---	5.21	---	---	5.28	5.33	5.55	5.22	5.27	5.34
E	Package width	6.35	---	6.73	6.35	---	6.73	6.35	---	6.731	6.45	6.56	6.68	6.49	6.52	6.57
E1	Back metal width	4.32	---	---	4.32	---	---	4.32	---	---	4.41	4.69	4.88	5.33	5.36	5.44
e	Lead pitch	---	2.29	BSC	---	2.29	BSC		2.29	---	2.25	2.28	2.36	2.26	2.29	2.33
H	Total package length	9.40	---	10.41	9.40	---	10.41	9.40	---	10.41	9.916	10.17	10.39	9.91	10.06	10.22
L	Foot length	1.40	---	1.78	1.40	---	1.78	1.40	---	1.78	1.405	1.51	1.59	1.43	1.50	1.64
(L1)	Lead length		2.9ref			2.90 Reference			2.743	---	2.879	2.93	2.95	2.68	2.78	2.93
L2	Gage plane	---	0.51	BSE	---	0.51	BSE	---	0.51	BSE		0.508		0.51	0.51	0.52
L3	Heat sink height	0.89	---	1.27	0.89	---	1.27	0.89	---	1.27	1.078	1.14	1.221	1.11	1.17	1.23
L4	Center lead cut length	0.64	---	1.02	0.64	---	1.02	0.64	---	1.02	0.7	0.83	0.96	0.63	0.69	0.74
ANG1	Package draft angle	---	---	---	---	---	---	0	---	15	7.2	7.40	7.5	7.01	7.15	7.37
ANG2	foot landing angle	0.00	---	10.00	0.00	---	10.00	0	---	10	5.5	8.56	9.99	0.53	0.88	1.32
aaa	Lead position tolerances	---	---	0.25	---	---	0.25		---	0.25	0.082	0.16	0.21	0.06	0.12	0.18



TO-263 (units are in mm)

REF	DESCRIPTION	MKT-TO263A02 REV 6			Package Dimensional Spec - Cebu			Package Dimensional Spec - Suzhou			Package Dimensional Data - Cebu			Package Dimensional Data - Suzhou		
		MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	Package thickness	4.06	---	4.83	4.060	---	4.830	4.064	---	4.826	4.47	4.62	4.79	4.528	4.563	4.691
A1	Profile height	0.00	---	0.254	0.000	---	0.254	0.000	---	0.254	0.010	0.150	0.230	0.080	0.115	0.150
b	Lead mounting width	0.51	---	0.991	0.510	---	0.990	0.508	---	0.991	0.600	0.783	0.880	0.796	0.827	0.849
b2	Lead shoulder width	1.14	---	1.78	1.140	---	1.780	1.143	---	1.778	1.28	1.37	1.52	1.250	1.281	1.308
c	Lead thickness	0.330	---	0.74	0.330	---	0.740	0.381	---	0.737	0.36	0.52	0.69	0.377	0.390	0.399
c2	Heat sink thickness	1.143	---	1.651	1.140	---	1.650	1.143	---	1.651	1.25	1.38	1.60	1.236	1.261	1.294
D	Package height	8.382	---	9.652	8.380	---	9.650	8.382	---	9.652	8.46	8.91	9.65	8.657	8.718	8.765
D1	Back metal heat sink he	6.86	---	---	6.860	---		6.858	---	---	6.92	7.46	7.75	7.68	7.69	7.72
E	Package width	9.65	---	10.67	9.650	---	10.670	9.652	---	10.67	10.13	10.30	10.56	10.065	10.155	10.229
E1	Back metal heat sink wi	6.22	---	---	6.220	---	---	6.223	---	---	6.50	7.80	8.55	8.610	8.686	8.892
e	Lead pitch	---	2.54	BSC	---	2.540	---	---	2.540	---	2.52	2.54	2.56	2.492	2.537	2.596
H	Total package height	14.61	---	15.88	14.610	---	15.880	14.605	---	15.875	14.65	14.98	15.49	14.860	15.363	15.546
L	Foot length	1.78	---	2.79	1.78	---	2.79	1.78	---	2.79	2.00	2.58	2.78	2.147	2.265	2.353
L1	Heat sink height	---	---	1.68	1.000	---	1.680	---	---	1.676	1.16	1.28	1.49	0.984	1.256	1.391
L2	Center lead cut length	---	---	1.78	---	---	1.780	---	---	1.778	1.64	1.73	1.78	1.545	1.654	1.710
L3	Gage plane	---	0.25	---	---	0.25	---	---	0.25	---	---	0.254	---	0.23	0.25	0.26
ANG1	Positive foot landing an	0.00	---	8.00	0.00	---	8.00	0.00	---	8.00	0.000	4.000	8.000	1.95	2.68	3.41
ANG2	Negative foot landing an	0.00	---	8.00	0.00	---	8.00	0.00	---	8.00	1.000	3.570	7.800	0.00	0.00	0.00
aaa	Lead position tolerance	---	---	0.25	---	---	0.25	---	---	0.25	0.020	0.130	0.200	0.08	0.16	0.23



Affected Product(s):

FQD9N25TM_SBEK002	FDD8453LZ_F085	FQB25N33TM_NB82122
RURD620CCS9A_F085	RURD620CCS9A_SB82068	

Qualification Plan	Device	Package	Process	No. of Lots
Q20110342	FQD9N25TM_SBEK002	TO-252	QFET	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Pre-condition	260C, 3 cycles	JESD22-A113		0/308
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Gate Bias	150C, 30V	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C, 200V	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	130C, 85%RH, 42V	JESD22-A110	96 hrs	0/77
Power Cycle	Delta 100CC,2 Min cyc	MIL-STD-750-1036	15000 cycles	0/77
Resistance to Solder Heat	Solder Dip=260C,10 sec	JESD22-B106		0/30

Qualification Plan	Device	Package	Process	No. of Lots
Q20110345	FQB25N33TM_NB82122	TO-263	QFET	3

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Pre-condition	245C, 3 cycles	JESD22-A113		0/924
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cycles	0/231
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/231
High Temperature Gate Bias	150C, 30V	JESD22-A108	1000 hrs	0/231
High Temperature Reverse Bias	150C, 264V	JESD22-A108	1000 hrs	0/231
Highly Accelerated Stress Test	130C, 85%RH, 42V	JESD22-A110	96 hrs	0/231
Power Cycle	Delta 100CC,3.5Min cyc	MIL-STD-750-1036	8572 cycles	0/231
Resistance to Solder Heat	Solder Dip=260C,10 sec	JESD22-B106		0/90

Qualification Plan	Device	Package	Process	No. of Lots
Q20110377	RURD620CCS9A_SB82068	TO-252	Rectifier	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Pre-condition	260C, 3 cycles	JESD22-A113		0/308
Temperature Cycle	-55C, 150C	JESD22-A104	1000 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Reverse Bias	175C, 80% of Rated BV	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	110C, 85%RH, 80%rated BV,Max=42V	JESD22-A110	96 hrs	0/77
Power Cycle	Delta 100CC,2 Min cyc	MIL-STD-750-1036	15000 cycles	0/77
Resistance to Solder Heat	Solder Dip=260C,10 sec	JESD22-B106		0/30

Qualification Plan	Device	Package	Process	No. of Lots
Q20110432	FDD8444L(FDD8453LZ_F085 is released by extension from this qual)	TO-252	PT4	3

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Pre-condition	260C, 3 cycles	JESD22-A113		0/1155
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cycles	0/231
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/231
High Temperature Gate Bias	175C, 20V	JESD22-A108	1000 hrs	0/462
High Temperature Reverse Bias	175C, 32V	JESD22-A108	1000 hrs	0/462
Highly Accelerated Stress Test	130 C, 85 % RH	JESD22-A110	96 hrs	0/231
Power Cycle	Delta 100CC,2 Min cyc	MIL-STD-750-1036	15000 cycles	0/462
Resistance to Solder Heat	Solder Dip=260C,10 sec	JESD22-B106		0/30