Date Created : **2011/04/06**
Date Issued On : **2011/04/06**
PCN# : **P143A**

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:
Name: Zhu, Ehming
E-mail: Ehming.Zhu@fairchildsemi.com
Phone:

PCN Originator:
Name: Zhu, Ehming
E-mail: Ehming.Zhu@fairchildsemi.com
Phone: 86512-67623311-82201

Implementation of change:
Expected 1st Device Shipment Date: 2011/08/25

Earliest Year/Work Week of Changed Product: WW31

Change Type Description: Alternate Assembly/Test Location/Qualification

Description of Change (From): MOSFET products identified in the Affected FSID list assembled at Fairchild Semiconductor in Suzhou, China (FSSZ).

Description of Change (To): GEM Electronics Shanghai, China is now qualified to produce the MOSFET devices identified in the Affected FSID section on this PCN. GEM Electronics has been a qualified assembly and test manufacturer for Fairchild Semiconductor since 2001.

Reason for Change : Alternative assembly and test site. This 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.

Qual/REL Plan Number(s): Q20100678

Qualification :

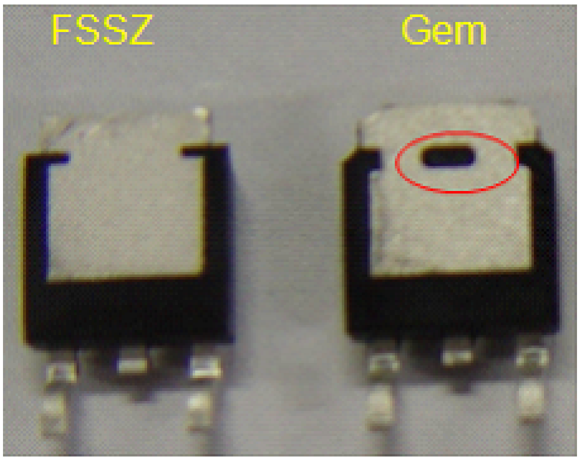
Affected FSID Rel test passed FSC-QAR-0006 requirement

Change To

BOM comparison

Process/Material	Process/Material	Gem	FSSZ
Lead frame	Vendor	Hitachi Cable / TSP	Hitachi Cable /TSP
	LF type	Matrix LF	Matrix LF
Green mold compound	EMC type	CEL9240HF10	CEL8240HF10FC
	Vendor	Hitachi	Hitachi

D-pak Package visual comparison as below



Note: there is a slot hole on GEM D-PAK heat sink surface compared with Fairchild Suzhou (FSSZ) product. There is no impact to the application

Results/Discussion for Qual Plan Number(s): Q20100678

Test: (Autoclave) | Conditions: 100%RH, 121C | Standard: JESD22-A102

Lot	Device	96-HOURS	Failure Code
Q20100678AAACLV	FDD6688	0/77	
Q20100678BAACLV	FDD8796	0/77	
Q20100678CAACLV	FDU8796	0/77	

Test: (High Temperature Gate Bias) | Conditions: 175C, 20V | Standard: JESD22-A108

Lot	Device	500-HOURS	1000-HOURS	Failure Code
Q20100678AAHTGB	FDD6688	0/77		
Q20100678AAHTGB	FDD6688		0/77	
Q20100678BAHTGB	FDD8796	0/77		
Q20100678BAHTGB	FDD8796		0/77	
Q20100678CAHTGB	FDU8796	0/77		
Q20100678CAHTGB	FDU8796		0/77	

Test: (High Temperature Reverse Bias) | Conditions: 175C, 20V | Standard: JESD22-A108

Lot	Device	500-HOURS	1000-HOURS	Failure Code
Q20100678BAHTRB	FDD8796	0/77		
Q20100678BAHTRB	FDD8796		0/77	
Q20100678CAHTRB	FDU8796	0/77		
Q20100678CAHTRB	FDU8796		0/77	

Test: (High Temperature Reverse Bias) | Conditions: 175C, 24V | Standard: JESD22-A108

Lot	Device	500-HOURS	1000-HOURS	Failure Code
Q20100678AAHTRB	FDD6688	0/77		
Q20100678AAHTRB	FDD6688		0/77	

Test: (Highly Accelerated Stress Test) | Conditions: 85%RH, 130C, 20V | Standard: JESD22-A110

Lot	Device	96-HOURS	Failure Code
Q20100678BAHAST1	FDD8796	0/77	
Q20100678CAHAST1	FDU8796	0/77	

Test: (Highly Accelerated Stress Test) | Conditions: 85%RH, 130C, 24V | Standard: JESD22-A110

Lot	Device	96-HOURS	Failure Code
Q20100678AAHAST1	FDD6688	0/77	

Test: (Power Cycle) | Conditions: Delta 100C, 2 Min cycle | Standard: MIL-STD-750-1036

Lot	Device	5000-CYCLES	10000-CYCLES	Failure Code
Q20100678AAPRCL	FDD6688	0/77		
Q20100678AAPRCL	FDD6688		0/77	
Q20100678BAPRCL	FDD8796	0/77		
Q20100678BAPRCL	FDD8796		0/77	
Q20100678CAPRCL	FDU8796	0/77		
Q20100678CAPRCL	FDU8796		0/77	

Test: (Precondition) | Conditions: | Standard: JESD22-A113

Lot	Device	Results	Failure Code
Q20100678AAPCNL1A	FDD6688	0/231	
Q20100678BAPCNL1A	FDD8796	0/231	
Q20100678CAPCNL1A	FDU8796	0/231	

Test: (Temperature Cycle) | Conditions: -65C, 150C | Standard: JESD22-A104

Lot	Device	200-CYCLES	500-CYCLES	Failure Code
Q20100678AATMCL1	FDD6688	0/77		
Q20100678AATMCL1	FDD6688		0/77	
Q20100678BATMCL1	FDD8796	0/77		
Q20100678BATMCL1	FDD8796		0/77	
Q20100678CATMCL1	FDU8796	0/77		
Q20100678CATMCL1	FDU8796		0/77	

Product Id Description :

Affected FSIDs :

FDD86102LZ	FDD86102	FDD86326