

Date Created : 2008/10/30  
Date Issued On : 2008/12/04  
PCN# : Q4074705-A

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:

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Implementation of change:

Expected 1st Device Shipment Date: 2009/02/27

Earliest Year/Work Week of Changed Product: 0909

Change Type Description: Alternate Assembly/Test Location/Qualification

Description of Change (From): For those specific products (see affected FSID list) where one of the current manufacturing locations is Hana Semiconductor Thailand for SC70 and/or SOT23 package types.

Description of Change (To): Hana Semiconductor JiaXing, China facility is being added as an additional manufacturing site for SC70 and SOT-23 package types upon successful completion of Fairchild's qualification process. Fairchild Semiconductor Malaysia Sdn. Bhd., Fairchild Semiconductor Cebu Philipines, Carsem Malaysia Sdn. Bhd. and Hana Semiconductor Thailand sites will continue to produce SC70 and/or SOT-23 devices. Additionally the SC70 and SOT-23 packages from Hana JiaXing will be Green, Halide Free packages.

Reason for Change : To improve product availability and manufacturing flexibility.

Qual/REL Plan Numbers : Q20080239

Qualification :

Rel test passed.

Change To

**Please note that the external package dimensions will remain unchanged.**

Table 1		
Assembly Site	Hana, Jia Xing	
Package	SOT23	SC70
Lead Frame Material	A194/Cu	A194/Cu
Die Attach	Alebond 2200D	Alebond 2200D
Wire	0.8mils Au	0.8mils Au
Mold Compound	Sumitomo EME-G600	Sumitomo EME-G600
Lead Finish	Matte Tin	Matte Tin

**Results/Discussion for Qual Plan Number - Q20080239**

Test: (Autoclave)   Conditions: 100%RH, 121C   Standard: JESD22-A102				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAACLV	NC7SZ125P5X	96-HOURS	0/77	
Q20080239BAACLV	NC7SB3157P6X	96-HOURS	0/77	
Q20080239CAACLV	NC7SZ66M5X	96-HOURS	0/77	
Q20080239DAACLV	FHP3130IS5X	96-HOURS	0/77	
Test: (Gate Leakage Negative)   Conditions: 155C, -400V   Standard: AEC-Q100-006				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAGATE-	NC7SZ125P5X		0/3	
Q20080239BAGATE-	NC7SB3157P6X		0/3	
Q20080239CAGATE-	NC7SZ66M5X		0/3	
Test: (Gate Leakage Positive)   Conditions: 155C, 400V   Standard: AEC-Q100-006				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAGATE+	NC7SZ125P5X		0/3	
Q20080239BAGATE+	NC7SB3157P6X		0/3	
Q20080239CAGATE+	NC7SZ66M5X		0/3	
Q20080239DAGATE+	FHP3130IS5X		0/3	
Test: (High Temperature Storage Life)   Conditions: 150C   Standard: JESD22-A103				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAHTSL	NC7SZ125P5X	168-HOURS	0/77	
		1000-HOURS	0/77	
Q20080239BAHTSL	NC7SB3157P6X	168-HOURS	0/77	
		1000-HOURS	0/77	
Q20080239CAHTSL	NC7SZ66M5X	168-HOURS	0/77	
		1000-HOURS	0/77	
Q20080239DAHTSL	FHP3130IS5X	168-HOURS	0/77	
		1000-HOURS	0/77	

Test: (Highly Accelerated Stress Test)   Conditions: 85%RH, 110C, +/-5 V   Standard: JESD22-A110				
Lot	Device	Setpoint	Result	Failure Code
Q20080239DAHAST2	FHP3130IS5X	264-HOURS	0/45	

Test: (Highly Accelerated Stress Test)   Conditions: 85%RH, 110C, 5.5V   Standard: JESD22-A110				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAHAST2	NC7SZ125P5X	264-HOURS	0/45	
Q20080239BAHAST2	NC7SB3157P6X	264-HOURS	0/45	
Q20080239CAHAST2	NC7SZ66M5X	264-HOURS	0/45	

Test: (Lead Integrity)   Conditions:   Standard: JESD22-B105				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AALINTB	NC7SZ125P5X		0/5	
Q20080239BALINTB	NC7SB3157P6X		0/5	
Q20080239CALINTB	NC7SZ66M5X		0/5	
Q20080239DALINTB	FHP3130IS5X		0/5	

Test: (Physical Dimensions)   Conditions:   Standard: JESD22-B100				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAPHYD	NC7SZ125P5X		0/5	
Q20080239BAPHYD	NC7SB3157P6X		0/5	
Q20080239CAPHYD	NC7SZ66M5X		0/5	
Q20080239DAPHYD	FHP3130IS5X		0/5	

Test: (Precondition)   Conditions:   Standard: JESD22-A113				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AAPCNL1A	NC7SZ125P5X		0/363	
Q20080239BAPCNL1A	NC7SB3157P6X		0/363	
Q20080239CAPCNL1A	NC7SZ66M5X		0/363	
Q20080239DAPCNL1A	FHP3130IS5X		0/363	

Test: (Solderability)   Conditions:   Standard: JESD22-B102				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AASOLDCA	NC7SZ125P5X		0/11	
Q20080239AASOLDCB			0/11	
Q20080239BASOLDCA	NC7SB3157P6X		0/11	
Q20080239BASOLDCB			0/11	
Q20080239CASOLDCA	NC7SZ66M5X		0/11	
Q20080239CASOLDCB			0/11	
Q20080239DASOLDCA	FHP3130IS5X		0/11	
Q20080239DASOLDCB			0/11	

Test: (Static Op Life)   Conditions: 150C, +/-5V   Standard: JESD22-A108				
Lot	Device	Setpoint	Result	Failure Code
Q20080239DASOPL1	FHP3130IS5X	168-HOURS	0/77	
		1000-HOURS	0/77	

Test: (Static Op Life)   Conditions: 150C, 5.5V   Standard: JESD22-A108				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AASOPL1	NC7SZ125P5X	168-HOURS	0/77	
		1000-HOURS	0/77	
Q20080239BASOPL1	NC7SB3157P6X	168-HOURS	0/77	
		1000-HOURS	0/77	
Q20080239CASOPL1	NC7SZ66M5X	168-HOURS	0/77	
		1000-HOURS	0/77	

Test: (Temperature Cycle)   Conditions: -65C, 150C   Standard: JESD22-A104				
Lot	Device	Setpoint	Result	Failure Code
Q20080239AATMCL1	NC7SZ125P5X	500-CYCLES	0/77	
Q20080239BATMCL1	NC7SB3157P6X	500-CYCLES	0/77	
Q20080239CATMCL1	NC7SZ66M5X	500-CYCLES	0/77	
Q20080239DATMCL1	FHP3130IS5X	500-CYCLES	0/77	

Product Id Description :

Affected FSIDs :

FHP3130IS5X	FHP3131IS6X	FHP3131IS6X_NA3C245
FHP3132IS5X	FIN1001M5X	FIN1002M5X
FMS6141S5X	FSA66M5	NC7S00M5X

NC7S00P5X	NC7S02M5X	NC7S02P5X
NC7S04M5X	NC7S04P5X	NC7S08M5X
NC7S08P5X	NC7S14M5X	NC7S14P5X
NC7S32M5X	NC7S32P5X	NC7S86M5X
NC7S86M5	NC7S86P5X	NC7SB3157P6X
NC7SP04P5X	NC7SP08P5X	NC7SP126P5X
NC7SP17P5X	NC7SP32P5X	NC7SP57P6X
NC7ST00M5X	NC7ST00P5X	NC7ST02M5X
NC7ST02P5X	NC7ST04M5X	NC7ST04P5X
NC7ST08M5X	NC7ST08P5X	NC7ST32M5X
NC7ST32P5X	NC7ST86M5X	NC7ST86P5X
NC7SU04M5X	NC7SU04P5X	NC7SV04P5X
NC7SV05P5X	NC7SV08P5X	NC7SV14P5X
NC7SV34P5X	NC7SVU04P5X	NC7SZ00M5X
NC7SZ00P5X	NC7SZ02M5X	NC7SZ02P5X
NC7SZ04M5X	NC7SZ04P5X	NC7SZ05M5X
NC7SZ05P5X	NC7SZ08M5X	NC7SZ08P5X
NC7SZ11P6X	NC7SZ125M5X	NC7SZ125P5X
NC7SZ126M5X	NC7SZ126P5X	NC7SZ14M5X
NC7SZ14P5X	NC7SZ157P6X	NC7SZ18P6X
NC7SZ19P6X	NC7SZ32M5X	NC7SZ32P5X
NC7SZ332P6X	NC7SZ384M5X	NC7SZ384P5X
NC7SZ38M5X	NC7SZ38P5X	NC7SZ57P6X
NC7SZ58P6X	NC7SZ66M5X	NC7SZ66P5X
NC7SZ86M5X	NC7SZ86P5X	NC7SZD384M5X
NC7SZU04M5X	NC7SZU04P5X	NC7WZ04P6X
NC7WZ07P6X	NC7WZ14P6X	NC7WZ16P6X
NC7WZ17P6X	NC7WZU04P6X	