

Date Created : 2008/03/18  
Date Issued On : 2008/08/08  
PCN# : Q1081203

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:

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Implementation of change:

Expected 1st Device Shipment Date: 2008/11/16

Earliest Year/Work Week of Changed Product: 0847

Change Type Description: Bond Wire Material Composition, Lead Frame Composition, Lead Frame Dimensions (Internal and External)

Description of Change (From): TO92R package assembled in AUK-D using copper leadframe and Au wire as referenced in table 1

Description of Change (To): TO92R package assembly at AUK-D will utilize Fe leadframe and Cu wire in addition to the current Copper leadframe and Au wire.(There is no difference in package dimension and electrical specification)

Reason for Change : To improve product availability and manufacturing flexibility

Qual/REL Plan Numbers : Q20080333

Qualification :

The qualification plan is intended to meet our criteria for qualifying changed BOM(Fe LF and Cu wire)

Change To

> **Table1. Bill of material**

Material	Current	Future
Lead frame Material	Copper(PMC90-1/2H)	Fe + Cu plating(Min.0.5Um)
Pad size	2.88 × 2.49mm	3.56 × 2.11
Die attach adhesive	Ag Epoxy	Ag Epoxy
Bond wire	Au	Cu
Epoxy Molding Compound	KTMC 3432NS/ EME 2500D3	KTMC 3432NS/ EME 2500D3
Plating	Pure Tin	Pure Tin

**Results/Discussion for Qual Plan NumberQ20080333**

Test: (Autoclave)					
Lot	Device	96-HOURS	Failure Code		
Q20080333AAACLV	KA431AZ	0/77			
Q20080333ABACLV	KA431AZ	0/77			
Q20080333ACACLV	KA431AZ	0/77			
Test: (High Temperature Op Life)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20080333AAHTOL	KA431AZ	0/77	0/77		
				0/77	
Q20080333ABHTOL		0/77	0/77		
				0/77	
Q20080333ACHTOL		0/77	0/77		
				0/77	
				0/77	
Test: (High Temperature Storage Life)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20080333AAHTSL		0/77	0/77		
				0/77	
Q20080333ABHTSL		0/77	0/77		
				0/77	
Q20080333ACTHSL		0/77	0/77		
				0/77	
				0/77	
Test: (Temperature Humidity Biased Test)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20080333AATHBT		0/77	0/77		
				0/77	
Q20080333ABTHBT		0/77	0/77		
				0/77	
Q20080333ACTHBT		0/77	0/77		
				0/77	
				0/77	
Test: -65C, 150C (Temperature Cycle)					
Lot	Device	200-CYCLES	500-CYCLES	Failure Code	
Q20080333AATMCL1	KA431AZ	0/77			
Q20080333AATMCL1	KA431AZ		0/77		
Q20080333ABTMCL1	KA431AZ	0/77			
Q20080333ABTMCL1	KA431AZ		0/77		
Q20080333ACTMCL1	KA431AZ	0/77			
Q20080333ACTMCL1	KA431AZ		0/77		

Product Id Description :

Affected FSIDs :

FAN431AZXA	FAN431LZXA	FAN431ZXA
KA317LZTA	KA336Z25BU	KA336Z5BU
KA431AZBU	KA431AZTA	KA431AZTA_F065
KA431AZTF	KA431LZTA	KA431LZTA_F065
KA431LZTF	KA431ZTA	KA431ZTF
KA75250ZTA	KA75270ZTA	KA75290ZTA
KA75310ZTA	KA75330ZTA	KA75360ZTA
KA75390ZTA	KA75420ZTA	KA75450ZTA
KA76L05ZTA	KA76L05ZTF	KA78L05AAZTA
KA78L05AZBU	KA78L05AZTA	KA78L05AZTF
KA78L06AZTA	KA78L08AZBU	KA78L08AZTA
KA78L08AZTF	KA78L09AZBU	KA78L09AZTA
KA78L10AZBU	KA78L10AZTA	KA78L12AZBU
KA78L12AZTA	KA78L12AZTF	KA78L15AZBU
KA78L15AZTA	KA78L18AZBU	KA78L18AZTA
KA78L24AZTA	KA79L05AZTA	KA79L08AZTA
KA79L12AZTA	KA79L15AZTA	LM2931AZ5X
LM2931AZ5	LM317LZTFR	LM317LZXA
LM317LZX	LM317LZ	LM336BZ50
LM336Z25X	LM336Z25	LM336Z5X
LM336Z5	LM431ACZXA	LM431ACZX
LM431ACZ	LM431AIZ	LM431BCZXA
LM431BCZX	LM431BCZ	LM431BIZX
LM431BIZ	LM431CCZXA	LM431CCZX
LM431CCZ	LM431CIZ	LM78L05ACZXA
LM78L05ACZX	LM78L05ACZ	LM78L12ACZXA
LM78L12ACZX	LM78L12ACZ	LM79L05ACZX
LM79L05ACZ	MC78L05ABPX	MC78L05ACPXA
MC78L05ACPX	MC78L05ACP	MC78L06ACP
MC78L08ACPX	MC78L08ACP	MC78L12ACPX
MC78L12ACP	MC78L15ACPXA	MC78L15ACP
MC78L24ACP	MC79L05ACPX	MC79L05ACP
MC79L15ACP	TL431ACLPX	TL431ACLP
TL431ACZ	TL431CLPX	TL431CLP