

Date Created : 2007/11/28  
Date Issued On : 2007/12/07  
PCN# : Q2072402-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:

Technical Contact:

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Phone:

Implementation of change:

Expected 1st Device Shipment Date: 2008/01/10

Earliest Year/Work Week of Changed Product: 0802

Change Type Description: Alternate Assembly/Test Location/Qualification

Description of Change (From): SPS , SP Semiconductor & Communication Co Ltd.

Description of Change (To): FSSZ , Fairchild Semiconductor (Suzhou) Co., Ltd

Reason for Change : Qualification of FSSZ as alternate manufacturing site to improve capacity flexibility in response to changing customer business demand as well as enable better management on delivery and cycle-time.

Qual/REL Plan Numbers : Q20070474

Qualification :

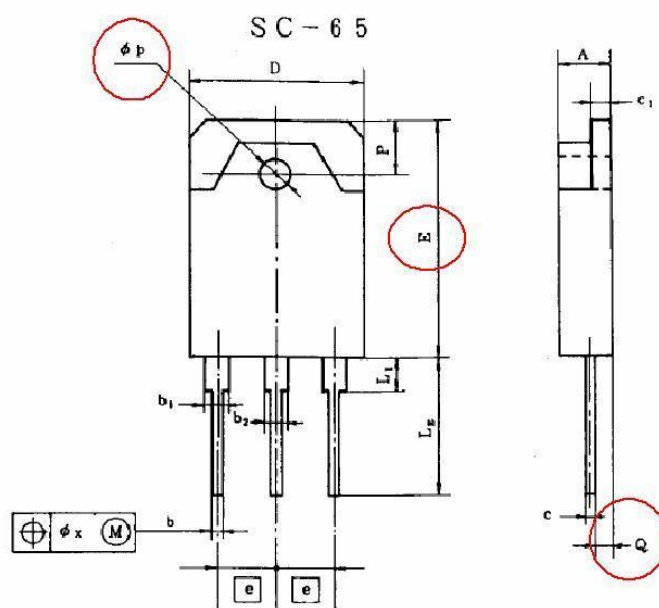
To qualify TO3P 5 package assembled at Suzhou where will be an alternative assembly and test site for Power conversion and Rectifier products loaded in TO-3P 5L packages

Change To

### A) Physical dimension comparison

	TO3PN_3L (SC-65)			TO3P_5L Current			TO3P_5L FSSZ target		
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX
A	4.600	4.800	5.000	4.600	4.800	5.000	4.600	4.800	5.000
b	0.800	2.000	1.200	0.600	0.800	1.000	0.600	0.800	1.000
b1	1.800	2.000	2.200	0.900	1.100	1.300	0.900	1.100	1.300
b2	2.800	3.000	3.200	1.100	1.300	1.500	1.100	1.300	1.500
c	0.550	0.600	0.615	0.550	0.600	0.615	0.550	0.600	0.615
c1	1.450	1.500	1.650	1.450	1.500	1.650	1.450	1.500	1.650
D	15.400	15.600	15.800	15.400	15.600	15.800	15.400	15.600	15.800
E	19.700	19.900	20.100		20.00 ref			20.00 ref	
e	5.250	5.450	5.650	2.240	2.540	2.840	2.240	2.540	2.840
				3.510	3.810	4.110	3.510	3.810	4.110
L1	3.300	3.500	3.700	3.300	3.500	3.700	3.300	3.500	3.700
LE	19.700	20.000	20.300	19.700	20.000	20.300	19.700	20.000	20.300
diaP	3.100	3.200	3.300	3.100	3.300	3.500	3.100	3.300	3.500
P	4.800	5.000	5.200	4.800	5.000	5.200	4.800	5.000	5.200
Q	2.200	2.400	2.600	2.500	2.800	3.100	2.100	2.400	2.700

### Reference Symbols



### B) Bill of materials

PROCESS	Current SUBCON TO3P 5L	New SUZHOU TO3P 5L
Wafer Fab	Fairchild Bucheon	Fairchild Bucheon
Assembly site	SPS	Fairchild suzhou
Molding Compound	SI-7200TS2(CHEIL)	SI7200DX2(CHEIL)
Die Attach	Solder - Umicor (Pb:Sn:Ag=93.5:5:1.5) + PI Tape - Innosem (ML2100-02A)	Same
Bonding wire material and size	Au Wire	Same
Lead Finish	Matte - Sn	Same
Lead Frame	Cu alloy	Same

## Results/Discussion

Test: (Autoclave)					
Lot	Device	96-HOURS	Failure Code		
Q20070474AAACLV	FS7M0680YDTU	0/77			
Q20070474BAACLV	FS6S1265RYDTU	0/77			
Q20070474CAACLV	FS7M0880TU	0/77			
Test: (High Temperature Storage Life)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070474AAHTSL	FS7M0680YDTU	0/77	0/77	0/77	
Q20070474BAHTSL	FS6S1265RYDTU	0/77	0/77	0/77	
Q20070474CAHTSL	FS7M0880TU	0/77	0/77	0/77	
Test: (Temperature Humidity Biased Test)					
Lot	Device	168-HOURS	500-HOURS	1000-HOURS	Failure Code
Q20070474AATHBT	FS7M0680YDTU	0/77	0/77	0/77	
Q20070474BATHBT	FS6S1265RYDTU	0/77	0/77	0/77	
Q20070474CATHBT	FS7M0880TU	0/77	0/77	0/77	
Test: -65C, 150C (Temperature Cycle)					
Lot	Device	200-CYCLES	Failure Code		
Q20070474AATMCL1	FS7M0680YDTU	0/77			
Q20070474BATMCL1	FS6S1265RYDTU	0/77			
Q20070474CATMCL1	FS7M0880TU	0/77			

Product Id Description :

Affected FSIDs :

FS6S1265RESYDTU	FS6S1265REYDTU	FS6S1565RBYDTU
FS7M0680TU	FS7M0680YDTU	FS7M0880TU
FS7M0880YDTU	KA1M0680RBTU	KA1M0680RBYDTU
KA1M0880BTU	KA1M0880BYDTU	KA1M0880DTU
KA5M0965QTU	KA5M0965QYDTU	KA5S1265YDTU