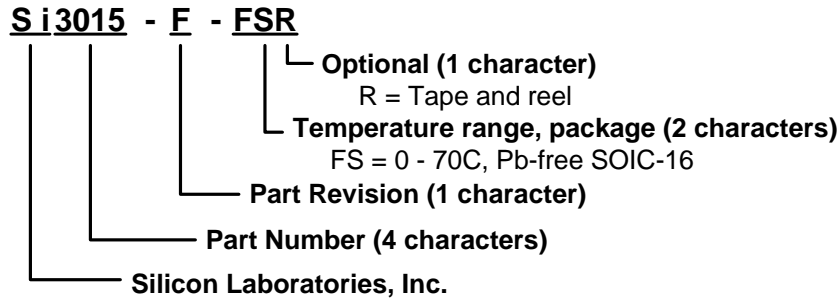
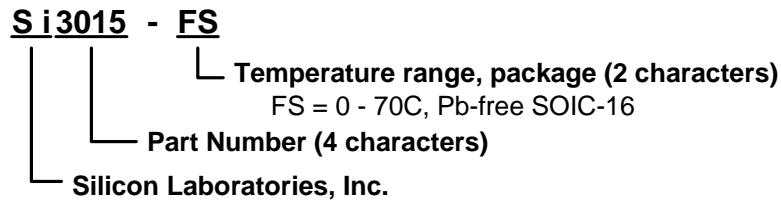


PCN Date: 17Feb06		Effective Date: 18May06	
Title: Si3015 Revision F			
Originator: Jim Judkins		Phone: 512/464-9439	Dept: Marketing
Customer Contact: Roger Wood		Phone: 512/464-9376	Dept: Sales
PCN Type: <input type="checkbox"/> Assembly <input type="checkbox"/> Discontinuance <input type="checkbox"/> Package <input type="checkbox"/> Test <input type="checkbox"/> Datasheet <input type="checkbox"/> Fabrication <input checked="" type="checkbox"/> Product Revision <input type="checkbox"/> Other Last Order Date: n/a			
PCN Details			
Description of Change: <p>Silicon Laboratories is pleased to announce revision F of the Si3015 line-side device, and a new part number format that includes the product revision level, improving order processing. This new revision consists of a small logic change implemented in metal layers. This logic change increases the robustness of the isolation link communications during sample rate changes. The overall architecture and design remain unchanged. No changes have been made to the process or manufacturing flow as a result of this revision. No specifications have been changed as a result of this revision. This new device revision will be available only in RoHS-compliant, Pb-free packaging.</p> <p>The Si3015 revision F is a direct replacement for the previous revision. The new revision is fully backward compatible with software written for the previous revision. The value in the revision register has been incremented by one. User's that check the device revision in software should confirm proper operation with the new value. (See Product Identification below.) No application hardware changes are required. This revision does not affect modem operation as presented to the PSTN.</p> <p>After the effective date of this PCN, Silicon Labs may schedule and fulfill orders for previous Si3015 revisions with revision F devices. Existing Si3015 customers should work with their local sales representative to create a customer specific inventory transition plan.</p>			
Reason for Change: Improvement in product performance and order processing.			

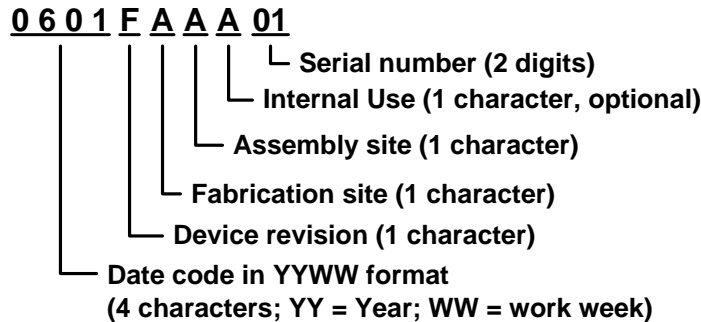
Product Identification: The ordering part number includes the product revision level, as shown in the example below.



The part number marked on the device does not include the revision level, as shown in the example below.



The product revision can be determined from the tracecode marked on the device, as shown in the example below.



The value in the revision register has been incremented by one. User's that check the device revision in software should confirm proper operation with the new value. The line-side device revision is reported in the Si3021's Chip B Revision register, register 13, in the REVB[3:0] field. For Si3015 revision F, this field will contain $1110_b = 0x0E = 14$.

User's of the Si2456/33/14/03 ISModem devices can read the line-side revision using the AT command I3. ATI3 will return the line side device type and revision. For Si3015 revision F, the value returned will be "15F". For the Si2400 ISModem device, the line-side revision can be determined by reading the contents of S-register F8. The command ATSF8 will return the value of this register in hexadecimal. The upper nibble of this register contains the line-side revision level. For Si3015-F, the upper nibble will be $1110_b = E_h = 14$.



Process Change Notice #0602171

Projected Implementation Date: 18May06 or earlier if approved.

This PCN, Si3015 Revision F, will become effective 18May06. Customers may approve early by completing the form below.

Early Release Date: _____ Signature: _____

Name: _____ Company: _____

Title: _____ Date: _____

Respond to Roger Wood at: FAX: 512-416-9669 or at email: raw@silabs.com with approval information

Qualification Data: See attached Product Qualification Report

Product: Si3015				
Product Reliability Qualification Level				
<input type="checkbox"/> Engineering <input type="checkbox"/> Pre-Production <input type="checkbox"/> Initial Production <input checked="" type="checkbox"/> Full Production				
Part Rev: D, E, F				
Product Family: Line Side DAA			Status: Full Production	
Package Family: 16 SOIC			Status: Full Production	
Fab Process Family: TSMC/WT 0.45µm logic			Status: Full Production	
SILICON QUALIFICATION TESTS				
High Temp. Operating Life Results				
JEDEC JA108; T _A =125°C				
<i>Stress hrs.</i>	<i>0</i>	<i>168</i>	<i>500</i>	<i>1000</i>
Q20143	0/77	-	0/77	0/77
Q20180	0/77	-	0/77	0/77
Q20470	0/77	-	0/77	0/77
Early Life Failure Rate (ELFR) Results				
JEDEC JA108; T _A =125°C				
<i>Stress hrs.</i>	<i>0</i>	<i>48</i>	<i>PPM</i>	
Q20431	0/500	0/500	0	
Q20847	0/500	0/500	0	
Q21044	0/500	0/500	0	
Q21045	0/500	0/500	0	
Q21473	0/500	0/500	0	
Q21633	0/500	0/500	0	
Q21693	0/500	0/500	0	
Q21991	0/500	0/500	0	
Q22834	0/500	0/500	0	
Total	0/4500	0/4500	0	

Electrostatic Discharge Sensitivity Results				
<u>Job Number:</u>	<u>Method:</u>	<u>Specification:</u>	<u>Results: [V]</u>	<u>Comment:</u>
Q20471	HBM	JESD22-A114	2000	Pass
Q20472	HBM	JESD22-A114	2000	Pass
Q20754	MM	JESD22-A115	200	Pass
Latch-up Results				
<u>Job Number:</u>	<u>Method:</u>	<u>Specification:</u>	<u>Results: [mA]</u>	<u>Comment:</u>
Q21274	Latch Up	JESD78	150	Pass @ 25C
SILICON QUALIFICATION SUPPORTING DATA				
Electrical Characterization				
pre/ post HTOL Ppks for tested parameters - Pass				
Electromigration Results - Pass				
Testing is performed by suppliers and the results are reviewed by Silicon Labs' Manufacturing Technology engineers.				
Time-Dependent Dielectric Breakdown (TDDb) Results - Pass				
Testing is performed by suppliers and the results are reviewed by Silicon Labs' Manufacturing Technology engineers.				
Hot-Carrier Degradation Results - Pass				
Testing is performed by suppliers and the results are reviewed by Silicon Labs' Manufacturing Technology engineers.				
PACKAGE QUALIFICATION TESTS				
Solderability / Lead Frame Finish				
<ul style="list-style-type: none"> • SnPb: Pass • Sn (Matte Tin) Lead Free: Pass • Testing is performed by suppliers and the results are reviewed by Silicon Labs' Manufacturing Technology engineers. 				
Package Precondition Level: MSL 3 Peak Reflow [C]: 260 Pass JESD22-A113				

Temperature Humidity Bias Results					
JEDEC JA101; 85°C/ 85% RH					
<i>Stress hrs.</i>	<i>0</i>	<i>Precond.</i>	<i>168</i>	<i>500</i>	<i>1000</i>
Q20469	0/77	0/77	-	0/77	0/77
Q21499	0/77	0/77	-	0/77	0/77
Q22026	0/77	0/77	-	0/76	0/76
Temperature Cycle Results					
JEDEC JA104; Condition C, -65°C to 150°C					
<i>Cycles</i>	<i>0</i>	<i>Precond.</i>	<i>100</i>	<i>200</i>	<i>500</i>
Q20200	0/77	0/77	-	-	0/77
Q20201	0/77	0/77	-	-	0/77
Q20467	0/77	0/77	-	-	0/77
Autoclave Results					
JEDEC JA102; 121°C, 15 PSIG					
<i>Stress hrs.</i>	<i>0</i>	<i>Precond.</i>	<i>48</i>	<i>96</i>	
Q20468	0/77	0/77	-	0/77	
Q21500	0/77	0/77	-	0/77	
Q21566	0/77	0/77	-	0/77	
High Temperature Bake Results					
JEDEC JA103; 150°C					
<i>Stress hrs.</i>	<i>0</i>	<i>500</i>	<i>1000</i>		
Q21946	0/77	-	0/77		
Q21543	0/77	-	0/77		
Q21996	0/77	-	0/77		
PACKAGE QUALIFICATION SUPPORTING DATA					
Bond Pull Strength, Bond Shear Results - Pass					
Testing is performed by suppliers and the results are reviewed by Silicon Labs Manufacturing Technology engineers.					
External Visual, Physical Dimensions, Lead Integrity, Bond Pull, Bond Shear, Solderability and Solvent Resistance - Pass					
Testing is performed by suppliers and the results are reviewed by Silicon Labs Manufacturing Technology engineers.					
Flammability/ Oxygen Index Results - Pass					
UL94-0					
Remarks:					
Q&R Engineering: Ralph Mertesdorf				Date: 16 Feb 2006	