

PCN Number:	20130509001			PCN Date:	05/14/2013
Title:	Qualification of copper wire as alternate bonding material for selected products in SOIC Package				
Customer Contact:	PCN Manager	Phone:	+1(214)480-6037	Dept:	Quality Services
Proposed 1st Ship Date:	06/14/2013	Estimated Sample Availability:	05/10/2013		
Change Type:					
<input type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
<p>To qualify Cu wire as alternative bond material for selected products in SOT23 package. All the devices in this notification were included in either Forecast PCN20123101B published on March 20, 2012 or PCN20125303A published on July 31, 2012 which was both issued from the National Semiconductor PCN system.</p>					
		From		To	
Wire		Au, 0.9mil & 1.0mil		Cu, 0.96 mil or Au, 0.9mil & 1.0mil	
Mold Compound		8097131		8097131	
Mount Compound		8075531		8075531	
Leadframe Finish		Matte Sn or SnPb		Matte Sn or SnPb	
Reason for Change:					
<p>Continuity of supply.</p> <ol style="list-style-type: none"> 1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties 2) Maximize flexibility within our Assembly/Test production sites. 3) Cu is easier to obtain and stock 					
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):					
None					
Changes to product identification resulting from this PCN:					
None					
Product Affected:					
See page 2					

Qualification Data: Approved 04/12/2013				
This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.				
Qualification Device: LM4041AIM3-1.2 (MSL 1-260c)				
Package Construction Details				
Assembly Site:	TIEM	Mold Compound:	8097131	
# Pins-Designator, Family:	3-DBZ, SOT	Mount Compound:	8075531	
Leadframe (Finish, Base):	SnPb, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
**High Temp. Storage Bake	150C (500, 1000hrs)	80/0	--	--
**Biased HAST	130C/85%RH (96Hrs)	80/0	80/0	80/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	80/0	80/0	80/0
**ACLV 121C/100%RH, 2ATM	121C, 2 atm (96 Hrs)	80/0	80/0	80/0
Bond-pull strength	2 bonds per corner, 1 in middle	pass	pass	pass
Notes: **Tests received preconditioning sequence: MSL1-260C				

Reference Qualification Data: Approved 12/14/2012				
This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.				
Qualification Device: LP3985IM5X-5.0 (MSL 1-260c)				
Package Construction Details				
Assembly Site:	TIEM	Mold Compound:	8097131	
# Pins-Designator, Family:	5-DBV, SOT	Mount Compound:	8075531	
Leadframe (Finish, Base):	SnPb, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
**Autoclave 121C	121C, 2 ATM (96 hrs)	80/0	79/0	79/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	78/0	80/0
Notes: **Tests received preconditioning sequence: MSL2-260C				

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com