



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20130523003
Qualification of copper wire as alternate bonding material
for selected products in VSSOP Package
Final Change Notification for PCN20123202A

Date: 6/7/2013
To: MOUSER PCN

Dear Customer:

This is a final announcement of change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

The changes discussed within this PCN will not take effect any earlier than **30** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process. Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services
Phone: +1(214) 480-6037
Fax: +1(214) 480-6659

20130523003
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
ADC08832IMM/NOPB	ADC08832IMM NOPB
ADC08832IMM/NOPB	ADC08832IMM/NOPB
DAC081S101C1MM	null
DAC101C085C1MM	null
LM3485MM	null
LM3485MM/NOPB	LM3485MM NOPB
LM3485MM/NOPB	LM3485MM/NOPB
LM3485MMX	null
LM3485MMX/NOPB	LM3485MMX NOPB
LM3489MM	null
LM3489MM/NOPB	LM3489MM NOPB
LM3489MM/NOPB	LM3489MM/NOPB
LM3489MMX	null
LM3489MMX/NOPB	LM3489MMX/NOPB
LM3881MM/NOPB	LM3881MM NOPB
LM3881MM/NOPB	LM3881MM/NOPB
LM3881MME/NOPB	LM3881MME NOPB
LM3881MME/NOPB	LM3881MME/NOPB
LM4809MM	null
LM4809MM/NOPB	LM4809MM NOPB
LM4809MM/NOPB	LM4809MM/NOPB
LM4809MMX	null
LM4809MMX/NOPB	LM4809MMX NOPB
LM4810MM/NOPB	null
LM4819MM/NOPB	null
LM4864MM	null
LM4864MM/NOPB	LM4864MM NOPB
LM4864MM/NOPB	LM4864MM/NOPB
LM4864MMX	null
LM4864MMX/NOPB	LM4864MMX NOPB
LM4865MM/NOPB	LM4865MM NOPB
LM4875MM/NOPB	LM4875MM NOPB
LM4875MM/NOPB	LM4875MM/NOPB
LM4881MM	null
LM4881MM/NOPB	LM4881MM NOPB
LM4881MM/NOPB	LM4881MM/NOPB
LM4889MM/NOPB	LM4889MM NOPB
LM4889MM/NOPB	LM4889MM/NOPB
LM4890MM	null
LM4890MM/NOPB	LM4890MM NOPB
LM4890MM/NOPB	LM4890MM/NOPB
LM4906MM/NOPB	LM4906MM NOPB
LM4910MM	null
LM4910MM/NOPB	LM4910MM NOPB
LM4910MM/NOPB	LM4910MM/NOPB
LM4923MM/NOPB	LM4923MM NOPB
LM4990MM	null
LM4990MM/NOPB	LM4990MM NOPB
LM4990MM/NOPB	LM4990MM/NOPB
LM7705MM/NOPB	LM7705MM NOPB
LM7705MME/NOPB	LM7705MME NOPB

LM7705MME/NOPB
 LMP2012MM
 LMP2012MM/NOPB
 LMP2012MM/NOPB
 LMV342MM/NOPB
 LMV342MM/NOPB
 LMV358MM/NOPB
 LMV358MM/NOPB
 LMV358MMX/NOPB
 LMV393MM/NOPB
 LMV393MM/NOPB
 LMV393MMX/NOPB
 LMV716MM
 LMV716MM/NOPB
 LMV722MM
 LMV722MM/NOPB
 LMV722MM/NOPB
 LMV722MMX/NOPB
 LMV762MM
 LMV762MM/NOPB
 LMV762MM/NOPB
 LMV762MMX/NOPB
 LMV772MM
 LMV772MM/NOPB
 LMV772MM/NOPB
 LMV822MM
 LMV822MM/NOPB
 LMV822MMX
 LMV822MMX/NOPB
 LMV832MM/NOPB
 LMV832MM/NOPB
 LMV832MM/NOPB
 LMV832MME/NOPB
 LMV832MME/NOPB
 LMV852MM/NOPB
 LMV852MM/NOPB
 LMV852MME/NOPB
 LMV862MM/NOPB
 LMV862MM/NOPB
 LMV932MM
 LMV932MM/NOPB
 LMV932MM/NOPB
 LMV932MMX
 LMV932MMX/NOPB
 LP3981IMM-2.5/NOPB
 LP3981IMM-2.7/NOPB
 LP3981IMM-3.0/NOPB
 LP3981IMM-3.03
 LP3981IMM-3.3/NOPB
 LP3981IMM-3.3/NOPB
 LP3997MM-3.3/NOPB
 LP3997MM-3.3/NOPB
 LPV358MM/NOPB

LM7705MME/NOPB
 null
 LMP2012MM NOPB
 LMP2012MM/NOPB
 LMV342MM NOPB
 LMV342MM/NOPB
 LMV358MM NOPB
 LMV358MM/NOPB
 LMV358MMX NOPB
 LMV393MM NOPB
 LMV393MM/NOPB
 LMV393MMX NOPB
 null
 LMV716MM NOPB
 null
 LMV722MM NOPB
 LMV722MM/NOPB
 LMV722MMX/NOPB
 null
 LMV762MM NOPB
 LMV762MM/NOPB
 LMV762MMX/NOPB
 null
 LMV772MM NOPB
 LMV772MM/NOPB
 null
 LMV822MM NOPB
 null
 LMV822MMX NOPB
 LMV832MM NOPB
 LMV832MM/NOPB
 LMV832MME NOPB
 LMV832MME/NOPB
 LMV852MM NOPB
 LMV852MM/NOPB
 LMV852MME NOPB
 LMV862MM NOPB
 LMV862MM/NOPB
 null
 LMV932MM NOPB
 LMV932MM/NOPB
 null
 LMV932MMX NOPB
 LP3981IMM-2.5 NOPB
 LP3981IMM-2.7 NOPB
 LP3981IMM-3.0 NOPB
 LP3981IMM-3.03
 LP3981IMM-3.3 NOPB
 LP3981IMM-3.3/NOPB
 LP3997MM-3.3 NOPB
 LP3997MM-3.3/NOPB
 LPV358MM NOPB

Technical details of this Product Change follow on the next page(s).

PCN Number:	20130523003		PCN Date:	06/07/2013	
Title:	Qualification of copper wire as alternate bonding material for selected products in VSSOP Package				
Customer Contact:	PCN Manager	Phone:	+1(214)480-6037	Dept:	Quality Services
Proposed 1st Ship Date:	07/07/2013	Estimated Sample Availability:	06/06/2013		
Change Type:					
	<input checked="" type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials	
PCN Details					
Description of Change:					
To qualify Cu wire as alternative bond material for selected products in VSSOP package. All the devices in this notification were included in Forecast PCN20123202A published on March 17, 2012 which was issued from the National Semiconductor PCN system.					
	From	To			
Wire	Au, 0.9mil & 1.0mil	Cu, 0.96 mil or Au, 0.9mil & 1.0mil			
Mold Compound	8096859	8096859			
Mount Compound	8075531	8075531			
Leadframe Finish	Matte Sn or SnPb	Matte Sn or SnPb			
Reason for Change:					
Continuity of supply. 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:					
ADC081C021C1MM/NOPB	DAC101S101C1MM/NOPB	LM4875MM	LMV722MM/J7003071		
ADC081C021C1MM/NOPB	DAC101S101C1MMX	LM4875MM/NOPB	LMV722MM/NOPB		
ADC081C021C1MMX/NOPB	DAC101S101C1MMX/NOPB	LM4881MM	LMV722MMX		
ADC081C021C1MMX/NOPB	DAC101S101C1MMX/NOPB	LM4881MM/NOPB	LMV722MMX/NOPB		
ADC082S021C1MM/NOPB	DAC121C085C1MM	LM4881MMX	LMV762MM		
ADC082S021C1MMX/NOPB	DAC121C085C1MM/NOPB	LM4881MMX/NOPB	LMV762MM/NOPB		
ADC082S051C1MM/NOPB	DAC121C085C1MM/NOPB	LM4881MMX/SL110728	LMV762MMX		
ADC082S051C1MMX/NOPB	DAC121C085C1MMX	LM4889MM	LMV762MMX/NOPB		
ADC082S101C1MM/NOPB	DAC121C085C1MMX/NOPB	LM4889MM/NOPB	LMV772MM		
ADC082S101C1MMX/NOPB	DAC121C085C1MMX/NOPB	LM4889MMX	LMV772MM/NOPB		
ADC088321MM	DAC121S101C1MM	LM4889MMX/NOPB	LMV772MMX		
ADC088321MM/NOPB	DAC121S101C1MM/NOPB	LM4890MM	LMV772MMX/NOPB		
ADC088321MMX	DAC121S101C1MM/NOPB	LM4890MM/NOPB	LMV822MM		
ADC088321MMX/NOPB	DAC121S101C1MMX	LM4890MMX	LMV822MM/NOPB		
ADC101C021C1MM/NOPB	LM3485MM	LM4890MMX/NOPB	LMV822MMX		

ADC101C021C1MM/NOPB	LM3485MM/J7001606	LM4902MM	LMV822MMX/NOPB
ADC101C021C1MMX/NOPB	LM3485MM/J7001606	LM4902MM/NOPB	LMV832MM/NOPB
ADC101C021C1MMX/NOPB	LM3485MM/J7002910	LM4906MM	LMV832MME/NOPB
ADC102S021C1MM/NOPB	LM3485MM/NOPB	LM4906MM/NOPB	LMV832MMX/NOPB
ADC102S021C1MMX/NOPB	LM3485MMX	LM4910MM	LMV852MM/NOPB
ADC102S051C1MM/NOPB	LM3485MMX/J7001607	LM4910MM/NOPB	LMV852MME/NOPB
ADC102S051C1MMX/NOPB	LM3485MMX/E7002594	LM4923MM/NOPB	LMV852MMX/NOPB
ADC102S101C1MM/NOPB	LM3485MMX/J7001607	LM4923MMX/NOPB	LMV852MMX/S7002352
ADC102S101C1MMX/NOPB	LM3485MMX/NOPB	LM4990MM	LMV862MM/NOPB
ADC121C021C1MM/NOPB	LM3485MMX/S7001693	LM4990MM/NOPB	LMV862MMX/NOPB
ADC121C021C1MM/NOPB	LM3489MM	LM4990MMX	LMV932MM
ADC121C021C1MMX/NOPB	LM3489MM/NOPB	LM4990MMX/NOPB	LMV932MM/NOPB
ADC121C021C1MMX/NOPB	LM3489MMX	LM7705MM/NOPB	LMV932MMX
ADC121S625C1MM/J7001348	LM3489MMX/NOPB	LM7705MME/NOPB	LMV932MMX/NOPB
ADC121S625C1MM/NOPB	LM3489MMX/S7003019	LM7705MMX/NOPB	LP3981IMM-2.5
ADC121S625C1MM/J7001348	LM3881MM/J7002449	LMP2012MM	LP3981IMM-2.5/J7001013
ADC121S625C1MMX/J7001359	LM3881MM/J7002449	LMP2012MM/NOPB	LP3981IMM-2.5/J5000346
ADC121S625C1MMX/NOPB	LM3881MM/NOPB	LMP2012MMX	LP3981IMM-2.5/J7001013
ADC121S625C1MMX/J7001359	LM3881MME/J7002450	LMP2012MMX/NOPB	LP3981IMM-2.5/NOPB
ADC121S655C1MM/NOPB	LM3881MME/J7002450	LMV342MM	LP3981IMM-2.5/S7000492
ADC121S655C1MMX/NOPB	LM3881MME/NOPB	LMV342MM/NOPB	LP3981IMM-2.5/S7000492
ADC121S705C1MM/NOPB	LM3881MMX/J7002451	LMV342MMX	LP3981IMM-2.5/J5000346
ADC121S705C1MMX/NOPB	LM3881MMX/J7002451	LMV342MMX/J7002640	LP3981IMM-2.7
ADC122S021C1MM/NOPB	LM3881MMX/NOPB	LMV342MMX/NOPB	LP3981IMM-2.7/NOPB
ADC122S021C1MMX/NOPB	LM4808MM	LMV342MMX/S5001099	LP3981IMM-2.8
ADC122S051C1MM/NOPB	LM4808MM/NOPB	LMV342MMX/S7002484	LP3981IMM-2.8/NOPB
ADC122S051C1MMX/NOPB	LM4808MMX/NOPB	LMV342MMX/S7002574	LP3981IMM-2.8/S7000643
ADC122S101C1MM/NOPB	LM4809MM	LMV358MM	LP3981IMM-2.8/S7000643
ADC122S101C1MMX/NOPB	LM4809MM/NOPB	LMV358MM/DRSN	LP3981IMM-3.0
DAC081C085C1MM/NOPB	LM4809MMX	LMV358MM/NOPB	LP3981IMM-3.0/NOPB
DAC081C085C1MM/NOPB	LM4809MMX/NOPB	LMV358MMX	LP3981IMM-3.03
DAC081C085C1MMX/NOPB	LM4810MM	LMV358MMX/E7002183	LP3981IMM-3.03/NOPB
DAC081C085C1MMX/NOPB	LM4810MM/NOPB	LMV358MMX/NOPB	LP3981IMM-3.03/NOPB
DAC081S101C1MM	LM4810MMX	LMV358MMX/S7002186	LP3981IMM-3.3
DAC081S101C1MM/NOPB	LM4810MMX/NOPB	LMV358MMX/SL110547	LP3981IMM-3.3/NOPB
DAC081S101C1MM/NOPB	LM4819MM	LMV393MM	LP3981IMMX-2.5
DAC081S101C1MMX	LM4819MM/NOPB	LMV393MM/NOPB	LP3981IMMX-2.5/NOPB
DAC081S101C1MMX/NOPB	LM4819MMX	LMV393MMX	LP3981IMMX-2.5/NOPB
DAC081S101C1MMX/NOPB	LM4819MMX/NOPB	LMV393MMX/E7001611	LP3981IMMX-3.3
DAC101C085C1MM	LM4864MM	LMV393MMX/ELLI971	LP3981IMMX-3.3/NOPB
DAC101C085C1MM/NOPB	LM4864MM/NOPB	LMV393MMX/NOPB	LP3981IMMX-3.3/NOPB
DAC101C085C1MM/NOPB	LM4864MMX	LMV716MM	LP3997MM-3.3
DAC101C085C1MMX	LM4864MMX/NOPB	LMV716MM/NOPB	LP3997MM-3.3/NOPB
DAC101C085C1MMX/NOPB	LM4865MM	LMV716MMX	LPV358MM
DAC101C085C1MMX/NOPB	LM4865MM/NOPB	LMV716MMX/NOPB	LPV358MM/NOPB
DAC101S101C1MM	LM4865MMX	LMV722MM	LPV358MMX
DAC101S101C1MM/NOPB	LM4865MMX/NOPB	LMV722MM/E7002677	LPV358MMX/NOPB

Qualification Data: Approved 05/27/2013

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: LMV852MMX/NOPB (MSL 1-260c)**Package Construction Details**

Assembly Site:	TIEM	Mold Compound:	8096859
# Pins-Designator, Family:	8-DGK, VSSOP	Mount Compound:	8075531
Leadframe (Finish, Base):	Matte Sn	Bond Wire:	0.96 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
Preconditioning	(level 1 @ 260C peak +5/-0C)	154/0	154/0	154/0
**Autoclave 121C	121C, 2 ATM (96hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Destructive Physical Analysis	Post Temp Cycle 500x	--	pass	pass

Notes: **Tests received preconditioning sequence: MSL1-260C

Reference Qualification Data: Approved 9/09/2012

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: LM93C1MT/NOPB (MSL 2-260c)**Package Construction Details**

Assembly Site:	TIEM	Mold Compound:	8095181
# Pins-Designator, Family:	56-DGG, TSSOP	Mount Compound:	8080598
Leadframe (Finish, Base):	Matte Sn, Cu	Bond Wire:	0.96 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
High Temp. Storage Bake	150C (500, 1000 Hrs)	77/0	--	--
**Biased HAST	130C/85%RH/33.3 psia (96 hrs)	77/0	77/0	77/0

Notes: **Tests received preconditioning sequence: MSL2-260C

Reference Qualification Data: Approved 2/01/2013

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: LM5642MHX/NOPB (MSL 1-260c)

Package Construction Details

Assembly Site:	TIEM	Mold Compound:	8095181
# Pins-Designator, Family:	28-PWP, TSSOP	Mount Compound:	8080598
Leadframe (Finish, Base):	Matte Sn, Cu	Bond Wire:	0.96 Mil Dia., Cu

Qualification: Plan Test Results

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
**T/C -65C/150C	JESD22-A104 (500 Cyc)	77/0	77/0	77/0
HTOL 150C	JESD22-A108 (500 Hrs)	77/0	-	-
ESDC 750V	JESD22-C101	3/0	-	-
ESDH 2000V	JESD22-A114	3/0	-	-
ESDM 150V	JESD22-A115	3/0	-	-
LUPS 25C, 125C	JESD78	6/0	-	-

Notes: **Tests received preconditioning sequence: MSL1-260C

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