12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20141223000
Qualification of copper wire as alternate bonding material for selected products in VSSOP Package
Final Change Notification

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

PCN# 20141223000
Attachment: 1

Products Affected:

According to our records, there are the affected device(s) that you have purchased within the past twenty-four (24) months. Technical details of this Product Change follow on the next page(s).

PCN Number:	20141223000	PCN Date:	12/23/2014
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:	01/23/2015	Estimated Sample Availability:	Date provided at sample request

Change Type:					
☐	Assembly Site	☒	Assembly Process	☒	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☐	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process

PCN Details

Description of Change:

To qualify Cu wire as alternative bond material for selected products in VSSOP package. This notice is an extension of PCN20130523003 and PCN20140212002 which were published June 7th, 2013 and February 17th, 2014 respectively. **All the devices in this notification were included in either Forecast PCN20125301A published on July 31, 2012 or Forecast PCN20123202A published on March 17, 2012** both which were issued from the National Semiconductor PCN system.

	From	To
Wire	Au, 0.9mil & 1.0mil	Cu, 0.96 mil or Au, 1.0mil

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

ADC121S625CIMM	LM9036MM-5.0/E7002414	LMP8481MME-S/NOPB	LP2951CMM-3.3/J7002895
ADC141S625CIMM/NOPB	LM9036MM-5.0/NOPB	LMP8481MMX-S/NOPB	LP2951CMM-3.3/NOPB
ADC141S625CIMMX/NOPB	LMC555CMMX/NOPB	LMP8650MM-T/NOPB	LP2951CMM/J7002325
DAC121S101CIMMX/NOPB	LMC6035IMM/NOPB	LMP8650MME-T/NOPB	LP2951CMM/NOPB
EMB1462MM/NOPB	LMC6035IMMX/NOPB	LMP8650MMX-T/NOPB	LP2951CMMX
EMB1462MME/NOPB	LMC6482IMM/NOPB	LMP8651MM-T/NOPB	LP2951CMMX-3.0/NOPB
EMB1462MMX/NOPB	LMC6482IMMX/NOPB	LMP8651MME-T/NOPB	LP2951CMMX-3.3
LM2936MM-3.0/NOPB	LMC6772AIMM/NOPB	LMP8651MMX-T/NOPB	LP2951CMMX-3.3/J7002896

LM2936MM-3.3	LMC6772AIMMX/NOPB	LMPVIP25AMPMM/NOPB	LP2951CMMX-3.3/JL800247
LM2936MM-3.3/NOPB	LMC6772AIMMX/S7002556	LMV342MMX/MESN	LP2951CMMX-3.3/NOPB
LM2936MM-5.0/NOPB	LMC8101MMX/NOPB	LMV722MM/MESN	LP2951CMMX/J7000701
LM2936MMX-3.3/NOPB	LMP8480MM-F/NOPB	LP2951ACMM	LP2951CMMX/J7002326
LM2936MMX-5.0	LMP8480MM-H/NOPB	LP2951ACMM-3.0	LP2951CMMX/JL800236
LM2936MMX-5.0/NOPB	LMP8480MM-S/NOPB	LP2951ACMM-3.0/NOPB	LP2951CMMX/JL800245
LM386MMX-1/NOPB	LMP8480MM-T/NOPB	LP2951ACMM-3.3	LP2951CMMX/NOPB
LM5023MM-2/NOPB	LMP8480MME-F/NOPB	LP2951ACMM-3.3/NOPB	LP2951CMMX/S7002522
LM5023MMX-2/NOPB	LMP8480MME-H/NOPB	LP2951ACMM/NOPB	LP2975AIMM-3.3/NOPB
LM555CMM	LMP8480MME-S/NOPB	LP2951ACMMX-3.0	LP2975AIMM-5.0
LM555CMM/NOPB	LMP8480MME-T/NOPB	LP2951ACMMX-3.0/NOPB	LP2975AIMM-5.0/NOPB
LM555CMMX/NOPB	LMP8480MMX-F/NOPB	LP2951ACMMX-3.3/NOPB	LP2975AIMMX-5.0
LM833MM/NOPB	LMP8480MMX-H/NOPB	LP2951ACMMX/J7002370	LP2975AIMMX-5.0/NOPB
LM833MMX/NOPB	LMP8480MMX-S/NOPB	LP2951ACMMX/NOPB	LP2975IMM-3.3/NOPB
LM9036MM-3.3/NOPB	LMP8480MMX-T/NOPB	LP2951CMM	LP2975IMM-5.0/NOPB
LM9036MM-5.0/E7001962	LMP8481MM-S/NOPB	LP2951CMM-3.0/NOPB	LP2975IMMX-5.0/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: LM93CIMT/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

Qualification Data: Approved November, 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: LMC6482IMM/NOPB (MSL 1-260c)

Package Construction Details

Assembly Site:	TIEM	Mold Compound:	4209002
# Pins-Designator, Family:	8-DGK, VSSOP	Mount Compound:	8080598
Leadframe (Finish, Base):	Matte Sn, Cu	Bond Wire:	1 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
**Autoclave 121C	121C, 2 ATM (96 hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0

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

Qualification Data: Approved October, 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: LMC6482AIM/NOPB (MSL 1-260c)

Package Construction Details

Assembly Site:	TIEM	Mold Compound:	4209002
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	8080598
Leadframe (Finish, Base):	Matte Sn, Cu	Bond Wire:	1 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot 2	Lot 3
**Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 ATM (96 hrs)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0

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