

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	LP39811MM-2.5
ADC121S625C1MM/J7001348	LM3881MM/J7002449	LMP2012MM	LP39811MM-2.5/J7001013
ADC121S625C1MMX/J7001359	LM3881MM/J7002449	LMP2012MM/NOPB	LP39811MM-2.5/J5000346
ADC121S625C1MMX/NOPB	LM3881MM/NOPB	LMP2012MMX	LP39811MM-2.5/J7001013
ADC121S625C1MMX/J7001359	LM3881MME/J7002450	LMP2012MMX/NOPB	LP39811MM-2.5/NOPB
ADC121S655C1MM/NOPB	LM3881MME/J7002450	LMV342MM	LP39811MM-2.5/S7000492
ADC121S655C1MMX/NOPB	LM3881MME/NOPB	LMV342MM/NOPB	LP39811MM-2.5/S7000492
ADC121S705C1MM/NOPB	LM3881MMX/J7002451	LMV342MMX	LP39811MM-2.5/J5000346
ADC121S705C1MMX/NOPB	LM3881MMX/J7002451	LMV342MMX/J7002640	LP39811MM-2.7
ADC122S021C1MM/NOPB	LM3881MMX/NOPB	LMV342MMX/NOPB	LP39811MM-2.7/NOPB
ADC122S021C1MMX/NOPB	LM4808MM	LMV342MMX/S5001099	LP39811MM-2.8
ADC122S051C1MM/NOPB	LM4808MM/NOPB	LMV342MMX/S7002484	LP39811MM-2.8/NOPB
ADC122S051C1MMX/NOPB	LM4808MMX/NOPB	LMV342MMX/S7002574	LP39811MM-2.8/S7000643
ADC122S101C1MM/NOPB	LM4809MM	LMV358MM	LP39811MM-2.8/S7000643
ADC122S101C1MMX/NOPB	LM4809MM/NOPB	LMV358MM/DRSN	LP39811MM-3.0
DAC081C085C1MM/NOPB	LM4809MMX	LMV358MM/NOPB	LP39811MM-3.0/NOPB
DAC081C085C1MM/NOPB	LM4809MMX/NOPB	LMV358MMX	LP39811MM-3.03
DAC081C085C1MMX/NOPB	LM4810MM	LMV358MMX/E7002183	LP39811MM-3.03/NOPB
DAC081C085C1MMX/NOPB	LM4810MM/NOPB	LMV358MMX/NOPB	LP39811MM-3.03/NOPB
DAC081S101C1MM	LM4810MMX	LMV358MMX/S7002186	LP39811MM-3.3
DAC081S101C1MM/NOPB	LM4810MMX/NOPB	LMV358MMX/SL110547	LP39811MM-3.3/NOPB
DAC081S101C1MM/NOPB	LM4819MM	LMV393MM	LP39811MMX-2.5
DAC081S101C1MMX	LM4819MM/NOPB	LMV393MM/NOPB	LP39811MMX-2.5/NOPB
DAC081S101C1MMX/NOPB	LM4819MMX	LMV393MMX	LP39811MMX-2.5/NOPB
DAC081S101C1MMX/NOPB	LM4819MMX/NOPB	LMV393MMX/E7001611	LP39811MMX-3.3
DAC101C085C1MM	LM4864MM	LMV393MMX/ELLI971	LP39811MMX-3.3/NOPB
DAC101C085C1MM/NOPB	LM4864MM/NOPB	LMV393MMX/NOPB	LP39811MMX-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: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> 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: <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, 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: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> 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.

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