12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20140409000
Add Cu as Alternative Wire Base Metal for Selected Device(s)
Change Notification / Sample Request

Date: 4/23/2014
To: Newark/Farnell PCN

Dear Customer:

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

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days.

The changes discussed within this PCN will not take effect any earlier than **90** 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.

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.

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

20140409000
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
INA149AID	null
OPA140AID	null
OPA1642AID	null
OPA188AID	null
OPA211AID	null
OPA2140AID	null
OPA2141AID	null
OPA2180ID	null
OPA2340UA	null
OPA2350UA	null
OPA2376AID	null
OPA4140AID	null
OPA4141AID	null
OPA4209AIPW	null
OPA4350UA	null
OPA827AID	null
REF5010AID	null
REF5025AID	null
REF5045AIDG4	null
SN74LS541N	null
BQ27000DRKR	null
BQ27200DRKR	null
BQ27210DRKR	null
INA826AID	null
OPA141AID	null
OPA1611AID	null
OPA1612AID	null
OPA1641AID	null
OPA1644AID	null
OPA171AID	null
OPA209AID	null
OPA211AIDR	null
OPA211ID	null
OPA2170AID	null
OPA2209AIDR	null
OPA2340UA/2K5	null
OPA2376AIDR	null
OPA2725AID	null
OPA2727AID	null
OPA2727AIDR	null
OPA376AID	null
OPA4188AID	null
OPA4340UA	null
OPA4705UA	null
OPA827AIDR	null
REF5020ID	null
REF5025ID	null
REF5030AID	null
REF5030ID	null
REF5040AID	null
REF5040ID	null

REF5045AID	null
REF5050AID	null
REF5050ID	null
SN74LS240N	null
SN74LS244N	null
SN74LS245N	null
SN74LS273N	null
SN74LS292N	null
SN74LS373N	null
SN74LS374N	null
SN74LS465N	null
SN74LS540N	null
SN74LS640N	null
SN74LS645N	null
SN74LS682N	null
SN74S1053N	null
SN75185N	null
TPS40304DRCT	null
OPA1602AID	null
OPA2171AIDR	null
OPA2703UA	null
OPA2704UA	null
OPA2705UA	null
OPA340UA	null
OPA4170AID	null
OPA4171AIDR	null
OPA4180ID	null
OPA4322AIPW	null
REF5010ID	null
REF5020AID	null
SN74LS241N	null
SN74LS294N	null
SN74LS297N	null
SN74LS377N	null
SN74LS641-1N	null
SN74LS641N	null
SN74LS645-1N	null
SN74LS688N	null
THS4531AID	null
UCC28070APW	null
SN74LS640-1N	null
SN74LV125AN	null
SN74S240N	null
TPA1517NE	null

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

PCN Number:	20140409000	PCN Date:	04/23/2014
Title:	Add Cu as Alternative Wire Base Metal for Selected Device(s)		
Customer Contact:	PCN Manager	Phone: +1(214)480-6037	Dept: Quality Services
Proposed 1st Ship Date:	07/23/2014	Estimated Sample Availability:	Date provided at sample request

Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site
☒	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of Cu as an additional bond wire option for devices listed in "Product affected" section below. Devices will remain in current assembly facility.

Group 1 Device: Wire material change only

Group 2 Device: Wire material and diam change

	Au wire	Cu wire
Wire diam (mils)	0.96, 1.20, 1.30	0.80, 0.96

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: Group 1 Devices

AMC7812BSPAP	OPA180IDR	SN74LS623NE4	SN74S241N
AMC7812BSPAPR	OPA2172ID	SN74LS640-1N	SN74S241NE4
AMC7812BSRGCR	OPA2172IDR	SN74LS640-1NE4	SN74S244N
AMC7812BSRGCT	OPA4172IDR	SN74LS640N	SN74S244NE4
AMC7812LSPAP	SN0708077DRPR	SN74LS640NE4	SN74S374N
AMC7812LSPAPR	SN0708077DRPRG4	SN74LS641-1N	SN74S374NE4
AMC7812LSRGCR	SN1011010DR	SN74LS641-1NE4	SN75185N
AMC7812LSRGCT	SN1302042DR	SN74LS641N	SN75185NE4
AMC7812SPAP	SN65LVPE502ARGER	SN74LS641NE4	SN75196N
AMC7812SPAPR	SN74LS240N	SN74LS642-1N	SN75196NE4
BQ20695ADBTR-V310	SN74LS240NE4	SN74LS642-1NE4	SN75ALS056N

BQ20695ADBT-V310	SN74LS241N	SN74LS642N	SN75ALS056NE4
BQ20895ADBTR-V700	SN74LS241NE4	SN74LS642NE4	SN75ALS057N
BQ27000DRKR	SN74LS244N	SN74LS645-1N	SN75ALS057NE4
BQ27000DRKRG4	SN74LS244NE4	SN74LS645-1NE4	SN75ALS1711N
BQ27010DRKR	SN74LS245N	SN74LS645N	SN75ALS1711NE4
BQ27010DRKRG4	SN74LS245NE4	SN74LS645NE4	SN75C1154N
BQ27200DRKR	SN74LS273N	SN74LS682N	SN75C1154NE4
BQ27200DRKRG4	SN74LS273NE4	SN74LS682NE4	SN75C185N
BQ27210DRKR	SN74LS292N	SN74LS684N	SN75C185NE4
BQ27210DRKRG4	SN74LS292NE4	SN74LS684NE4	SN75LP1185N
CC2538NF11RTQR	SN74LS294N	SN74LS688N	SN75LP1185NE4
CC2538NF11RTQT	SN74LS294NE4	SN74LS688NE4	TPA1517NE
CC2538NF23RTQR	SN74LS297N	SN74LS697N	TPA1517NEE4
CC2538NF23RTQT	SN74LS297NE4	SN74LS697NE4	TPS40304DRCR
CC2538NF53RTQR	SN74LS299N	SN74LV125AN	TPS40304DRCT
CC2538NF53RTQT	SN74LS299NE4	SN74LV125ANE4	TPS61158DRVR
CC2538SF23RTQR	SN74LS373N	SN74LVC373AN	TPS61158DRVT
CC2538SF23RTQT	SN74LS373NE4	SN74LVC373ANE4	TPS61199NSR
CC2538SF53RTQR	SN74LS374N	SN74LVC374AN	TPS61199NST
CC2538SF53RTQT	SN74LS374NE4	SN74LVC374ANE4	TPS65630ARTGR
HPA00203DRKR	SN74LS377N	SN74LVC541ADGVR	TPS65631LDSKR
HPA00211DRKR	SN74LS377NE4	SN74LVC541ADGVRE4	TPS65631WDSKR
HPA00242DRKR	SN74LS465N	SN74LVC541ADGVRG4	TPS92023D
HPA00374DRKR	SN74LS465NE4	SN74LVC573AN	TPS92023DR
HPA00425DRKR	SN74LS540N	SN74LVC573ANE4	TPS92221D
HPA00599DRKR	SN74LS540NE4	SN74LVC574AN	TSM104WAIN
HPA00794NE	SN74LS541N	SN74LVC574ANE4	TSM104WIN
HPA00906DRKR	SN74LS541NE4	SN74S1052N	UCC28070APW
HPA00949DRKR	SN74LS593N	SN74S1052NE4	UCC28070APWR
HPA02232ARGER	SN74LS593NE4	SN74S1053N	VSP5640RSLR
OPA1664AIPW	SN74LS598N	SN74S1053NE4	
OPA1664AIPWR	SN74LS598NE4	SN74S240N	
OPA180ID	SN74LS623N	SN74S240NE4	

Product Affected: Group 2 Devices

ADS58C20IPFP	OPA2170AID	OPA4141AIDR	REF5020AIDR
ADS58C20IPFPR	OPA2170AIDR	OPA4170AID	REF5020AIDRG4
ADS58C23IPFP	OPA2171AID	OPA4170AIDR	REF5020ID
ADS58C23IPFPR	OPA2171AIDR	OPA4171AID	REF5020IDG4
ADS58C48IPFP	OPA2180ID	OPA4171AIDR	REF5020IDR
ADS58C48IPFPR	OPA2180IDR	OPA4180ID	REF5020IDRG4
HPA00598AID	OPA2209AID	OPA4180IDR	REF5025AID
HPA00598AIDR	OPA2209AIDR	OPA4188AID	REF5025AIDG4
HPA00813IDR	OPA2320AID	OPA4188AIDR	REF5025AIDR
HPA02228AIDR	OPA2320AIDR	OPA4209AIPW	REF5025AIDRG4
INA149AID	OPA2322AID	OPA4209AIPWR	REF5025ID
INA149AIDR	OPA2322AIDR	OPA4322AIPW	REF5025IDG4
INA822AID	OPA2340UA	OPA4322AIPWR	REF5025IDR
INA822AIDR	OPA2340UA/2K5	OPA4340UA	REF5025IDRG4
INA826AID	OPA2340UA/2K5G4	OPA4340UA/2K5	REF5030AID
INA826AIDR	OPA2340UAG4	OPA4340UA/2K5G4	REF5030AIDG4
OPA140AID	OPA2350UA	OPA4340UAG4	REF5030AIDR

OPA140AIDR	OPA2350UA/2K5	OPA4344UA	REF5030AIDRG4	
OPA141AID	OPA2350UA/2K5G4	OPA4344UA/2K5	REF5030ID	
OPA141AIDR	OPA2350UAG4	OPA4344UA/2K5G4	REF5030IDG4	
OPA1602AID	OPA2376AID	OPA4344UAG4	REF5030IDR	
OPA1602AIDR	OPA2376AIDG4	OPA4350UA	REF5030IDRG4	
OPA1604AID	OPA2376AIDR	OPA4350UA/2K5	REF5040AID	
OPA1604AIDR	OPA2376AIDRG4	OPA4350UA/2K5G4	REF5040AIDG4	
OPA1604AIPW	OPA2377AID	OPA4350UAG4	REF5040AIDR	
OPA1611AID	OPA2377AIDR	OPA4703UA	REF5040AIDRG4	
OPA1611AIDR	OPA2703UA	OPA4703UA/2K5	REF5040ID	
OPA1612AID	OPA2703UA/2K5	OPA4703UA/2K5G4	REF5040IDG4	
OPA1612AIDR	OPA2703UA/2K5G4	OPA4703UAG4	REF5040IDR	
OPA1641AID	OPA2703UAG4	OPA4704UA	REF5040IDRG4	
OPA1641AIDR	OPA2704UA	OPA4704UAG4	REF5045AID	
OPA1642AID	OPA2704UA/2K5	OPA4705UA	REF5045AIDG4	
OPA1642AIDR	OPA2704UA/2K5G4	OPA4705UAG4	REF5045AIDR	
OPA1644AID	OPA2704UAG4	OPA703UA	REF5045AIDRG4	
OPA1644AIDR	OPA2705UA	OPA703UA/2K5	REF5045ID	
OPA170AID	OPA2705UAG4	OPA703UA/2K5G4	REF5045IDG4	
OPA170AIDR	OPA2725AID	OPA703UAG4	REF5045IDR	
OPA171AID	OPA2725AIDG4	OPA705UA	REF5045IDRG4	
OPA171AIDR	OPA2725AIDR	OPA705UAG4	REF5050AID	
OPA172ID	OPA2725AIDRG4	OPA725AID	REF5050AIDG4	
OPA172IDR	OPA2727AID	OPA725AIDG4	REF5050AIDR	
OPA188AID	OPA2727AIDG4	OPA725AIDR	REF5050AIDRG4	
OPA188AIDR	OPA2727AIDR	OPA725AIDRG4	REF5050ID	
OPA192ID	OPA2727AIDRG4	OPA726AID	REF5050IDG4	
OPA192IDR	OPA340UA	OPA726AIDG4	REF5050IDR	
OPA209AID	OPA340UA/2K5	OPA827AID	REF5050IDRG4	
OPA209AIDR	OPA340UA/2K5G4	OPA827AIDG4	THS4531AID	
OPA211AID	OPA340UAG4	OPA827AIDR	THS4531AIDR	
OPA211AIDG4	OPA376AID	OPA827AIDRG4	THS4532IPW	
OPA211AIDR	OPA376AIDG4	OPA827ID	THS4532IPWR	
OPA211AIDRG4	OPA376AIDR	OPA827IDR	TPS2395PW	
OPA211ID	OPA376AIDRG4	REF5010AID	TPS2395PWR	
OPA211IDR	OPA377AID	REF5010AIDR	TPS2482PW	
OPA2140AID	OPA377AIDR	REF5010ID	TPS2482PWR	
OPA2140AIDR	OPA4140AID	REF5010IDR	TPS2483PW	
OPA2141AID	OPA4140AIDR	REF5020AID	TPS2483PWR	
OPA2141AIDR	OPA4141AID	REF5020AIDG4		

Qualification Data : Group 1 Devices

This qualification has been developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.

Qual Vehicle 1: CC2538 (MSL 3-260C)

Package Construction Details

Assembly Site:	Clark AT	Mold Compound:	4208625
# Pins-Designator, Family:	56-RTQ, VQFN	Mount Compound:	4207123
Lead Finish	NiPdAu	Bond Wire:	0.8mil Cu

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

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	150C (168, 300, 600 hrs)	78/0	78/0	78/0
**Biased Temp. Humidity	85C/85%RH (168, 600 Hrs).	26/0	26/0	26/0
**Unbiased HAST	110C/85%RH/17.7 psia (96, 264 hrs)	78/0	78/0	78/0
**T/C -55C/125C	-55C/+125C (200, 700 Cyc)	78/0	78/0	78/0

Notes **Preconditioning sequence: Level 3-260C.

Qual Device 2: ULN2003AN

Package Attributes:

Assembly Site:	TI Mexico	Mold Compound:	4042503
# Pins-Designator, Family:	16-N, PDIP	Mount Compound:	4147858
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot2	Lot 3
Electrical Characterization	-	Pass	-	-
High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0
Biased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0
T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Thermal Shock	-65C/+150C (500 Cyc)	77/0	77/0	77/0
High Temperature Operating Life	150C (300 Hrs)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass

Qual Device 3: TLC0838CN

Package Attributes:

Assembly Site:	TI Malaysia	Mold Compound:	4042503
# Pins-Designator, Family:	20-N, PDIP	Mount Compound:	4042500
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail
Autoclave	121C, 2 ATM (96 hrs)	77/0
T/C -65C/150C	-65C/+150C (500 Cyc)	77/0
High Temp. Storage Bake	170C (420 Hrs)	77/0
Manufacturability	(per mfg. Site specification)	Pass

Qual Vehicle 4: SN75DP139RGZ (MSL3-260C)			
Package Construction Details			
Assembly Site:	TI Malaysia	Mold Compound:	4208625
# Pins-Designator, Family:	48-RGZ, VQFN	Mount Compound:	4205846
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot2	Lot 3
**High Temp. Storage Bake	150C (500, 1000 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
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass

Notes: **Preconditioning sequence: MSL3-260C

Qual Vehicle 5 : SN75DP122ARTQ (MSL3-260C)			
Package Construction Details			
Assembly Site:	TI Clark	Mold Compound:	4208625
# Pins-Designator, Family:	56-RTQ, VQFN	Mount Compound:	4207768
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot2	Lot 3
**High Temp. Storage Bake	170C (420 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
Ball Bond Shear	76 balls 3 units min	76/0	76/0	76/0
Bond Pull	76 Wire 3 units min	76/0	76/0	76/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
X-ray	(top side only)	5/0	5/0	5/0

Notes: **Preconditioning sequence: MSL3-260C

Qual Vehicle 6 : TLVDAC32IRHBR (MSL2-260C)			
Package Construction Details			
Assembly Site:	TI Clark	Mold Compound:	4208625
# Pins-Designator, Family:	32-RHB, VQFN	Mount Compound:	4207768
Solder Ball Composition:	NiPdAu, Cu	Bond Wire:	0.8 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot2	Lot 3
**High Temp. Storage Bake	170C (420 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/+150°C (500 Cycles)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
X-Ray	(top side only)	5/0	5/0	5/0

Notes: **Preconditioning sequence: MSL2-260C

Qual Vehicle 7 : TPS51217DSCR (MSL2-260C)			
Package Construction Details			
Assembly Site:	TI Clark	Mold Compound:	4208625
# Pins-Designator, Family:	10-DSC, WSON	Mount Compound:	4207768
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot2	Lot 3
High Temp Operating Life	125C (1000 Hrs), Vddmax	77/0	77/0	77/0
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
**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
Ball Bond Shear	76 balls, 3 units min	76/0	76/0	76/0
Bond Pull	76 Wires, 3 units min	76/0	76/0	76/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
X-ray	(top side only)	5/0	5/0	5/0

Notes: **Preconditioning sequence: Level 2-260C

Qual Vehicle 8 : TMDS351PAG (MSL3-260C)			
Package Construction Details			
Assembly Site:	TI Philippines	Mold Compound:	4205442
# Pins-Designator, Family:	64-PAG, TQFP	Mount Compound:	4042504
Lead Finish, Base	NiPdAu, 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	170C (420 Hours)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hours)	77/0	77/0	77/0
**T/C -65C/150C	-65C/+150°C (500 Cycles)	77/0	77/0	77/0
**T/C -55C/125C	-55C/+125C (1000 Cycles)	77/0	77/0	77/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass
**Thermal Shock	-65C/+150C (500 Cycles)	77/0	77/0	77/0

Note** Test requires Moisture Preconditioning

Qual Device 9 : TPS5130PTR			
Package Attributes:			
Assembly Site:	TAI	Mold Compound:	4205442
# Pins-Designator, Family:	48-PT, LQFP	Mount Compound:	4042504
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail
**High Temp. Storage Bake	170C (420 Hours)	76/0
**Autoclave 121C	121C, 2 atm (96 Hours)	77/0
**T/C -65C/150C	-65C/+150°C (500 Cycles)	77/0
**Thermal Shock	-65C/+150C (500 Cycles)	77/0
Manufacturability	(per mfg. Site specification)	Pass
Moisture Sensitivity	L1-260C	12/0

Note** Test requires Moisture Preconditioning

Qual Vehicle 10 : CDCVF2505PW (MSL1-260C)					
Package Construction Details					
Assembly Site:	TI Malaysia		Mold Compound:	4206193	
# Pins-Designator, Family:	8-PW, TSSOP		Mount Compound:	4042500	
Leadframe (Finish, Base):	NiPdAu, Cu		Bond Wire:	0.96 Mil Dia., Cu	
Qualification: ☐ **Plan** ☒ **Test Results**					
Reliability Test	Conditions	Sample Size / Fail			
		Lot 1	Lot2	Lot 3	
**High Temp. Storage Bake	170C (420 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	
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass	
Notes: **Preconditioning sequence: MSL1-260C					

Qual Vehicle 11 : SN75LVDS84ADGG (MSL2-260C)					
Package Construction Details					
Assembly Site:	TI Taiwan		Mold Compound:	4209002	
# Pins-Designator, Family:	48-DGG, TSSOP		Mount Compound:	4042500	
Leadframe (Finish, Base):	NiPdAu, Cu		Bond Wire:	0.96 Mil Dia., Cu	
Qualification: ☐ **Plan** ☒ **Test Results**					
Reliability Test	Conditions	Sample Size / Fail			
		Lot 1	Lot2	Lot 3	
**High Temp. Storage Bake	150C (500, 1000 Hrs)	77/0	77/0	77/0	
**Unbiased HAST	130C/85%RH (96 Hrs)	77/0	77/0	77/0	
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0	
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass	
Notes: **Preconditioning sequence: MSL2-260C					

Qual Vehicle 12 : THS7303PW (MSL2-260C)					
Package Construction Details					
Assembly Site:	TI Taiwan		Mold Compound:	4206193	
# Pins-Designator, Family:	20-PW, TSSOP		Mount Compound:	4042500	
Leadframe (Finish, Base):	NiPdAu, Cu		Bond Wire:	0.96 Mil Dia., Cu	
Qualification: ☐ **Plan** ☒ **Test Results**					
Reliability Test	Conditions	Sample Size / Fail			
		Lot 1	Lot2	Lot 3	
**High Temp. Storage Bake	170 (420 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	
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass	
Notes: **Tests require preconditioning sequence: MSL2-260C					

Qual Vehicle 13 : TAS5086DBT (MSL 2-260C)			
Package Construction Details			
Assembly Site:	TI Taiwan	Mold Compound:	4206193
# Pins-Designator, Family:	38-DBT, TSSOP	Mount Compound:	4042500
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size / Fail		
		Lot 1	Lot2	Lot 3
**High Temp Operating Life (Analog)	155C (240 Hrs), Vddmax	77/0	77/0	77/0
**High Temp. Storage Bake	170C (420 Hrs)	77/0	77/0	77/0
**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
**T/C -55C/125C	-55C/+125C (1000 Cyc)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
**Thermal Shock	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Notes: **Tests require preconditioning sequence: MSL2-260C				

Qual Vehicle 14 : RC4558DR (MSL 1-260C)			
Package Construction Details			
Assembly Site:	TI Malaysia	Mold Compound:	4211880
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4211470
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

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

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Steady-state Life Test	150C (168, 300 hrs)	77/0	-	-
Electrical Characterization	-	30/0	-	-
**High Temp. Storage Bake	170C (420hrs)	77/0	-	-
**Biased HAST	130C/85%RH (96 Hrs)	77/0	-	-
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	-	-
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	77/0
Flammability	Method A - UL94-0	5/0	-	-
Flammability	Method B - IEC 695-2-2	5/0	-	-
Flammability	Method C - UL 1694	5/0	-	-
Manufacturability	(per mfg. Site specification)	1/0	-	-
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes **- Preconditioning sequence: Level 1-260C.				

Qual Vehicle 15 : ADS1131IDR (MSL 2-260C)			
Package Construction Details			
Assembly Site:	TI Mexico	Mold Compound:	4211880
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4147858
Lead frame (Finish, Base):	NiPdAu, 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	170C (420hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	77/0
Manufacturability	(per mfg. Site specification)	Pass	-	-

Notes **- Preconditioning sequence: Level 2-260C.

Qualification Data : Group 2 Devices

Qual Vehicle 1: INA-2126U (MSL 3-260C)			
Package Construction Details			
Assembly Site:	MLA	Mold Compound:	4209640
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4205846
Lead Finish	NiPdAu	Bond Wire:	0.96mil Cu

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

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	-	Pass	-	-
**High Temp. Storage Bake	170C (420 hrs)	80/0	80/0	80/0
**Autoclave	121C (96 hrs)	80/0	80/0	80/0
**Temperature Cycle	-65/150C (500 Cycles)	80/0	80/0	80/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	L3-260C	11/0	11/0	12/0

Notes **- Preconditioning sequence: Level 3-260C.

Qual Vehicle 2: OPA2340UA (MSL 2-260C)			
Package Construction Details			
Assembly Site:	MLA	Mold Compound:	4209640
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4205846
Lead Finish	NiPdAu	Bond Wire:	0.96mil Cu

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

Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	-	Pass	-	-
**High Temp. Storage Bake	170C (420 hrs)	79/0	80/0	80/0
**Autoclave	121C (96 hrs)	80/0	78/0	80/0
**Temperature Cycle	-65/150C (500 Cycles)	80/0	80/0	80/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
Moisture Sensitivity	L2-260C	12/0	12/0	12/0

Notes **- Preconditioning sequence: Level 2-260C.

Qual Vehicle 3: REF5025AIDR (MSL 2-260C)					
Package Construction Details					
Assembly Site:	MLA	Mold Compound:	4209640		
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4205846		
Lead Finish	NiPdAu	Bond Wire:	0.96mil Cu		
Qualification: ☐ **Plan** ☒ **Test Results**					
Reliability Test	Conditions	Sample Size/Fail			
		Lot#1	Lot#2	Lot#3	
Electrical Characterization	-	Pass	-	-	
**High Temp. Storage Bake	170C (420 hrs)	80/0	80/0	80/0	
**Autoclave	121C (96 hrs)	80/0	80/0	80/0	
**Temperature Cycle	-65/150C (500 Cycles)	80/0	80/0	80/0	
**Biased HAST	130C/85%RH (96 hrs)	77/0	77/0	77/0	
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass	
Moisture Sensitivity	L2-260C	11/0	11/0	11/0	
Notes **- Preconditioning sequence: Level 2-260C.					

Qual Vehicle 4: TPS2480PW (MSL 1-260C)					
Package Construction Details					
Assembly Site:	MLA	Mold Compound:	4209640		
# Pins-Designator, Family:	20-PW, TSSOP	Mount Compound:	4042500		
Lead Finish	NiPdAu	Bond Wire:	0.96mil Cu		
Qualification: ☐ **Plan** ☒ **Test Results**					
Reliability Test	Conditions	Sample Size/Fail			
		Lot#1	Lot#2	Lot#3	
Electrical Characterization	-	Pass	-	-	
**High Temp. Storage Bake	170C (420 hrs)	80/0	80/0	80/0	
**Autoclave	121C (96 hrs)	80/0	80/0	80/0	
**Temperature Cycle	-65/150C (500 Cycles)	80/0	80/0	80/0	
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass	
Moisture Sensitivity	L1-260C	11/0	11/0	11/0	
Notes **- Preconditioning sequence: Level 1-260C.					

Qual Vehicle 5: ADS58C48IPFP (MSL 3-260C)			
Package Construction Details			
Assembly Site:	TIPI	Mold Compound:	4205443
# Pins-Designator, Family:	80-PFP, HTQFP	Mount Compound:	4208458
Lead Finish	NiPdAu	Bond Wire:	0.8mil Cu
Qualification: ☐ **Plan** ☒ **Test Results**			
Reliability Test	Conditions	Sample Size/Fail	
Electrical Characterization	-	Pass	
Manufacturability	(per mfg. Site specification)	Pass	

Qual Vehicle 6: SN96019PFP (MSL 3-260C)			
Package Construction Details			
Assembly Site:	TIPI	Mold Compound:	4205443
# Pins-Designator, Family:	80-PFP, HTQFP	Mount Compound:	4208458
Lead Finish	NiPdAu	Bond Wire:	1.3mil Cu

Qualification: ☐ **Plan** ☒ **Test Results**		
Reliability Test	Conditions	Sample Size/Fail
Electrical Characterization	-	Pass
**Life Test	125C (990 hrs)	77/0
**High Temp. Storage Bake	170C (420 hrs)	77/0
**Autoclave	121C (96 hrs)	80/0
**Temperature Cycle	-65/150C (500 Cycles)	80/0
Manufacturability	(per mfg. Site specification)	Pass
Notes **Preconditioning sequence: Level 3-260C.		

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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