



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20120808000
Qualification of Alternate Material Set for Assembly with Au Wire
and Cu as Additional Wire Base Metal Option for Select SOIC Package Devices
Change Notification / Sample Request

Date: 8/24/2012
To: Newark 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

20120808000
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
CDC329AD	null
CDC391D	null
CDCVF2505D	null
CDCVF25081D	null
INA270AID	null
INA271AID	null
OPA1632D	null
SN10501D	null
SN65HVD1040DR	null
SN65HVD1050D	null
SN65HVD33D	null
SN65HVD34D	null
SN65HVD34DR	null
SN65HVD35DR	null
SN65HVD37D	null
SN65LBC173D	null
SN65LBC175D	null
SN65LBC176AD	null
SN65LBC176D	null
SN65LBC182D	null
SN65LVCP22D	null
SN65LVCP23D	null
SN65LVDM050D	null
SN65LVDM051D	null
SN65LVDM176D	null
SN65LVDM179D	null
SN65LVDS047D	null
SN65LVDS048AD	null
SN65LVDS100D	null
SN65LVDS101D	null
SN65LVDS104D	null
SN65LVDS105D	null
SN65LVDS179D	null
SN65LVDS390D	null
SN65LVDS391D	null
SN65LVDS9637BD	null
SN65LVDS9637D	null
SN65LVDS9638D	null
SN65LVDT100D	null
SN65LVDT32BD	null
SN65LVDT33D	null

SN65LVDT390D	null
SN75LBC173D	null
SN75LBC176D	null
SN75LBC176DR	null
SN75LBC182D	null
SN75LVDT390D	null
TB3R2D	null
THS3001CD	null
THS3061D	null
THS3062D	null
THS3091D	null
THS3111ID	null
THS3122ID	null
THS3125ID	null
THS4001ID	null
THS4031CD	null
THS4031ID	null
THS4032CD	null
THS4032ID	null
THS4041CD	null
THS4051CD	null
THS4061CD	null
THS4062CD	null
THS4120ID	null
THS4121CD	null
THS4130ID	null
THS4131CD	null
THS4131ID	null
THS4140ID	null
THS4211D	null
THS4215D	null
THS4225D	null
THS4271D	null
THS4304D	null
THS4503CD	null
THS4503ID	null
THS4601ID	null
THS4631D	null
THS6042ID	null
TL1451ACD	null
TL3116CD	null
TLC04CD	null
TLC072CD	null
TLC072ID	null
TLC074AID	null
TLC074CD	null
TLC074CDR	null
TLC080IDR	null
TLC082CDG4	null
TLC084AID	null
TLC1078ID	null

TLC14ID	null
TLC1549ID	null
TLC2201AID	null
TLC2202ACD	null
TLC2252AID	null
TLC2252CD	null
TLC2262AID	null
TLC2264AID	null
TLC2264CD	null
TLC2264ID	null
TLC2272ACD	null
TLC2272AID	null
TLC2272AIDR	null
TLC2272CD	null
TLC2272CDR	null
TLC2274ACDR	null
TLC2274CD	null
TLC2274CDR	null
TLC25L2ACD	null
TLC25L4CDG4	null
TLC272BCD	null
TLC272BID	null
TLC274ACD	null
TLC274BIDR	null
TLC274CD	null
TLC274CDR	null
TLC274ID	null
TLC277ID	null
TLC277IDR	null
TLC279IDR	null
TLC27L2BCD	null
TLC27L2CD	null
TLC27L2CDR	null
TLC27L2ID	null
TLC27L2IDR	null
TLC27L4ACD	null
TLC27L4BCD	null
TLC27L4CD	null
TLC27L4ID	null
TLC27L7CD	null
TLC27M2ID	null
TLC27M9CD	null
TLC339CD	null
TLC354CD	null
TLC3702CDR	null
TLC3704CD	null
TLC3704ID	null
TLC372CD	null
TLC372CDR	null
TLC372ID	null
TLC374ID	null

TLC393IDR	null
TLC4502CD	null
TLC4541ID	null
TLC4545ID	null
TLC551CD	null
TLC552CD	null
TLC555CD	null
TLC555CDG4	null
TLC555ID	null
TLC555IDR	null
TLC556CD	null
TLC556ID	null
TLC556IDR	null
TLC5615CD	null
TLC5620CD	null
TLC7524CD	null
TLC7701ID	null
TLC7703ID	null
TLC7705ID	null
TLC7705QD	null
TLC7733ID	null
TLE2022AID	null
TLE2022CD	null
TLE2022CDR	null
TLE2062ACD	null
TLE2062CD	null
TLE2062CDR	null
TLE2062ID	null
TLE2064ACD	null
TLE2064CD	null
TLE2064ID	null
TLE2072AID	null
TLE2072CD	null
TLE2072CDR	null
TLE2072ID	null
TLE2082CD	null
TLE2082ID	null
TLE2082IDR	null
TLE2141AID	null
TLE2141CD	null
TLE2141IDR	null
TLE2142ACD	null
TLE2142AID	null
TLE2142CD	null
TLE2161ACD	null
TLE2425CD	null
TLE2425CDR	null
TLE2426CD	null
TLE2426CDR	null
TLE2426ID	null
TLV1572CD	null

TLV2252AID	null
TLV2264AID	null
TLV2342ID	null
TLV2422AID	null
TLV2422CD	null
TLV2422ID	null
TLV2432AID	null
TLV2442CD	null
TLV2442ID	null
TLV2444CD	null
TLV2451CD	null
TLV2454CD	null
TLV2461CD	null
TLV2462AIDR	null
TLV2462CD	null
TLV2462CDR	null
TLV2463CD	null
TLV2472CD	null
TLV2473CD	null
TLV2474CD	null
TLV2474IDR	null
TLV2541ID	null
TLV2772CD	null
TLV2772ID	null
TLV2774CD	null
TLV2774ID	null
TLV2784AID	null
TLV5604CD	null
TLV5616CD	null
TLV5618ACD	null
TLV5618AID	null
TLV5620CD	null
TLV5626CD	null
TLV5626ID	null
TLV5638CD	null
TPA302D	null
TPA311D	null
TPA321DR	null
TPA4860D	null
TPA4861D	null
TPA741D	null
TPS1100D	null
TPS1101D	null
TPS2080D	null
TPS2082D	null
TPS2085D	null
TPS2087D	null
TPS2102D	null
TPS2375D	null
TPS2813D	null
TPS2832D	null

TPS2834D	null
TPS3305-33D	null
TPS3307-18D	null
TPS3307-25D	null
TPS3705-33D	null
TPS3705-50D	null
TPS6734IDR	null
TPS6735ID	null
TPS6735IDR	null
TPS7101QD	null
TPS7101QDR	null
TPS7133QDR	null
TPS7148QD	null
TPS7150QD	null
TPS7225QD	null
TPS7233QD	null
TPS7250QD	null
TPS7250QDR	null
TPS7301QDR	null
TPS7333QD	null
TPS7433D	null
TPS7433DG4	null
TPS76550D	null
TPS76601D	null
TPS76618D	null
TPS76625D	null
TPS76633D	null
TPS76650D	null
TPS76718QD	null
TPS76725QD	null
TPS76733QD	null
TPS76801QD	null
TPS76833QD	null
TPS76850QD	null
TPS77515D	null
TPS77518D	null
TPS77533D	null
TPS77601D	null
TPS77615D	null
TPS77625D	null
TPS77633D	null
TPS77733D	null
TPS77801D	null
TPS77833D	null

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

PCN Number:	20120808000			PCN Date:	08/24/2012
Title:	Qualification of Alternate Material Set for Assembly with Au Wire and Cu as Additional Wire Base Metal Option for Select SOIC Package Devices				
Customer Contact:	PCN_ww_admin_team@list.ti.com	Phone:	+1(214)480-6037	Dept:	Quality Services
Proposed 1st Ship Date:	11/24/2012	Estimated Sample Availability:	Date provided at sample request.		
Change Type:					
<input type="checkbox"/>	Assembly Site	<input 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:					
Qualification of an alternate material set for assembly with Au wire and add Cu as an additional wire base metal option for select devices in the SOIC package. See table below:					
Material set	Current Assembly Au wire	Alternate Assembly Au wire	Cu Bond wire option		
Mold compound	4205694	4211880	4211880		
Wire dia. (Mils)	0.8, 0.9, 0.96, 1.0, 1.15, 1.3	0.8, 0.9, 0.96, 1.0, 1.15, 1.3	0.96		
Qualification references are provided for further test data validation (See Qualification References Section).					
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:					
Please see page two of this document for your list of PCN affected devices.					
Qualification Plan					
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.					
Qualification Schedule:	Start:	Aug 2012	End:	Oct 2012	

Qual Vehicle 1 : CDCVF25081DR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Taiwan	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4042500	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Electrical Characterization	-	30/0	-	-
**High Temp. Storage Bake	150C (500, 1000hrs)	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)	1/0	1/0	1/0
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	-	-
Notes **- Preconditioning sequence: Level 1-260C.				
Qual Vehicle 2 : SN65HVD1050DR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Taiwan	Mold Compound:	4211880	
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4042500	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0		
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0		
Manufacturability	(per mfg. Site specification)	1/0		
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0		
Notes **- Preconditioning sequence: Level 1-260C.				
Qual Vehicle 3 : TB3R2DR (MSL 2-260C)				
Package Construction Details				
Assembly Site:	TI Taiwan	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4042500	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	150C (500, 1000hrs)	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)	1/0	1/0	1/0
Moisture Sensitivity	(level 2 @ 260C peak +5/-0C)	12/0	-	-
Notes **- Preconditioning sequence: Level 2-260C.				

Qual Vehicle 4 : TLC3702CDR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Taiwan	Mold Compound:	4211880	
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4042500	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
**High Temp. Storage Bake	150C (500, 1000hrs)	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)	1/0	1/0	1/0
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	-	-
Notes ** - Preconditioning sequence: Level 1-260C.				
Qual Vehicle 5 : TPS2058AD (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Taiwan	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4042500	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	77/0	
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0	77/0	
Manufacturability	(per mfg. Site specification)	1/0	1/0	
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	-	
Notes ** - Preconditioning sequence: Level 1-260C.				
Qual Vehicle 6 : MAX232DR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Malaysia	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4211470	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size/Fail		
		Lot#1	Lot#2	Lot#3
Steady-state Life Test	150C (168, 300 hrs)	77/0	77/0	77/0
Electrical Characterization	-	30/0	-	-
**High Temp. Storage Bake	170C (420hrs)	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
Flammability	Method A - UL94-0	5/0	5/0	5/0
Flammability	Method B - IEC 695-2-2	5/0	5/0	5/0
Flammability	Method C - UL 1694	5/0	5/0	5/0
Manufacturability	(per mfg. Site specification)	1/0	1/0	1/0
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes ** - Preconditioning sequence: Level 1-260C.				

Qual Vehicle 7 : 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: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> 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 8 : SN74LV14ADR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Malaysia	Mold Compound:	4211880	
# Pins-Designator, Family:	14-D, SOIC	Mount Compound:	4211470	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	
Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> 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 9 : ULN2003ADR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Malaysia	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4211470	
Lead frame (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu	

Qualification: <input checked="" type="checkbox"/> Plan <input type="checkbox"/> Test Results		
Reliability Test	Conditions	Sample Size/Fail
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
Manufacturability	(per mfg. Site specification)	1/0
Notes ** - Preconditioning sequence: Level 1-260C.		

Qualification Data: Approved 10/17/2011

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.

Qual Vehicle 1 : CD4053BM96 (MSL 1-260C)

Package Construction Details

Assembly Site:	TI Mexico	Mold Compound:	4211880
# Pins-Designator, Family:	16-D, SOIC	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
**Steady-state Life Test	150C (300 Hrs)	77/0
Electrical Characterization	-	Pass
**High Temp. Storage Bake	170C (600 Hrs)	77/0
**Biased HAST	130C/85%RH (192 Hrs)	77/0
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0
**T/C -65C/150C	-65C/+150C (500 Cyc)	77/0
Visual / Mechanical	-	Pass
Lead Pull	# of leads to destruction, min. 3 units	22/0
Bond Strength	76 ball bonds, min. 3 units	76/0
Manufacturability	(per mfg. Site specification)	Pass
**Thermal Shock	-65C/+150C (500 Cyc)	77/0
X-ray	(Top-side only)	5/0
Moisture Sensitivity	(level 1 @ 260C peak +0/-5C)	12/0

Notes ** - Preconditioning sequence: Level 1-260C.

Qual Vehicle 2 : LM358DR (MSL 1-260C)

Package Construction Details

Assembly Site:	TI Mexico	Mold Compound:	4211880
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4147858
Leadframe (Finish, Base):	NiPdAu, 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
Steady-state Life Test	150C (168, 300 hrs)	77/0	-	-
Electrical Characterization	-	Pass	-	-
**High Temp. Storage Bake	170C (420hrs)	77/0	-	-
**Biased HAST	130C/85%RH (192 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
Visual / Mechanical	-	Pass	-	-
Lead Pull	--	22/0	-	-
Bond Strength	76 ball bonds, min. 3 units	76/0	-	-
Manufacturability	(per mfg. Site specification)	Pass	-	-
**Thermal Shock	-65C/+150C (500 Cyc)	77/0	77/0	77/0
X-ray	(top side only)	5/0	-	-
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes ** - Preconditioning sequence: Level 1-260C.				
Qual Vehicle 3 : TL494IDR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Mexico	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4147858	
Leadframe (Finish, Base):	NiPdAu, 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
Steady-state Life Test	150C (168, 300 hrs)	77/0	77/0	77/0
Electrical Characterization	-	Pass	-	-
**High Temp. Storage Bake	170C (600hrs)	77/0	77/0	77/0
**Biased HAST	130C/85%RH (192 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
Visual / Mechanical	-	Pass	Pass	Pass
Lead Pull	--	22/0	22/0	22/0
Flammability	Method A - UL94-0	5/0	5/0	5/0
Flammability	Method B - IEC 695-2-2	5/0	5/0	5/0
Flammability	Method C - UL 1694	5/0	5/0	5/0
Bond Strength	76 ball bonds, min. 3 units	76/0	76/0	76/0
Manufacturability	(per mfg. Site specification)	Pass	Pass	Pass
**Thermal Shock	-65C/+150C (500 Cyc)	77/0	77/0	77/0
X-ray	(top side only)	5/0	5/0	5/0
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes ** - Preconditioning sequence: Level 1-260C.				

Qual Vehicle 4 : ULN2003ADR (MSL 1-260C)				
Package Construction Details				
Assembly Site:	TI Mexico	Mold Compound:	4211880	
# Pins-Designator, Family:	16-D, SOIC	Mount Compound:	4147858	
Leadframe (Finish, Base):	NiPdAu, 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
**Steady-state Life Test	150C (300 Hrs)	77/0	-	-
Electrical Characterization	-	Pass	-	-
**High Temp. Storage Bake	170C (600 Hrs)	77/0	77/0	77/0
**Biased HAST	130C/85%RH (192 Hrs)	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
Visual / Mechanical	-	Pass	-	-
Lead Pull	--	22/0	22/0	22/0
Bond Strength	76 ball bonds, min. 3 units	76/0	-	-
Manufacturability	(per mfg. Site specification)	Pass	-	-
**Thermal Shock	-65C/+150C (500 Cyc)	77/0	77/0	77/0
X-ray	(Top-side only)	5/0	5/0	5/0
Moisture Sensitivity	(level 1 @ 260C peak +0/-5C)	12/0	12/0	12/0
Notes **- Preconditioning sequence: Level 1-260C.				

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
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Japan	PCNJapanContact@list.ti.com