



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20200904000.1A
Qualification of HFTF as an additional assembly site for select Devices
Change Notification / Sample Request

Date: October 01, 2020
To: Newark/Farnell PCN

Dear Customer:

Revision A is to announce the addition of new devices that were not included on the original PCN notification.

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 proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

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 Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team
SC Business Services

20200904000.1A
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
SN74LVC1G04DCKT	null
SN74LVC1G06DCKT	null

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

PCN Number:	20200904000.1A		PCN Date:	Oct. 1, 2020																									
Title:	Qualification of HFTF as an additional assembly site for select Devices																												
Customer Contact:	PCN Manager	Dept:	Quality Services																										
Proposed 1st Ship Date:	Dec 09, 2020	Estimated Sample Availability:	Date provided at sample request																										
Change Type:																													
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site																								
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material																								
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process																								
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site																								
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials																								
				<input type="checkbox"/>	Wafer Fab Process																								
PCN Details																													
Description of Change:																													
<p>Revision A is to announce the <u>addition</u> of new devices that were not included on the original PCN notification. These new devices are highlighted and bolded in the device list below. The expected first shipment date for these new devices will be 90 days from this notice (Dec 16, 2020) for these newly added devices only. The proposed 1st ship date of Dec 09, 2020 still applies for the original set of device.</p> <p>Texas Instruments Incorporated is announcing the qualification of HFTF as an alternate Assembly site for devices listed below in the product affected section. Construction differences and current assembly sites are as follows:</p> <p>Material Differences:</p> <table border="1"> <thead> <tr> <th></th> <th>ASEWH</th> <th>HIT</th> <th>HNA</th> <th>HFTF</th> </tr> </thead> <tbody> <tr> <td>Mount Compound</td> <td>1120999A2</td> <td>RZ241C</td> <td>400180</td> <td>SID# A-18</td> </tr> <tr> <td>Mold Compound</td> <td>4020039A1</td> <td>RM500F</td> <td>450179</td> <td>SID#R-31</td> </tr> <tr> <td>Lead Finish</td> <td>NiPdAu</td> <td>Matte Sn</td> <td>NiPdAu</td> <td>Matte Sn</td> </tr> <tr> <td>Wire type</td> <td>Au</td> <td>Au</td> <td>Au</td> <td>Cu</td> </tr> </tbody> </table> <p>Upon expiry of this PCN TI will combine lead free solutions in a single <u>standard part number</u>, for the devices in group 2. For example; SN74LVC1G04DCKR – can ship with both Matte Sn and NiPdAu. When available customers may specify NiPdAu finish by ordering the part with the G4 suffix, e.g. SN74LVC1G04DCKRG4.”</p> <p>Example:</p> <ul style="list-style-type: none"> – Customer order for 7500 units of SN74LVC1G04DCKR with 2500 units SPQ (Standard Pack Quantity per Reel). – TI can satisfy the above order in one of the following ways. <ul style="list-style-type: none"> I. 3 Reels of NiPdAu finish. II. 3 Reels of Matte Sn finish III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish. IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish. 						ASEWH	HIT	HNA	HFTF	Mount Compound	1120999A2	RZ241C	400180	SID# A-18	Mold Compound	4020039A1	RM500F	450179	SID#R-31	Lead Finish	NiPdAu	Matte Sn	NiPdAu	Matte Sn	Wire type	Au	Au	Au	Cu
	ASEWH	HIT	HNA	HFTF																									
Mount Compound	1120999A2	RZ241C	400180	SID# A-18																									
Mold Compound	4020039A1	RM500F	450179	SID#R-31																									
Lead Finish	NiPdAu	Matte Sn	NiPdAu	Matte Sn																									
Wire type	Au	Au	Au	Cu																									
Reason for Change:																													
Supply continuity																													
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																													
None																													

Anticipated impact on Material Declaration			
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
ASEWH	AWH	CHN	Weihai
HIT	HTC	JPN	Kitatsugaru
HNA	HNT	THA	Ayutthaya
HFTF	HFT	CHN	Hefei

Sample product shipping label (not actual product label)

Product Affected:

SN74LVC1G04DCKR	SN74LVC1G07DCKR	SN74LVC1G125DBVT
SN74LVC1G04DCKT	SN74LVC1G07DCKT	SN74LVC2G125DCUR
SN74LVC1G06DCKR	SN74LVC1G123DCUR	SN74LVC2G125DCUT
SN74LVC1G06DCKT	SN74LVC1G125DBVR	SN74LVC2G132DCUR

Qualification Report

Approve Date 30-Oct-2019

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	Test Name / Condition	Duration	Qual Device: <u>LSF0102DCUR</u>	Qual Device: <u>SN74LVC1G123DCUR</u>
PC	PreCon Level 1	Level 1-260C	3/231/0	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	3/231/0
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	3/231/0
HTOL	Life Test, 125C	1000 Hours	3/231/0	3/231/0
LI	Lead Fatigue	Leads	3/66/0	-
LI	Lead Pull	Leads	3/18/0	-

Type	Test Name / Condition	Duration	Qual Device: LSF0102DCUR	Qual Device: SN74LVC1G123DCUR
MISC	Salt Atmosphere	24 Hours	3/66/0	-
SD	Surface Mount Solderability	PB	3/66/0	-
SD	Surface Mount Solderability	PB-Free	3/66/0	-
DS	Die Shear	--	3/30/0	3/30/0
PKG	Lead Finish Adhesion	Leads	3/45/0	-
WBP	Bond Pull	Wires	3/228/0	3/228/0
WBS	Bond Shear	Wires	3/228/0	3/228/0
FLAM	Flammability (IEC 695-2-2)	--	3/15/0	-
FLAM	Flammability (UL 94V-0)	--	3/15/0	-
FLAM	Flammability (UL-1694)	--	3/15/0	-

- QBS: Qual By Similarity
- Qual Device SN74LVC1G123DCUR is qualified at LEVEL1-260CG
- Qual Device LSF0102DCUR is qualified at LEVEL1-260CG

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
 - The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
 - The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles
- Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>
Green/Pb-free Status:
Qualified Pb-Free(SMT) and Green

Qualification Report

Approve Date 09-Jun-2017

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	Test Name / Condition	Duration	Qual Device: SN74AHC1G14DBV R	Qual Device: SN74CBTLV1G125DBV R	Qual Device: SN74LVC1G17DBV R	Qual Device: TL431AIDBV R	Qual Device: TLVH431AIDBV R
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
AC	Autoclave 121C	144 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
FLAM	Flammability (IEC 695-2-2)	--	3/15/0	-	-	-	-
FLAM	Flammability (UL 94V-0)	--	3/15/0	-	-	-	-
FLAM	Flammability (UL-1694)	--	3/15/0	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
HAST	Biased HAST, 130C/85%RH	192 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0

	H						
HTOL	Life Test, 150C	300 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
HTSL	High Temp. Storage Bake, 170C	400 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
HTSL	High Temp. Storage Bake, 170C	600 Hours	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
LI	Lead Fatigue	Leads	3/66/0	-	-	2/44/0	1/22/0
LFA	Lead Finish Adhesion	Leads	3/45/0	-	-	2/30/0	1/15/0
LI	Lead Pull to Destruction	Leads	3/66/0	-	-	2/44/0	1/22/0
PD	Physical Dimensions	--	3/15/0	-	-	2/10/0	1/5/0
SD	Solderability	Pb	3/66/0	-	-	2/44/0	1/22/0
SD	Solderability	Pb Free	3/66/0	-	-	2/44/0	1/22/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
TC	Temperature Cycle, -65/150C	750 Cycles	3/231/0	3/231/0	3/231/0	2/154/0	1/77/0
DSS	Die Shear	Die	3/30/0	3/30/0	3/30/0	2/20/0	1/10/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	3/228/0	2/152/0	1/76/0
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0	3/228/0	2/152/0	1/76/0
MSL	Moisture Sensitivity Level	1-260C	3/36/0	-	-	2/24/0	1/12/0
SA	Salt Atmosphere	24 Hours	3/66/0	-	-	-	-
XR	X-Ray	(top side only)	3/15/0	3/15/0	3/15/0	2/10/0	1/5/0

- QBS: Qual By Similarity

- Qual Device SN74AHC1G14DBVR is qualified at LEVEL1-260C

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours

- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours

- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the 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
WW PCN Team	PCN_ww_admin_team@list.ti.com

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI’s products are provided subject to TI’s Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI’s provision of these resources does not expand or otherwise alter TI’s applicable warranties or warranty disclaimers for TI products.