12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20170613005A
Qualification of Hefei Tongfu Microelectronic Co. Ltd (HFTF) as additional Assembly and Test Site for Select Devices
Change Notification / Sample Request

Date: September 15, 2017
To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

Revision A is to update the description of change to provide correction on the material differences table. We apologize for any inconvenience this may have caused.

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 Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20170613005A
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
SN74AHC1G14DBVR	null
SN74LVC1G04DBVR	null
SN74LVC1G08DBVR	null
SN74LVC1G132DBVT	null
SN74LVC1G34DBVR	null
TL331IDBVT	null
SN74LV1T34DBVR	null
SN74LVC1G04DBVT	null
SN74LVC1G08DBVT	null
TLV1391IDBVR	null
TLVH431IDBVR	null
SN74CBTLV1G125DBVR	null
SN74LV1T126DBVR	null
SN74LVC1G66DBVT	null
SN74LVC1G125DBVT	null
SN74AHC1G00DBVR	null
SN74AHCT1G14DBVR	null
SN74LVC1G132DBVR	null
SN74CBT1G125DBVR	null
SN74LVC1G38DBVR	null
SN74LVC1G34DBVT	null
TL432AQDBVR	null
TL331KDBVR	null
SN74LVC1G66DBVR	null

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

PCN Number:	20170613005A	PCN Date:	Sept 15, 2017
Title:	Qualification of Hefei Tongfu Microelectronic Co. Ltd (HFTF) as additional Assembly and Test Site for Select Devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Sept 27, 2017	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:

Revision A is to update the description of change to provide correction on the material differences table. Devices under Group 2 will have a lead finish change from NiPdAu to Matte Sn. We apologize for any inconvenience this may have caused.

Texas Instruments is pleased to announce the Qualification of Hefei Tongfu Microelectronic Co. Ltd (HFTF) as additional Assembly and Test Site for Select Devices listed in the "Product Affected" Section. Current assembly sites and Material differences are as follows.

Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly Site City
NFME	NFM	CHN	Chongchuan
HFTF	**HFT**	**CHN**	**Hefei**

Material Differences:

Group 1 Device:

	NFME	HFTF
Mold compound	R-07	R-27

Group 2 Device:

	NFME	HFTF
Lead finish	NiPdAu	Matte Sn
Mold compound	R-07	R-27

Upon expiration of this PCN, TI will combine lead free solutions in a single ***standard part number***, for example; ***SN74LV1T00DBVR*** – 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. ***SN74LV1T00DBVRG4***.

Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

Reason for Change:

Continuity of supply.

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

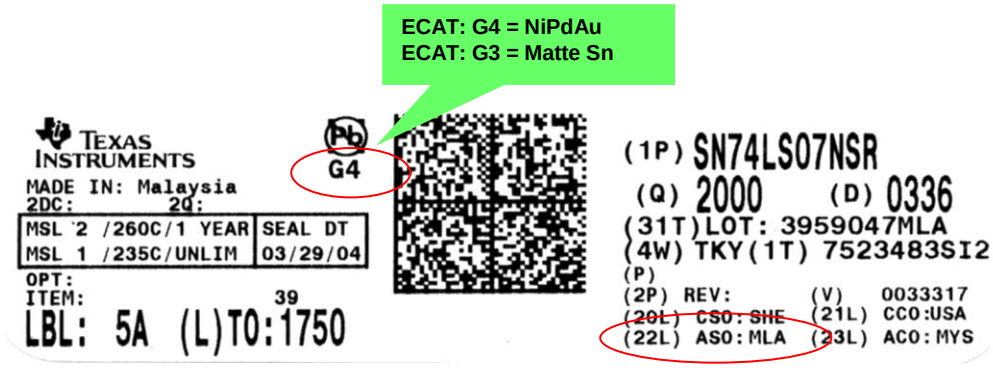
☐	No Impact to the Material Declaration	☒	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI Eco-Info website. There is no impact to the material meeting current regulatory compliance requirements with this PCN change.

Changes to product identification resulting from this PCN:

Group 2 Device:

Assembly Site			
NFME	Assembly Site Origin (22L)	ASO: NFM	ECAT: G4
HFTF	Assembly Site Origin (22L)	ASO: HFT	ECAT: G3

Sample product shipping label (not actual product label)



ASSEMBLY SITE CODES: NFME = E, HFTF = J

Product Affected: Group 1

SN74AHC1G02DBVR	SN74AHCT1G08DBVR	SN74LVC1G17DBVR	TL431BIDBVR
SN74AHC1G02DBVT	SN74AHCT1G08DBVT	SN74LVC1G17DBVT	TL431BIDBVT
SN74AHC1G04DBVR	SN74AHCT1G125DBVR	SN74LVC1G240DBVR	TL431CDBVR
SN74AHC1G04DBVT	SN74AHCT1G125DBVT	SN74LVC1G240DBVT	TL431CDBVT
SN74AHC1G08DBVR	SN74AHCT1G126DBVR	SN74LVC1G32DBVR	TL431IDBVR
SN74AHC1G08DBVT	SN74AHCT1G126DBVT	SN74LVC1G32DBVT	TL431IDBVT
SN74AHC1G09DBVR	SN74AHCT1G32DBVR	SN74LVC1G79DBVR	TL431QDBVR
SN74AHC1G125DBVR	SN74AHCT1G32DBVT	SN74LVC1G79DBVT	TL431QDBVT
SN74AHC1G125DBVT	SN74AHCT1G86DBVR	SN74LVC1G80DBVR	TL432ACDBVR
SN74AHC1G126DBVR	SN74AHCT1G86DBVT	SN74LVC1G80DBVT	TL432AIDBVR
SN74AHC1G126DBVT	SN74CB3T1G125DBVR	SN74LVC1G86DBVR	TL432CDBVR
SN74AHC1G32DBVR	SN74LVC1G00DBVR	SN74LVC1G86DBVT	TL432IDBVR
SN74AHC1G32DBVT	SN74LVC1G00DBVT	SN74LVC1GU04DBVR	TLV1391CDBVR
SN74AHC1G86DBVR	SN74LVC1G02DBVR	SN74LVC1GU04DBVT	TLV1391CDBVT
SN74AHC1G86DBVT	SN74LVC1G02DBVT	TL331KDBVT	TLV2361CDBVR
SN74AHC1GU04DBVR	SN74LVC1G06DBVR	TL343IDBVR	TLV2361CDBVT
SN74AHC1GU04DBVT	SN74LVC1G06DBVT	TL343IDBVT	TLV2361IDBVR
SN74AHCT1G00DBVR	SN74LVC1G07DBVR	TL431ACDBVR	TLV2361IDBVT
SN74AHCT1G00DBVT	SN74LVC1G07DBVT	TL431ACDBVT	TLV431BCDBVR
SN74AHCT1G02DBVR	SN74LVC1G126DBVR	TL431AIDBVR	TLV431BCDBVT
SN74AHCT1G02DBVT	SN74LVC1G126DBVT	TL431AIDBVT	TLVH431ACDBVR
SN74AHCT1G04DBVR	SN74LVC1G14DBVR	TL431BCDBVR	TLVH431ACDBVT
SN74AHCT1G04DBVT	SN74LVC1G14DBVT	TL431BCDBVT	TS5A1066DBVR

Product Affected: Group 2

SN74AHC1G00DBVR	SN74LV1T04DBVR	SN74LVC1G38DBVT	TLV431BQDBVT
SN74AHC1G00DBVT	SN74LV1T08DBVR	SN74LVC1G66DBVR	TLVH431AIDBVR
SN74AHC1G14DBVR	SN74LV1T125DBVR	SN74LVC1G66DBVT	TLVH431AIDBVT
SN74AHC1G14DBVT	SN74LV1T126DBVR	TL331IDBVT	TLVH431AQDBVR
SN74AHCT1G14DBVR	SN74LV1T32DBVR	TL331KDBVR	TLVH431AQDBVT
SN74AHCT1G14DBVT	SN74LV1T34DBVR	TL431AQDBVR	TLVH431BCDBVR
SN74CBT1G125DBVR	SN74LV1T86DBVR	TL431AQDBVT	TLVH431BCDBVT
SN74CBT1G125DBVT	SN74LVC1G04DBVR	TL431BQDBVR	TLVH431BIDBVR
SN74CBT1G384DBVR	SN74LVC1G04DBVT	TL431BQDBVT	TLVH431BIDBVT
SN74CBT1G384DBVT	SN74LVC1G08DBVR	TL432AQDBVR	TLVH431BQDBVR
SN74CBTD1G125DBVR	SN74LVC1G08DBVT	TL432AQDBVT	TLVH431BQDBVT
SN74CBTD1G125DBVT	SN74LVC1G125DBVT	TL432BCDBVR	TLVH431CDBVR
SN74CBTD1G384DBVR	SN74LVC1G132DBVR	TLV1391IDBVR	TLVH431CDBVT
SN74CBTD1G384DBVT	SN74LVC1G132DBVT	TLV1391IDBVT	TLVH431IDBVR
SN74CBTLV1G125DBVR	SN74LVC1G34DBVR	TLV431BIDBVR	TLVH431IDBVT
SN74LV1T00DBVR	SN74LVC1G34DBVT	TLV431BIDBVT	TLVH431QDBVR
SN74LV1T02DBVR	SN74LVC1G38DBVR	TLV431BQDBVR	TLVH431QDBVT

Qualification Report

HFTF SOT: 5DBV Assy Site Qual

Approve Date 09-Jun-2017

Product Attributes

Attributes	Qual Device: SN74AHC1G14DBVR	Qual Device: SN74CBTLV1G125DBVR	Qual Device: SN74LVC1G17DBVR	Qual Device: TL431AIDBVR	Qual Device: TLVH431AIDBVR
Assembly Site	NFME	NFME	NFME	NFME	NFME
Package Family	SOT-23	SOT-23	SOT-23	SOT-23	SOT-23
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	SFAB	FFAB	FFAB	SFAB	SFAB
Wafer Process	EPIC1S2	ASL3C	50b10.13 BOPO	JI1	JI2

- QBS: Qual By Similarity
- Qual Device SN74AHC1G14DBVR is qualified at LEVEL1-260C

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: SN74AHC1G14DBVR	Qual Device: SN74CBTLV1G125DBVR	Qual Device: SN74LVC1G17DBVR
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0
AC	Autoclave 121C	144 Hours	3/231/0	3/231/0	3/231/0
FLAM	Flammability	--	3/15/0	-	-

	(IEC 695-2-2)				
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
HAST	Biased HAST, 130C/85%RH	192 Hours	3/231/0	3/231/0	3/231/0
HTOL	Life Test, 150C	300 Hours	3/231/0	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	400 Hours	3/231/0	3/231/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	600 Hours	3/231/0	3/231/0	3/231/0
LI	Lead Fatigue	Leads	3/66/0	-	-
LFA	Lead Finish Adhesion	Leads	3/45/0	-	-
LI	Lead Pull to Destruction	Leads	3/66/0	-	-
PD	Physical Dimensions	--	3/15/0	-	-
SD	Solderability	Pb	3/66/0	-	-
SD	Solderability	Pb Free	3/66/0	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	750 Cycles	3/231/0	3/231/0	3/231/0
DSS	Die Shear	Die	3/30/0	3/30/0	3/30/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0	3/228/0	3/228/0
MSL	Moisture Sensitivity Level	1-260C	3/36/0	-	-
SA	Salt Atmosphere	24 Hours	3/66/0	-	-
XR	X-Ray	(top side only)	3/15/0	3/15/0	3/15/0

Type	Test Name / Condition	Duration	Qual Device: TL431AIDBVR	Qual Device: TLVH431AIDBVR
AC	Autoclave 121C	96 Hours	2/154/0	1/77/0
AC	Autoclave 121C	144 Hours	2/154/0	1/77/0
FLAM	Flammability (IEC 695-2-2)	--	-	-
FLAM	Flammability (UL 94V-0)	--	-	-
FLAM	Flammability (UL-1694)	--	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	2/154/0	1/77/0
HAST	Biased HAST, 130C/85%RH	192 Hours	2/154/0	1/77/0

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

- 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 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