PCN Number:	PCN#20181130001.1A	**PCN Date:**	March 20 2018
Title:	Qualification of additional Fab site (RFAB) and Assembly/Test site (TIPI & HFTF) options for the TLV6001 device family		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Mar 03 2019	**Estimated Sample Availability:**	Date provided at sample request.

Change Type:					
☒	Assembly Site	☒	Assembly Process	☒	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☒	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☒	Wafer Fab Materials	☐	Wafer Fab Process
		☐	Part number change		

PCN Details

Description of Change:

Revision A is to update the description of change for the devices being qualified in HFTF. Modifications are below in yellow highlight. The proposed implementation date for these devices only will be 90 days from the date of this Rev A publication.

Texas Instruments is pleased to announce the qualification of additional Fab site (RFAB) and Assembly/Test site (TIPI & HFTF) options for the TLV6001 device family.

Additional Fab Site					
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
DP1DM5	HPA07	200 mm	RFAB	LBC9	300 mm

Assembly construction differences are as follows (TIPI, DBV Package only):

	Current (NFME)	**Additional (TIPI)**
Mount Compound	SID# A-03	**4207123**
Mold Compound	SID#R-13	**4222198**
Bond wire composition/diameter	Au/1.0 mils	**Au/1.0 mils or Cu/0.8 mils**
MSL	LEVEL2-260CG	**LEVEL1-260CG**

Assembly construction differences are as follows (HFTF, DCK Package only):

	Current (NFME)	**Additional (HFTF)**
Mold Compound	SID# R-07	**SID#R-27**
Bond wire composition/diameter	Au/1.0 mils	**Au/1.0 mils or Cu/0.8 mils**
MSL	LEVEL1-260CG	**LEVEL2-260CG**
Lead Finish	NiPdAu	**Matte Sn**

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

Upon expiry of this PCN TI will combine lead free solutions in a single ***standard part number***, for example; ***TLV6001IDCKR***– can ship with both Matte Sn and NiPdAu/Ag.

Example:

- Customer order for 7500units of TLV6001IDCKR with 2500 units SPQ (Standard Pack Quantity per Reel).

- TI can satisfy the above order in one of the following ways.
  - 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.

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 website.

Changes to product identification resulting from this PCN:

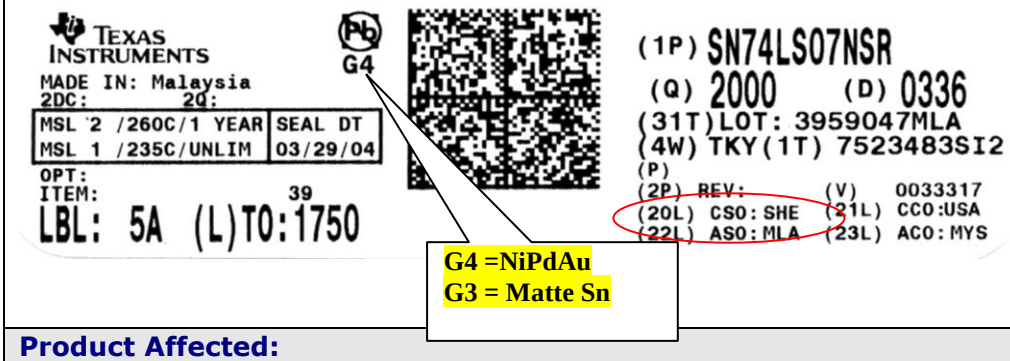
Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
DP1DM5	DM5	USA	Dallas
RFAB	**RFB**	**USA**	**Richardson**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (21L)	Assembly City
NFME	NFM	CHN	Economic Development Zone
TIPI	**PHI**	**PHL**	**Baguio City**
HFTF	**HFT**	**CHN**	**Hefei**

Sample product shipping label (not actual product label)



Product Affected:

Group 1 Device list (Additional Fab (RFAB) site plus AT (TIPI) Qualification:

TLV6001IDBVR	TLV6001IDBVT	TLV6001UIDBVR	TLV6001UIDBVT

Group 2 Device list (Additional Fab (RFAB) plus AT (HFTF) Qualification):

TLV6001IDCKR	TLV6001IDCKT

TI Information
Selective Disclosure

Qualification Report

Approved - 09-Nov-2018

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: : TLV6001IDBVR/T	QBS Process Reference: TLV9002ID	QBS Process Reference: TLV9062ID
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2399/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	1/77/0	3/231/0
HBM	ESD - HBM	2000 V	1/3/0	1/3/0	3/12/0
CDM	ESD - CDM	1000 V	1/3/0	1/3/0	3/9/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	3/231/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	3/231/0	1/77/0	3/231/0
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	3/18/0
SD	Solderability	Pb Free	-	-	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	1/76/0	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	3/231/0	1/77/0	3/231/0

- QBS: Qual By Similarity
- Qual Device TLV6001IDBVR/T 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

TI Information
Selective Disclosure

Qualification Report

Approve Date 08-Nov-2018

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TLV6001IDCKR/T	QBS Process Reference: TLV9002ID	QBS Process Reference: TLV9062ID
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2399/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	1/77/0	3/231/0
HBM	ESD - HBM	2000 V	1/3/0	1/3/0	3/9/0
CDM	ESD - CDM	1000 V	1/3/0	1/3/0	3/9/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	1/77/0	3/231/0
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	3/18/0
SD	Solderability	Pb Free	-	-	3/66/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	1/76/0	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	3/231/0	1/77/0	3/231/0

- QBS: Qual By Similarity
- Qual Device TLV6001IDCKR/T is qualified at LEVEL2-260C
- 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

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Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

TI Information
Selective Disclosure

Qualification Report

Approve Date 09-Nov-2018

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TLV6001UIDBVR/T	QBS Process Reference: TLV9002ID	QBS Process Reference: TLV9062ID	QBS Package Reference: TLV9001IDBVR
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2399/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0
HBM	ESD - HBM	2000 V	1/3/0	1/3/0	3/9/0	1/3/0
CDM	ESD - CDM	1000 V	1/3/0	1/3/0	3/9/0	1/3/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	3/231/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	1/77/0	3/231/0	3/231/0
LU	Latch-up	(per JESD78)	1/6/0	1/6/0	3/18/0	1/6/0
SD	Solderability	Pb Free	-	-	3/66/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	1/76/0	3/231/0	3/231/0
UHAST	Unbiased HAST, 130C/85%RH	96 Hours	-	1/77/0	3/231/0	3/231/0

- QBS: Qual By Similarity
- Qual Device TLV6001UIDBVR/T 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

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Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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