

PCN Number:	20220817001.1	PCN Date:	August 18, 2022
Title:	Qualification of new Fab site (FFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly site for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Nov 18, 2022	Sample requests accepted until:	Sep 18, 2022*

***Sample requests received after September 18, 2022 will not be supported.**

Change Type:

<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials
<input checked="" type="checkbox"/>	Design	<input checked="" type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input checked="" 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 checked="" type="checkbox"/>	Wafer Fab Site	<input checked="" type="checkbox"/>	Wafer Fab Materials	<input checked="" type="checkbox"/>	Wafer Fab Process
		<input type="checkbox"/>	Part number change		

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of a new fab & process technology (FFAB, BICOMHD) and additional Assembly site (HFTF) for selected devices as listed below in the product affected section.

Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
DL-LIN	BICOM	150 mm	FFAB	BICOMHD	200 mm

The die was also changed as a result of the process change.

Construction differences are noted below:

	HANA	HFTF
Mount compound	400154	A-18
Mold Compound	450179	R-30
Wire type	1.0 mil Au	1.0 mil Cu
Lead finish	Non-roughened NiPdAu	Roughened NiPdAu

The datasheet will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history. The link to the revised datasheet is available in the table below.



THS4130, THS4131

SLOS318K – MAY 2000 – REVISED AUGUST 2022

Changes from Revision J (March 2022) to Revision K (August 2022)

Page

- Updated thermal specifications for DGK package in *Thermal Information* table..... 7
- Changed title of *Electrical Characteristics: THS413xD* to *Electrical Characteristics: THS413xD, THS413xDGK* 7
- Changed title of *Electrical Characteristics: THS413xDGK, THS413xDGN* table to *Electrical Characteristics: THS413xDGN* 9
- Changed title of *Typical Characteristics: THS413xD* to *Typical Characteristics: THS413xD, THS413xDGK* .. 11
- Changed title of *Typical Characteristics* to *Typical Characteristics: THS413xDGN* 16

Product Family	Current Datasheet Number	New Datasheet Number	Link to full datasheet
THS413x	SLOS318J	SLOS318K	https://www.ti.com/product/THS4130

Tube versions of the devices are included in EOL notice PDN# 20220817002.3

Qual details are provided in the Qual Data Section.

Reason for Change:

These changes are part of our multiyear plan to transition products from our 150-milimeter factories to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

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

None

Impact on Environmental Ratings

Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

RoHS	REACH	Green Status	IEC 62474
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change

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
DL-LIN	DLN	USA	Dallas
FR-BIP-1	TID	DEU	Freising

Die Rev:

Current	New
Die Rev [2P]	Die Rev [2P]
A	A

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
Hana Semiconductor	HNT	THA	Ayutthaya
Hefei Tongfu Microelectronics Co. Ltd.	HFT	CHN	Hefei

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 20:
 MSL '2 /260C/1 YEAR SEAL DT
 MSL 1 /235C/UNLIM 03/29/04
 OPT:
 ITEM: 39
 LBL: 5A (L)T0:1750

(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) 0033317
 (20L) C60-CHE (21L) CCO-USA
 (22L) ASO: MLA (23L) ACO: MYS

Product Affected:

Group 1 Device list (Wafer fab, die revision, Assembly site/BOM and Datasheet)

THS4130IDGKR	THS4131CDGKR	THS4131IDGKR
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Group 2 Device list (Datasheet changes only)

THS4130CDGK	THS4131CDGK	THS4131IDGK
THS4130IDGK	THS4131CDGKG4	THS4131IDGKG4

For alternate parts with similar or improved performance, please visit the product page on TI.com

Qualification Report

Approve Date 11-May-2022

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: THS4130DGK	QBS Product Reference: THS4130ID	QBS Process Reference: OPA2810IDGK	QBS Package Reference: OPA2607QDQKRO1	QBS Package Reference: OPA2991QDQKRO1
HTOL	Life Test, 125C	1000 Hours	-	-	3/231/0	-	-
HTOL	Life Test, 150C	408 Hours	-	-	-	1/77/0	3/231/1 (1)
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/3000/0	-	-
HBM	ESD - HBM	2500 V	-	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	-
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	3/9/0	1/3/0	-
LU	Latch-up	Per JESD78	-	1/6/0	3/18/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	-	-
AC	Autoclave 121C	96 Hours	-	-	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	1/77/0	3/231/2 (1)
HTSL	High Temp Storage Bake 150C	1000 Hours	-	-	-	1/77/0	2/90/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	3/231/0	-	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	1/77/0	-	3/231/0	1/77/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	-	3/231/0	-	3/231/1
LI	Lead Pull	Lead Pull	-	-	-	1/6/0	-

Type	Test Name / Condition	Duration	Qual Device: THS4130DGK	QBS Product Reference: THS4130ID	QBS Process Reference: OPA2810IDGK	QBS Package Reference: OPA2607QDQKRO1	QBS Package Reference: OPA2991QDQKRO1
LI	Lead Pull to Destruction	Leads	-	-	-	-	1/24/0
PD	Auto Physical Dimensions	Cpk>1.67	-	-	-	3/30/0	-
SD	Surface Mount Solderability	Pb	-	-	-	1/15/0	1/15/0
SD	Surface Mount Solderability	Pb Free	-	-	-	1/15/0	1/15/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	1/77/0	-	3/231/0	1/77/0	-

- 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

Note (1): Two units failed Vio due to bad BI socket contact

Qualification Report

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Approve Date 11-May-2022

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: THS4131DGK	QBS Product Reference: THS4130DGK	QBS Product Reference: THS4130ID	QBS Process Reference: OPA2810IDGK	QBS Package Reference: OPA2607QDGKRQ1	QBS Package Reference: OPA2991QDGKRQ1
HTOL	Life Test, 125C	1000 Hours	-	-	-	3/231/0	-	-
HTOL	Life Test, 150C	408 Hours	-	-	-	-	1/77/0	3/231/1 (1)
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	-	3/3000/0	-	-
HBM	ESD - HBM	2500 V	-	-	1/3/0	3/9/0	1/3/0	-
CDM	ESD - CDM	1500 V	-	1/3/0	1/3/0	2/6/0	1/3/0	-
LU	Latch-up	Per JESD78	-	-	1/6/0	3/18/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	1/30/0	3/90/0	-	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	1/77/0	-	3/231/0	1/77/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	-	3/231/0	-	3/231/0
AC	Autoclave 121C	96 Hours	-	-	-	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	192 hours	-	-	-	-	-	1/70/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	1/77/0	3/231/2 (1)
HTSL	High Temp Storage Bake 150C	1000 Hours	-	-	-	-	1/77/0	2/90/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	-	-	3/231/0	-	-
LI	Lead Pull	Lead Pull	-	-	-	-	1/6/0	-

Type	Test Name / Condition	Duration	Qual Device: THS4131DGK	QBS Product Reference: THS4130DGK	QBS Product Reference: THS4130ID	QBS Process Reference: OPA2810IDGK	QBS Package Reference: OPA2607QDGKRQ1	QBS Package Reference: OPA2991QDGKRQ1
LI	Lead Pull to Destruction	Leads	-	-	-	-	-	1/24/0
PD	Auto Physical Dimensions	Cpk>1.67	-	-	-	-	3/30/0	-
SD	Surface Mount Solderability	Pb	-	-	-	-	1/15/0	1/15/0
SD	Surface Mount Solderability	Pb Free	-	-	-	-	1/15/0	1/15/0
YLD	FTY and Bin Summary	-	1/Pass	-	-	-	-	-

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

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- 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

Note (1): Two units failed Vio due to bad BI socket contact

For questions regarding this notice, e-mails can be sent to the contact below or your local Field Sales Representative.

Location	E-Mail
WW Change Management Team	PCN_ww_admin_team@list.ti.com

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