

PCN Number:	20221013000.1	PCN Date:	October 14, 2022
Title:	Qualification of new Fab site (FFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly BOM options for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Jan 13, 2023	Sample requests accepted until:	Nov 13, 2022*

***Sample requests received after November 13, 2022 will not be supported.**

Change Type:

<input 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, BICOM3XHV) and assembly BOM options (MLA) 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
SFAB	JIBB	150 mm	FFAB	BICOM3XHV	200 mm

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

Assembly BOM options are noted below:

	Current	Additional
Bond wire composition, diameter	Au, 1.15 mils	Cu, 1.0 mil
Mold Compound	4209640	4226323
Mount Compound	4205846	4147858

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.



INA126, INA216

SBOS062C – SEPTEMBER 2000 – REVISED JANUARY 2022

Changes from Revision B (December 2015) to Revision C (December 2021) Page

- Updated the numbering format for tables, figures, and cross-references throughout the document..... 1
- Added dual supply specification to *Absolute Maximum Ratings* 5
- Deleted redundant operating temperature and input common mode voltage specifications in *Recommended Operating Conditions* 5
- Added dual supply and specified temperature specifications in *Recommended Operating Conditions* 5
- Added proper signs for PSRR and input bias current specifications in *Electrical Characteristics* 7
- Deleted $V_O = 0\text{ V}$ test condition of common-mode voltage specification in *Electrical Characteristics* 7
- Changed common-mode voltage specification from $\pm 11.25\text{ V}$ minimum, to -11.25 V minimum and 11.25 V maximum, in *Electrical Characteristics* 7
- Changed minimum CMRR specification for INA126U/E, INA2126E from 83 dB to 80 dB in *Electrical Characteristics* 7
- Added typical input bias current specification of $\pm 10\text{ nA}$ for INA126PA/UA/EA and INA2126PA/UA/EA in *Electrical Characteristics* 7
- Changed current noise specifications in *Electrical Characteristics* from $60\text{ fA}/\sqrt{\text{Hz}}$ to $160\text{ fA}/\sqrt{\text{Hz}}$ for $f = 1\text{ kHz}$, and from 2 pApp to 7.3 pApp for $f = 0.1\text{ Hz}$ to 10 Hz 7
- Changed test condition for short-circuit current specification in *Electrical Characteristics* from "Short circuit to ground" to "Continuous to $V_S / 2$ " for clarity..... 7
- Changed short-circuit current specification in *Electrical Characteristics* from $+10/-5\text{ mA}$ to $\pm 5\text{ mA}$ 7
- Deleted redundant voltage range, operating temperature range, and specification temperature range specifications from *Electrical Characteristics* 7
- Changed Figures 6-7, 6-10, 6-13, 6-14, 6-15, 6-16, 6-17 9
- Added Figure 6-11..... 9

Product Family	Current Datasheet Number	New Datasheet Number	Link to full datasheet
INA126, INA2126	SBOS062B	SBOS062C	http://www.ti.com/product/INA126

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- millimeter 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
SH-BIP-1	SHE	USA	Sherman
FR-BIP-1	TID	DEU	Freising

Die Rev:

Current

New

Die Rev [2P]	Die Rev [2P]
A	A

Sample product shipping label (not actual product label)

Product Affected:

INA2126E/250	INA2126EA/250	INA2126U	INA2126UA/2K5
INA2126E/2K5	INA2126EA/2K5	INA2126UA	INA2126UE4

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

Qualification Report

Approve Date 29-Jun-2022

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: INA2126E	QBS Product Reference: INA126U	QBS Process Reference: INA821ID	QBS Process Reference: OPA207ID
HTOL	Life Test, 150C	300 Hours	-	1/77/0	3/231/0	3/231/0
HBM	ESD - HBM	2000V	1/3/0	1/3/0	1/3/0	3/9/0
CDM	ESD - CDM	1000V	1/3/0	1/3/0	-	3/9/0
CDM	ESD - CDM	500V	1/3/0	1/3/0	1/3/0	3/9/0
CDM	ESD - CDM	750V	-	1/3/0	1/3/0	3/9/0
LU	Latch-up, 125C	Per JESD78 Class 1	-	-	-	3/18/0
LU	Latch-up	Per JESD78 Class 2	1/6/0	-	1/6/0	-
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	1/30/0	3/90/0	3/90/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	-	3/231/0	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	1/77/0	3/231/0	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	3/231/0	-	3/231/0	3/231/0

- QBS: Qual By Similarity

- Qual Device INA2126E/EA is qualified at L2, 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

Qualification Report

Approve Date 27-JULY -2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: INA2126U	QBS Reference: OPA202ID	QBS Reference: INA828ID	QBS Reference: INA821ID	QBS Reference: OPA207ID
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
TC	A4	Temperature Cycle	-65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/231/0	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	3/231/0	3/231/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	3/231/0	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	3/231/0	3/231/0
ESD	E2	ESD CDM	-	250 Volts	-	-	1/3/0	1/3/0	1/3/0
ESD	E2	ESD CDM	-	750 Volts	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	-	-	1/3/0	1/3/0	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	1/3/0	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/6/0	-	1/6/0	1/6/0	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	3/90/0	3/90/0	1/30/0

- QBS: Qual By Similarity

- Qual Device INA2126U is qualified at MSL2 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 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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