

PCN Number:	20241217011.1	PCN Date:	December 18, 2024		
Title:	Qualification of FFAB using qualified Process Technology, Die Revision, Datasheet, and additional Assembly BOM options for select devices				
Customer Contact:	Change Management Team	Dept:	Quality Services		
Proposed 1st Ship Date:	March 18, 2025	Sample requests accepted until:	January 17, 2025*		
*Sample requests received after January 17, 2025 will not be supported.					
Change Type:					
<input type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input checked="" type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input checked="" type="checkbox"/>	Wafer Fab Material
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
Texas Instruments is pleased to announce the addition of FFAB using the BICOM3XHV qualified process technology and additional BOM options for the devices listed below.					
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.					
Construction differences are as follows:					
	Current	Proposed			
Wire diam/type	1.2mil Au	1.0mil Cu			
Mount Compound	4205846	4147858			
Mold compound	4209640	4226323			
The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history. The links to the revised datasheets are available in the table below.					
			INA122 SBOS069A – OCTOBER 1997 – REVISED DECEMBER 2024		

Changes from Revision * (October 1997) to Revision A (December 2024)

Page

- Added *Pin Functions* table, *Recommended Operating Conditions* table, *Thermal Information* table, *Detailed Description* section, *Application and Implementation* section, *Power Supply Recommendations* section, *Layout* section, and the *Device and Documentation Support* section..... 1
- Changed names on pins 2, 3, 4, 6, and 7 from: V_{IN-} , V_{IN+} , $V-$, V_O and $V+$ to: $-IN$, $+IN$, $-VS$, OUT and $+VS$...3
- Added dual supply specification to *Absolute Maximum Ratings* 4
- Added note clarifying output short-circuit "to ground" in *Absolute Maximum Ratings* refers to short-circuit to $V_S / 2$ 4
- Added test condition of $T_A = -40^\circ\text{C}$ to $+85^\circ\text{C}$ to input bias current drift and input offset current drift parameter in *Electrical Characteristics* 5
- Changed parameter from *Offset Voltage RTI vs Power Supply* to *Power Supply Rejection Ratio* in *Electrical Characteristics* 5
- Changed parameter from *Input Impedance* to *Differential impedance* and *Common-mode impedance* in *Electrical Characteristics* 5
- Added test condition to input bias current parameter in *Electrical Characteristics* 5
- Changed voltage noise from $2\mu\text{V}_{pp}$ to $2.7\mu\text{V}_{pp}$ in *Electrical Characteristics* 5
- Changed Bandwidth, -3dB at $G = 5$ from 120kHz to 100kHz in *Electrical Characteristics* 5
- Changed Bandwidth, -3dB $G = 100$ from 5kHz to 3kHz in *Electrical Characteristics* 5
- Added test condition to Slew rate parameter in *Electrical Characteristics* 5
- Changed falling Slew rate from $0.16\text{V}/\mu\text{s}$ to $0.12\text{V}/\mu\text{s}$ in *Electrical Characteristics* 5
- Changed Overload recovery from $3\mu\text{s}$ to $22\mu\text{s}$ in *Electrical Characteristics* 5
- Updated *Quiescent Current vs Temperature* curve in *Typical Characteristics* section..... 7
- Changed *Offset Trimming* section..... 14

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
INA122	SBOS069	SBOS069A	http://www.ti.com/product/INA122

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			

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):

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) 0053317
 (20L) CSO: SHE (21L) CCO:USA
 (22L) ASO: MLA (23L) ACO: MYS

Product Affected:

INA122U/2K5	INA122UA/2K5
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For alternate parts with similar or improved performance, please visit the product page on TI.com

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: INA122UA/2K5	QBS Process Reference: OPA1637DGKT	QBS Package Reference: INA849DR	QBS Package Reference: TCAN1043DQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	3/231/0
HAST	A2	Temperature Humidity Bias	85C/85%RH	1000 Hours	-	-	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	3/231/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	1/45/0
HTOL	B1	Life Test	100C ¹	300 Hours	-	-	1/77/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	1/77/0
HTOL	B1	Life Test	150C	300 Hours	-	3/231/0	-	-
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	3/2399/0	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0

Type	#	Test Name	Condition	Duration	Qual Device: INA122UA/2K5	QBS Process Reference: OPA1637DGKT	QBS Package Reference: INA849DR	QBS Package Reference: TCAN1043DQ1
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	3/30/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	3/9/0	1/3/0	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	3/9/0	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	3/18/0	1/6/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	1/30/0	1/30/0

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device [INA122UA/2K5](#) is qualified at MSL1 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/>

TI Qualification ID: R-CHG-2305-020

[1] TJ of device at 150C

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

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