

PCN Number:	20250212003.1	PCN Date:	February 12, 2025
Title:	Qualification of FFAB using qualified Process Technology, Die Revision, Datasheet & BOM options for select devices		
Customer Contact:	Change Management Team	Dept:	Quality Services
Proposed 1st Ship Date:	May 13, 2025	Sample requests accepted until:	April 13, 2025*

***Sample requests received after April 13, 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.



XTR106

SBOS092B – JUNE 1996 – REVISED JANUARY 2025

Changes from Revision A (November 2003) to Revision B (January 2025)	Page
• Updated the numbering format for tables, figures, and cross-references throughout the document.....	1
• Added the <i>Pin Configuration and Functions, Recommended Operating Conditions, Thermal Information, Electrical Characteristics, Detailed Description, Functional Block Diagram, Application and Implementation, Typical Applications, Device and Documentation Support, and Mechanical, Packaging, and Orderable Information</i> sections.....	1
• Modified end equipments in <i>Applications</i>	1
• Moved operating and storage temperature parameters from <i>Electrical Characteristics</i> to <i>Absolute Maximum Ratings</i>	4
• Changed minimum operating temperature from –55°C to –40°C in <i>Absolute Maximum Ratings</i>	4
• Moved specified temperature and power-supply parameters from <i>Electrical Characteristics</i> to <i>Recommended Operating Conditions</i>	4

- Deleted thermal resistance, θ_{JA} parameters in *Electrical Characteristics* and replaced with detailed thermal model parameters in *Thermal Information*4
- Added footnote regarding the use of the box method for the voltage references accuracy vs temperature specification in *Electrical Characteristics*5
- Changed typical V_{REG} accuracy vs temperature specification from $\pm 0.3\text{mV}/^\circ\text{C}$ to $\pm 0.5\text{mV}/^\circ\text{C}$ in *Electrical Characteristics*5
- Deleted *Input Voltage, Input Current, and Zero Output Current Noise Density vs Frequency* plot and replaced with Figure 5-13, *Input Voltage Noise Density vs Frequency*, and Figure 5-14, *Zero Output Current Noise Density vs Frequency*7
- Updated Figure 5-20, *Reference Voltage Deviation vs Temperature*7
- Changed description of maximum loop-supply voltage to specified absolute maximum rating in *Overvoltage Surge Protection*16
- Updated suggested transistor part numbers in Figure 7-1, *Basic Bridge Measurement Circuit with Linearization*17

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
XTR106	SBOS092A	SBOS092B	http://www.ti.com/product/XTR106

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

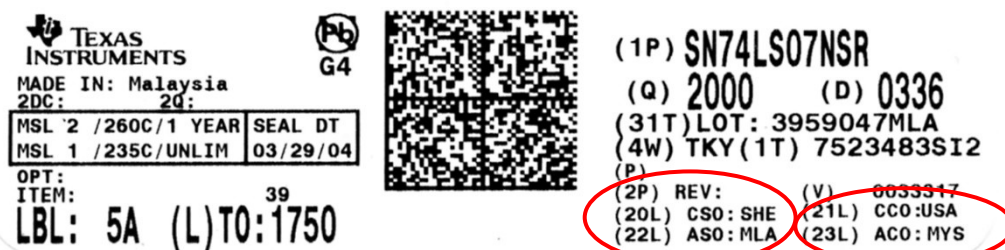
Die Rev:

Current

New

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

Sample product shipping label (not actual product label):



Product Affected:

XTR106U/2K5	XTR106UA/2K5
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For alternate parts with similar or improved performance, please visit the product page on [TI.com](https://www.ti.com)

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: XTR106U	QBS Process Reference: OPA1637DGKT	QBS Package Reference: ULQ2003AQDRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0
UHA	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0
UHA	A3	Unbiased HAST	130C/85%RH	96 Hours	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0
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
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	3/9/0	-

Type	#	Test Name	Condition	Duration	Qual Device: XTR106U	QBS Process Reference: OPA1637DGKT	QBS Package Reference: ULQ2003AQDRQ1
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	3/9/0	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	3/18/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	3/90/0	3/90/0

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device XTR106U/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-2211-060

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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