

<b>PCN Number:</b>	20240202005.2	<b>PCN Date:</b>	February 02, 2024		
<b>Title:</b>	Qualification of RFAB using qualified Process Technology, Die Revision, and additional Assembly site options				
<b>Customer Contact:</b>	Change Management team	<b>Dept:</b>	Quality Services		
<b>Proposed 1<sup>st</sup> Ship Date:</b>	May 2, 2024	<b>Estimated Sample Availability:</b>	Mar 2, 2024*		
<b>*Sample requests received after March 2, 2024 will not be supported.</b>					
<b>Change Type:</b>					
<input checked="" type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input checked="" type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input checked="" 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 Materials
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	Wafer Fab Process
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments is pleased to announce the addition of RFAB using the LBC9 qualified process technology and additional Assembly site (CDAT, TIPI) options for the device listed below.					
<b>Current Fab Site</b>			<b>Additional Fab Site</b>		
<b>Current Fab Site</b>	<b>Process</b>	<b>Wafer Diameter</b>	<b>Additional Fab Site</b>	<b>Process</b>	<b>Wafer Diameter</b>
SFAB	LFAST/JI2	150/200 mm	RFAB	LBC9	300 mm
GFAB6/8	LFAST	150/200 mm			
The die was also changed as a result of the process change.					
Additionally, there will be a BOM options introduced for these devices ( <b>C2312071</b> ):					
	<b>UTL2</b>	<b>TIEM</b>	<b>CDAT</b>	<b>TIPI</b>	
Bond wire diam/type	1.0mil Au	1.0mil Au	0.8mil Cu	0.8mil Cu	
Mount compound	PZ0001	4213245	4207123	4207123	
Mold compound	CZ0096	8097131	4222198	4222198	
Lead finish	NiPdAu	Matte Sn	Matte Sn	NiPdAu	
Pin 1 Marking	Notch	Stripe	Dot	Dot	
Qual details are provided in the Qual Data Section.					
<b>Reason for Change:</b>					
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.					
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>					
None					
<b>Impact on Environmental Ratings:</b>					
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.					
<b>RoHS</b>		<b>REACH</b>		<b>Green Status</b>	
<b>IEC 62474</b>					
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change
<b>Changes to product identification resulting from this PCN:</b>					
<b>Fab Site Information:</b>					
Chip Site	Chip Site Origin	Chip Site Country Code (21L)	Chip Site City		

	Code (20L)		
GFAB6	GF6	GBR	Greenock
GFAB8	GF8	GBR	Greenock
SH-BIP-1	SHE	USA	Sherman
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>

**Die Rev:**

<b>Current</b>	<b>New</b>
Die Rev [2P]	<b>Die Rev [2P]</b>
C <sub>r</sub> -	<b>A</b>

**Assembly/Test Site Information:**

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TIEM	CU6	MYS	Melaka
UTL2	NS2	THA	Bangpakong, Chachoengsao
<b>CDAT</b>	<b>CDA</b>	<b>CHN</b>	<b>Chengdu</b>
<b>TIPI</b>	<b>PHI</b>	<b>PHL</b>	<b>Baguio City</b>

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS  
 MADE IN: Malaysia  
 2DC: 2Q:  
 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) 7523483S12  
 (P)  
 (2P) REV: 0033317  
 (20L) CSO: SHE (21L) CCO: USA  
 (22L) ASO: MLA (23L) ACO: MYS

**Product Affected:**

LM4050AEM3-2.0/NOPB	LM4050BIM3X-4.1/NOPB	TL4050A25IDBZT	TL4050C25IDBZR
LM4050AEM3-2.5/NOPB	LM4050BIM3X-5.0/NOPB	TL4050A25QDBZR	TL4050C25IDBZT
LM4050AEM3-5.0/NOPB	LM4050CEM3-2.5/NOPB	TL4050A25QDBZT	TL4050C25QDBZR
LM4050AEM3X-2.5/NOPB	LM4050CEM3-5.0/NOPB	TL4050A41IDBZR	TL4050C41IDBZR
LM4050AEM3X-5.0/NOPB	LM4050CEM3X-2.5/NOPB	TL4050A41IDBZT	TL4050C41IDBZT
LM4050AIM3-2.5/NOPB	LM4050CEM3X-5.0/NOPB	TL4050A41QDBZR	TL4050C41QDBZR
LM4050AIM3-4.1/NOPB	LM4050CIM3-2.5/NOPB	TL4050A41QDBZT	TL4050C50IDBZR
LM4050AIM3-5.0/NOPB	LM4050CIM3-4.1/NOPB	TL4050A50IDBZR	TL4050C50IDBZT
LM4050AIM3X-2.5/NOPB	LM4050CIM3-5.0/NOPB	TL4050A50IDBZT	TL4050C50QDBZR
LM4050AIM3X-4.1/NOPB	LM4050CIM3X-2.0/NOPB	TL4050A50QDBZR	TL4051A12IDBZR
LM4050AIM3X-5.0/NOPB	LM4050CIM3X-2.5/NOPB	TL4050A50QDBZT	TL4051A12IDBZT
LM4050BEM3-2.5/NOPB	LM4050CIM3X-4.1/NOPB	TL4050B25IDBZR	TL4051A12QDBZR
LM4050BEM3-4.1/NOPB	LM4050CIM3X-5.0/NOPB	TL4050B25IDBZT	TL4051A12QDBZT
LM4050BEM3-5.0/NOPB	LM4051AIM3-1.2/NOPB	TL4050B25QDBZR	TL4051B12IDBZR
LM4050BEM3X-2.5/NOPB	LM4051AIM3X-1.2/NOPB	TL4050B41IDBZR	TL4051B12IDBZT
LM4050BEM3X-5.0/NOPB	LM4051BEM3-1.2/NOPB	TL4050B41IDBZT	TL4051B12QDBZR
LM4050BIM3-2.5/NOPB	LM4051BIM3-1.2/NOPB	TL4050B41QDBZR	TL4051C12IDBZR
LM4050BIM3-4.1/NOPB	LM4051BIM3X-1.2/NOPB	TL4050B41QDBZT	TL4051C12IDBZT
LM4050BIM3-5.0/NOPB	LM4051CIM3-1.2/NOPB	TL4050B50IDBZR	TL4051C12QDBZR
LM4050BIM3X-2.0/NOPB	LM4051CIM3X-1.2/NOPB	TL4050B50IDBZT	TL4051C12QDBZT

LM4050BIM3X-2.5/NO PB	TL4050A25IDBZR	TL4050B50QDBZR
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For alternate parts with similar or improved performance, please visit the product page on [TI.com](http://TI.com)

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: PLM405X25DBZRQ1	Qual Device: PLM405X25DBZRQ1	Process QBS Reference: BQ79516HPAPRQ1	Package QBS Reference: PTSP3840PHXXDBVR(PH)	Package/Product QBS Reference: LM4040QAIM3-5.0NO(PH)	Package QBS Reference: TL431BQDBZRQ1(CDAT)	Package/Product QBS Reference: PLM40XX25DBZRQ1(CDAT)
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	1/77/0	3/231/0	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	3/231/0	1/77/0	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	3/135/0	1/45/0	3/231/0	1/45/0
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	3/135/0	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	3/231/0	3/231/0	-	1/77/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	3/2400/0	-	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	3/30/0	3/30/0	1/10/0	3/30/0	-
ESD	E2	ESD CDM	-	500 Volts	-	-	1/3/0	1/3/0	1/3/0	-	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	-	1/3/0	1/3/0	1/3/0	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	-	1/6/0	1/6/0	1/6/0	-	1/6/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/90/0	3/90/0	3/90/0	3/90/0	3/90/0

- 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/>

TI Qualification ID: R-CHG-2312-065

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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