



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20240826005.1

**Qualification of RFAB using qualified Process Technology & Die Change
Change Notification / Sample Request**

Date: August 26, 2024

To: MOUSER PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) [process](#).

TI requires acknowledgement of receipt of this notification within 30 days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within 30 days of this notification, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 30 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

This particular PCN is related to TI's multiyear transition plan for our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). DFAB will remain open, but will focus on 200-mm production, with a smaller set of technologies. SFAB will close no earlier than 2024 and no later than 2025. As referenced in the "reason for change" below, these changes are part of our multiyear plan to transition these products to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the Change Management team. For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

Change Management Team
SC Business Services

20240826005.1
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
LM2903AVQPWR	NULL
LM2903AVQPWRG4	NULL
LM2903BIPWR	NULL
LM2903PWR	NULL
LM2903PWRG4	NULL
LM2903VQPWR	NULL
LM393APWR	NULL
LM393BIPWR	NULL
LM393PWR	NULL
LM393PWRG4	NULL


Technical details of this Product Change follow on the next page(s).

PCN Number:	20240826005.1		PCN Date:	August 26, 2024																						
Title:	Qualification of RFAB using qualified Process Technology & Die Change																									
Customer Contact:	Change Management team		Dept:	Quality Services																						
Proposed 1st Ship Date:	November 24, 2024		Sample requests accepted until:	September 25, 2024*																						
*Sample requests received after September 25, 2024 will not be supported.																										
Change Type:																										
<input type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material																					
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process																					
<input 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																					
PCN Details																										
Description of Change:																										
Texas Instruments is pleased to announce the addition of RFAB using the TIB qualified process technology.																										
<table border="1"> <thead> <tr> <th colspan="3">Current Fab Site</th> <th colspan="3">Additional Fab Site</th> </tr> <tr> <th>Current Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> <th>Additional Fab Site</th> <th>Process</th> <th>Wafer Diameter</th> </tr> </thead> <tbody> <tr> <td>SFAB</td> <td>J11</td> <td>150 mm</td> <td rowspan="2">RFAB</td> <td rowspan="2">TIB</td> <td rowspan="2">300 mm</td> </tr> <tr> <td>CFAB</td> <td>J13</td> <td>200 mm</td> </tr> </tbody> </table>						Current Fab Site			Additional Fab Site			Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter	SFAB	J11	150 mm	RFAB	TIB	300 mm	CFAB	J13	200 mm
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Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter																					
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CFAB	J13	200 mm																								
The die was also changed as a result of the process change.																										
As a result of this change, for the condition of the inputs exceeding the maximum operating common mode range, the state of the output will be low. The LM2903BIPWR and LM393BIPWR currently, for these conditions, have the output go high. The other devices listed in this PCN can currently go either high or low under these conditions. This change will result in $V_{OUT} = \text{Low}$ when $V_{CM} > V_{CMMAX}$ for all affected devices.																										
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																										
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																							
CFAB	CU3	CHN	Chengdu																							
RFAB	RFB	USA	Richardson																							
Die Rev:																										
Current		New																								
Die Rev [2P]		Die Rev [2P]																								

A,B

A

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


 Pb
 G4



(1P) SN74LS07NSR
 (Q) 2000 (D) 0336
 (31T) LOT: 3959047MLA
 (4W) TKY (1T) 7523483SI2
 (P)
 (2P) REV: (V) 0033317
 (20L) CS0: SHE (21L) CC0: USA
 (22L) AS0: MLA (23L) AC0: MYS

Product Affected:

LM2903AVQPWR	LM2903PWR	LM393APWR	LM393PWRG4
LM2903AVQPWRG4	LM2903PWRG4	LM393BIPWR	SN2903PWR
LM2903BIPWR	LM2903VQPWR	LM393PWR	

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

TI Information
 Selective Disclosure

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LM393PWR	Qual Device: LM2903PWR	QBS Reference: LM324BIPWR	QBS Reference: LM2903QPWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	1/77/0
ESD	E2	ESD CDM	-	1000 Volts	-	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-
LU	E4	Latch-Up	Per JESD78	-	-	1/3/0	-	-
FTY	E6	Final Test Yield	-	-	-	1/1/0	-	-

- QBS: Qual By Similarity
- Qual Device LM393PWR is qualified at MSL1 260C
- Qual Device LM2903PWR 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-2310-098

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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