12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20230228003.1
Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update for select devices
Change Notification / Sample Request

Date: March 30, 2023
To: TOKYO ELECTRON DEVICE (DSTR) 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 of the 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 PCN Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your local Field Sales Representative. As always, we thank you for your continued business.

PCN Team
SC Business Services

20230228003.1
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
CD4052BPWR	null
CD4051BPWR	null
CD4053BPWR	null

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

PCN Number:	20230228003.1	PCN Date:	March 30, 2023
Title:	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Jun 30, 2023	Sample requests accepted until:	April 30, 2023*

***Sample requests received after April 30, 2023 will not be supported.**

Change Type:					
☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials
☒	Design	☒	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☒	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☒	Wafer Fab Site	☒	Wafer Fab Materials	☒	Wafer Fab Process
		☐	Part number change		

PCN Details

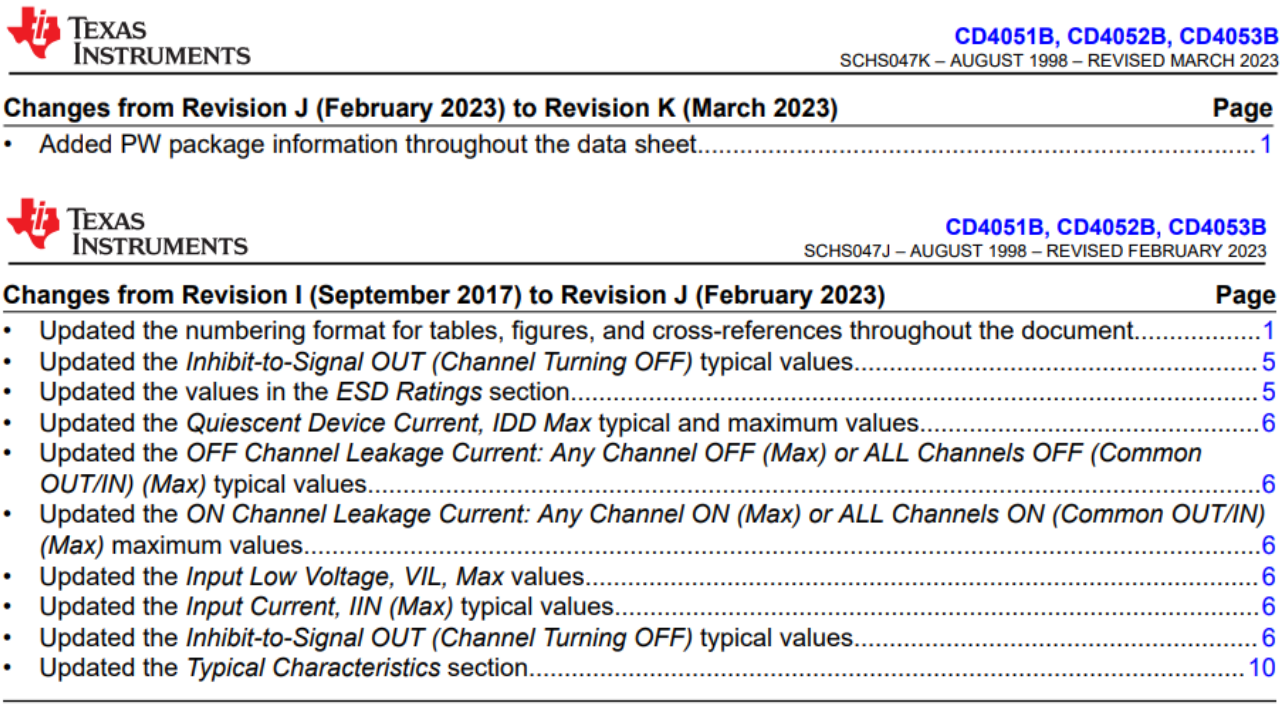
Description of Change:

Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC9) options for selected devices as listed below in the product affected section.

Current Fab Site			New Fab Site		
Fab Site	**Process**	**Wafer Diameter**	**Fab Site**	**Process**	**Wafer Diameter**
SFAB	CD4000	150 mm	RFAB	LBC9	300 mm

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

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 datasheets are available in the table below.



TEXAS INSTRUMENTS — CD4051B, CD4052B, CD4053B
SCHS047K – AUGUST 1998 – REVISED MARCH 2023

Changes from Revision J (February 2023) to Revision K (March 2023) — **Page**

- Added PW package information throughout the data sheet 1

TEXAS INSTRUMENTS — CD4051B, CD4052B, CD4053B
SCHS047J – AUGUST 1998 – REVISED FEBRUARY 2023

Changes from Revision I (September 2017) to Revision J (February 2023) — **Page**

- Updated the numbering format for tables, figures, and cross-references throughout the document 1
- Updated the *Inhibit-to-Signal OUT (Channel Turning OFF)* typical values 5
- Updated the values in the *ESD Ratings* section 5
- Updated the *Quiescent Device Current, IDD Max* typical and maximum values 6
- Updated the *OFF Channel Leakage Current: Any Channel OFF (Max) or ALL Channels OFF (Common OUT/IN) (Max)* typical values 6
- Updated the *ON Channel Leakage Current: Any Channel ON (Max) or ALL Channels ON (Common OUT/IN) (Max)* maximum values 6
- Updated the *Input Low Voltage, VIL, Max* values 6
- Updated the *Input Current, IIN (Max)* typical values 6
- Updated the *Inhibit-to-Signal OUT (Channel Turning OFF)* typical values 6
- Updated the *Typical Characteristics* section 10

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
CD405xB	SCHS047I	SCHS047K	http://www.ti.com/product/CD4051B

Tube, G3 and G4 versions of the devices are included in EOL notice PDN# 20230228005.3.

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:

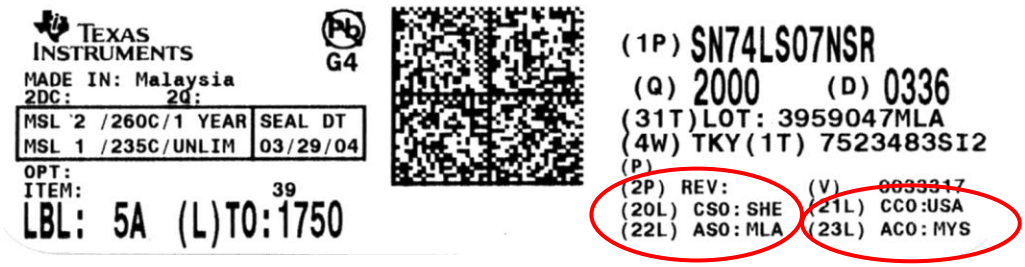
Fab Site Information:

Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
SH-BIP-1	SHE	USA	Sherman
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

Current	**New**
Die Rev [2P]	**Die Rev [2P]**
A, -	**B**

Sample product shipping label (not actual product label):



Product Affected:

CD4051BPWR	CD4052BPWR	CD4053BPWR	

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

Qualification Report
Approve Date 05-January-2023

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: CD4051BPWR	Qual Device: CD4052BPWR	Qual Device: CD4053BPWR	QBS Reference: TCA6408AQPWRQ1	QBS Reference: TMUX4051PWR	QBS Reference: TMUX4052PWR	QBS Reference: TMUX4053PWR	QBS Reference: TMUX4051PWR	QBS Reference: TMUX4053PWR
HAST	A2	Biased HAST	130C	96 Hours	-	-	-	3/231/0	-	-	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0	-	-	-	-	-
TC	A4	Temperature Cycle	-65/150C	500 Cycles	-	-	-	3/231/0	-	-	-	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	1/45/0	-	-	-	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	1/77/0	-	-	-	-	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	-	-	-	-	1/76/0	-	1/76/0	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	-	-	-	-	1/76/0	-	1/76/0	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	3/30/0	-	-	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	1/3/0	-	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	1/3/0	-	1/3/0	-	-	-	1/3/0
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	1/3/0	-	1/3/0	-	-	-	1/3/0
ESD	E2	ESD HBM	-	4000 Volts	-	-	-	1/3/0	-	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	1/3/0	1/6/0	1/3/0	-	-	-	1/3/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/5/0	-	1/30/0	1/30/0	-	1/30/0	1/30/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	3/90/0	-	-	-	-	-

- QBS: Qual By Similarity
- Qual Device CD4051BPWR is qualified at MSL1 260C
- Qual Device CD4052BPWR is qualified at MSL1 260C
- Qual Device CD4053BPWR 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/

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the contact shown 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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