

PCN# 20220615004.1 Qualification of CFAB as an additional Fab site options for select LBC3S devices Change Notification / Sample Request

Date:June 16, 2022To: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) <u>process</u>.

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 (<u>PCN ww_admin_team@list.ti.com</u>). 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

20220615004.1 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

TRSF3238EIDBR

CUSTOMER PART NUMBER

null

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

PCN Number: 202		220615004.1			PC	PCN Date:		June 16, 2022			
Title: Qualification of CF		of CFA	AB as an additional Fab site option			otions	ons for select		LBC3S devices		
Customer Contact:			PCN Manager				pt:		Quality Services		
Proposed 1 st Ship Date:			Sep 16, 2022			nple i ccept	ed u	ntil:	July 16, 2022*		
*Sample requests received after July 16, 2022 will not be supported.											
Change Typ				0				A	and the Mathematical		
Assembl	y Site		<u> </u>	Assembly F					ssembly Materials echanical Specification		
Test Site	<u>د</u>		Electrical Specification Packing/Shipping/Labeling			na	\square		t Process		
	ump Site		Wafer Bump Material			ing	\square		fer Bump Process		
Wafer Fa			Wafer Fab Materials					Wafer Fab Process			
			Part number change								
				PCN	Details						
Description											
					•				ation facilities as	an	
additional Wa	ifer Fab opti	on for	the	devices liste	ed in the "Proo	duct A	ffect	ed" se	ection.		
	Current F	ah Cil	-				low	Eah (lite		
	1	-				New Fab S					
Fab Site	Process	Wa		Diameter	Fab Site		oces		Wafer Diamete	er -	
DL-LIN	LBC3S		15	0 mm	CFAB	L	BC3S	5	200 mm		
	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-milimeter 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 ide	entific	atio	on resulting	from this P	CN:					
Fab Site In	formation:	1							T	1	
Chip Site		(Site Origin de (20L)	Chip Site	Chip Site Country C (21L)			Chip Site City	'	
DL-LIN				DLN		USA			Dallas		
CFAB				CU3		CHN		Chengdu			
Sample product shipping label (not actual product label):											
		ONGE		05000	TUCCOT			TIN (2	475.004/00		
MAX3238CD				8EDBR		LV2462IP			TLV2475CPWPR		
MAX3238ECDBR TLC0		TLC08	84AIN TLV2475AIPW			WP		TLV2	475IPWPR		

Texas Instruments Incorporated

TI Information - Selective Disclosure

PCN# 20220615004.1

MAX3238EIDBR	TLC085AIN	TLV2475AIPWPR	TRSF3238EIDBR	
MAX3238IDBR	TLV2462CP			

Qualification Report

Approve Date 13-Sept-2021

Qualification Results

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

Test Name / Condition	Duration	Qual Device: TLV2464CPWR	QBS Process Reference: CD3301RHHR	QBS Package Reference: TP S2042BD	QBS Package Reference: TP \$2419DR
Life Test, 150C	300 Hours	-	3/231/0	-	-
High Temp Storage Bake 170C	420 Hours	-	3/231/0	3/231/0	3/231/0
Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	-	3/231/0
Autoclave 121C	96 Hours	-	3/231/0	3/231/0	3/231/0
Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0
ESD - HBM	4000 V	1/3/0	1/3/0	-	-
ESD - CDM	1000 V	1/3/0	1/3/0	-	-
Latch-up	(per JESD78)	1/6/0	1/6/0	-	-
Electrical Characterization	Per Datasheet Parameters	1/30/0	1/30/0	-	-
Assembly MQ	Per Site Specifications	Pass	Pass	Pass	Pass
	Life Test, 150C High Temp Storage Bake 170C Biased HAST, 130C/85%RH Autoclave 121C Temperature Cycle, -65/150C ESD - HBM ESD - CDM Latch-up Electrical Characterization	Life Test, 150C 300 Hours High Temp Storage Bake 170C 420 Hours Biased HAST, 130C/85%RH 96 Hours Autoclave 121C 96 Hours Temperature Cycle, -65/150C 500 Cycles ESD - HBM 4000 V ESD - CDM 1000 V Latch-up (per JESD78) Electrical Characterization Per Datasheet Parameters Assembly MQ Per Site Specifications	Test Name / Condition Duration TLV2464CPWR Life Test, 150C 300 Hours - High Temp Storage Bake 170C 420 Hours - Biased HAST, 130C/85%RH 96 Hours - Autoclave 121C 96 Hours - Temperature Cycle, -65/150C 500 Cycles - ESD - HBM 4000 V 1/3/0 ESD - CDM 1000 V 1/3/0 Latch-up (per JESD78) 1/6/0 Electrical Characterization Per Datasheet Parameters 1/30/0 Assembly MQ Per Site Specifications Pass	Test Name / Condition Duration TLV2464CPWR Reference: CD3301RHHR Life Test, 150C 300 Hours - 3/231/0 High Temp Storage Bake 170C 420 Hours - 3/231/0 Biased HAST, 130C/85%RH 96 Hours - 3/231/0 Autoclave 121C 96 Hours - 3/231/0 Temperature Cycle, -65/150C 500 Cycles - 3/231/0 ESD - HBM 4000 V 1/3/0 1/3/0 ESD - CDM 1000 V 1/3/0 1/3/0 Latch-up (per JESD78) 1/6/0 1/6/0 Electrical Characterization Per Datasheet Parameters 1/30/0 1/3/00 Assembly MQ Per Site Specifications Pass Pass	Test Name / Condition Duration TLV2464CPWR Reference: CD3301RHHR QBS Package Reference: TPS2042BD Life Test, 150C 300 Hours - 3/231/0 - High Temp Storage Bake 170C 420 Hours - 3/231/0 - Biased HAST, 130C/85%RH 96 Hours - 3/231/0 - Autoclave 121C 96 Hours - 3/231/0 3/231/0 Temperature Cycle, -65/150C 500 Cycles - 3/231/0 3/231/0 ESD - HBM 4000 V 1/3/0 1/3/0 - ESD - CDM 1000 V 1/3/0 1/3/0 - Latch-up (per JESD78) 1/6/0 1/6/0 - Electrical Characterization Per Site Specifications Pass Pass Pass

- QBS: Qual By Similarity

- Qual Device TLV2464CPWR is qualified at LEVEL1-260C

- 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

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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