PCN Number:	20221216002.1	PCN Date:	December 21, 2022
Title:	Qualification of new Fab site (RFAB) using qualified Process Technology, Die Revision, Datasheet update and additional Assembly site/BOM options for select devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Mar 21, 2023	Sample requests accepted until:	January 21, 2023*

***Sample requests received after January 21, 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) and assembly (MLA) site/BOM 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	IMP-PWR2	150 mm	RFAB	LBC9	300 mm

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

Construction Differences are as follows:

	Current	Additional
Wire diam	0.96mil Cu	0.80mil Cu
Pin1 marking	Stripe	Dot

The associated datasheet changes were notified in a separate Datasheet change notification on 11/18/2022 (Notification# 20221117000.0) as shown below:

TEXAS INSTRUMENTS

UCC28C40, UCC28C41, UCC28C42, UCC28C43, UCC28C44, UCC28C45, UCC38C40, UCC38C41, UCC38C42, UCC38C43, UCC38C44, UCC38C45

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Changes from Revision G (January 2017) to Revision H (September 2022) **Page**

- Changed -40°C to 105°C to -40°C to 125°C, and 0°C to 70°C to 0°C to 85°C....1
- Removed *PDIP* package from Device Information....1
- Updated T_J *range* in Device Comparison Table....3
- Removed *PDIP* package from Pin Configuration....4
- Removed *PDIP* package from Absolute Maximum Table....5
- Updated *Total Power Dissipation* values in Absolute Maximum Table....5
- Added V_{REF} *maximum continuous voltage* from external circuitry in Recommended Operating Conditions....5
- Updated T_J *max values* in Recommended Operating Conditions Table....5
- Updated all *Thermal Resistance Numbers* in Thermal Information....6
- Updated Electrical Characteristics section....6
- Corrected a *drawing error* of OUT pin high-side FET connection....13

These changes may be reviewed at: http://www.ti.com/product/UCC28C40

Tube versions of the devices are included in EOL notice PDN# 20221216003.3.

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-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

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
☒ No Change	☒ No Change	☒ No Change	☒ 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
RFAB	**RFB**	**USA**	**Richardson**

Die Rev:

Current	**New**
Die Rev [2P]	**Die Rev [2P]**
A	**A**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Mexico	MEX	MEX	Aguascalientes
MLA	**MLA**	**MYS**	**Kuala Lumpur**

Sample product shipping label (not actual product label):

Product Affected:

UCC28C40DR	UCC28C43DRG4	UCC38C40DR	UCC38C42DRG4
UCC28C41DR	UCC28C44DR	UCC38C41DR	UCC38C43DR
UCC28C42DR	UCC28C44DRG4	UCC38C41DRG4	UCC38C44DR
UCC28C42DRG4	UCC28C45DR	UCC38C42DR	UCC38C45DR
UCC28C43DR	UCC28C45DRG4		

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

Qualification Report
Approve Date 13-SEPTEMBER-2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: UCC28C44D	QBS Reference: LM74700QDBVRQ1	QBS Reference: LM74700QDBVRQ1	QBS Reference: UCC28C56HD	QBS Reference: TLV2314QDRQ1	QBS Reference: SN65HVD1781AQDRQ1	QBS Reference: UCC28C44QDRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	1/77/0	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	-	1/77/0	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	2/154/0	1/77/0	1/77/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	1/45/0	-	1/45/0	1/45/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	1/77/0	2/154/0	-
HTOL	B1	Life Test	140C	480 Hours	-	-	-	-	-	1/77/0	-
HTOL	B1	Life Test	150C	408 Hours	-	1/77/0	2/154/0	-	-	-	-
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	-	3/2400/0	-	-	-	-
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
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	1/30/0	-	-	3/90/0	3/90/0	1/30/0

- QBS: Qual By Similarity
- Qual Device UCC28C44D 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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