

<b>PCN Number:</b>	20210713000.1		<b>PCN Date:</b>	Jul 15 2021	
<b>Title:</b>	Qualification of CDAT as an alternate AT site for the TPS22964CZPR/T				
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services		
<b>Proposed 1<sup>st</sup> Ship Date:</b>	Oct 15 2021	<b>Estimated Sample Availability:</b>	Date provided at sample request		
<b>Change Type:</b>					
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials
		<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments Incorporated is announcing the qualification of CDAT as an additional Assembly site for the TPS22964CZPR/T. There are no construction differences between the 2 sites.					
<b>Reason for Change:</b>					
Supply continuity					
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>					
None					
<b>Anticipated impact on Material Declaration</b>					
<input checked="" type="checkbox"/>	No Impact to the Material Declaration	<input type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained at the site link below <a href="http://www.ti.com/quality/docs/materialcontentsearch.tsp">http://www.ti.com/quality/docs/materialcontentsearch.tsp</a>		
<b>Changes to product identification resulting from this PCN:</b>					
<b>Assembly Site</b>	<b>Assembly Site Origin (22L)</b>	<b>Assembly Country Code (23L)</b>	<b>Assembly City</b>		
CLARK	QAB	PHL	Angeles City, Pampanga		
<b>CDAT</b>	<b>CDA</b>	<b>CHN</b>	<b>Chengdu</b>		
Sample product shipping label (not actual product label)					
<b>Product Affected:</b>					
TPS22964CZPR	TPS22964CZPT				

Approve Date 19-May-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS22964CZPR	QBS Product Reference: TPS22964CZPR
CDM	ESD - CDM	250 V	-	1/3/0
ED	Electrical Characterization.	Per Datasheet Parameters	1/Pass	1/Pass
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-
HBM	ESD - HBM	1000 V	-	1/3/0
LU	Latch-up	(per JESD78)	-	1/6/0
SBS	Solder Ball Shear	Solder/Ball	3/108/0	-
SD	Pb Free Surface Mount Solderability	Pb Free/Solder-	3/30/0	-
TC	Temperature Cycle, -55/125C	700 Cycles	3/231/0	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	3/231/0	-

- QBS: Qual B Similarity
  - Qual Device TPS22964CZPR 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

For questions regarding this notice, e-mails can be sent to the contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
WW PCN Team	<a href="mailto:PCN_ww_admin_team@list.ti.com">PCN_ww_admin_team@list.ti.com</a>

**IMPORTANT NOTICE AND DISCLAIMER**

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or

other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale ([www.ti.com/legal/termsofsale.html](http://www.ti.com/legal/termsofsale.html)) or other applicable terms available either on [ti.com](http://ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.