


<b>PCN Number:</b>	20240327006.1			<b>PCN Date:</b>	March 28, 2024																		
<b>Title:</b>	Qualification of RFAB using qualified Process Technology and Die Revision for select devices																						
<b>Customer Contact:</b>	Change Management Team		<b>Dept:</b>	Quality Services																			
<b>Proposed 1<sup>st</sup> Ship Date:</b>	June 26, 2024		<b>Sample requests accepted until:</b>	April 27, 2024*																			
<b>*Sample requests received after April 27, 2024 will not be supported.</b>																							
<b>Change Type:</b>																							
<input type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material																		
<input type="checkbox"/>	Assembly Process	<input checked="" 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 Material																		
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input checked="" type="checkbox"/>	Wafer Fab Process																		
<b>PCN Details</b>																							
<b>Description of Change:</b>																							
Texas Instruments is pleased to announce the addition of RFAB using the TIB qualified process technology.																							
<table><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><tr><td>SFAB</td><td>J11</td><td>150 mm</td><td>RFAB</td><td>TIB</td><td>300 mm</td></tr></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
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SFAB	J11	150 mm	RFAB	TIB	300 mm																		
As a result of the changes described above, there are datasheet changes as per below:																							
<div><div></div><div>SLRS076A – AUGUST 2022 – REVISED MARCH 2024</div><div>ULN2803C</div></div>																							
<b>10 Revision History</b>																							
NOTE: Page numbers for previous revisions may differ from page numbers in the current version.																							
<table><tr><th>Changes from Revision * (August 2022) to Revision A (March 2024)</th><th>Page</th></tr><tr><td>• Updated thermal parameters in the <i>Thermal Information</i> section.....</td><td>4</td></tr><tr><td>• Changed typical specification for V<sub>F</sub>, Clamp forward voltage from 1.7V : to 1.3V in the <i>Electrical Characteristics</i> section.....</td><td>4</td></tr><tr><td>• Updated graphs in the <i>Typical Characteristics</i> section.....</td><td>4</td></tr></table>						Changes from Revision * (August 2022) to Revision A (March 2024)	Page	• Updated thermal parameters in the <i>Thermal Information</i> section.....	4	• Changed typical specification for V <sub>F</sub> , Clamp forward voltage from 1.7V : to 1.3V in the <i>Electrical Characteristics</i> section.....	4	• Updated graphs in the <i>Typical Characteristics</i> section.....	4										
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<b>The datasheet number will be changing.</b>																							
<table><tr><td>Device Family</td><td>Change From:</td><td>Change To:</td></tr><tr><td>ULN2803C</td><td>SLRS076</td><td>SLRS076A</td></tr></table>						Device Family	Change From:	Change To:	ULN2803C	SLRS076	SLRS076A												
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ULN2803C	SLRS076	SLRS076A																					
These changes may be reviewed at the datasheet links provided. <a href="http://www.ti.com/product/ULN2803C">http://www.ti.com/product/ULN2803C</a>																							
The die was also changed as a result of the process change.																							
Qual details are provided in the Qual Data Section.																							
<b>Reason for Change:</b>																							
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.																							

<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>			
None			
<b>Changes to product identification resulting from this PCN:</b>			
<b>Fab Site Information:</b>			
Chip Site	Chip Site Origin Code (20L)	Chip Site Country Code (21L)	Chip Site City
SH-BIP-1	SHE	USA	Sherman
<b>RFAB</b>	<b>RFB</b>	<b>USA</b>	<b>Richardson</b>
<b>Die Rev:</b>			
<b>Current</b>		<b>New</b>	
Die Rev [2P]		<b>Die Rev [2P]</b>	
-		<b>A</b>	
Sample product shipping label (not actual product label)			
<b>Product Affected:</b>			
ULN2803CDWR			

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

## Qualification Report

ULN2803CDWR

Approve Date 05-DECEMBER -2023

### Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: ULN2803CDWR	QBS Reference: MC33063AQDRQ1	QBS Reference: OPA2991QDRQ1	QBS Reference: ULQ2003AQDRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	1/77/0
UHA	A3	Autoclave	121C/15psig	96 Hours	-	-	-	1/77/0
UHA	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	-	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	1/45/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	3/231/0
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0

Type	#	Test Name	Condition	Duration	Qual Device: ULN2803CDWR	QBS Reference: MC33063AQDRQ1	QBS Reference: OPA2991QDRQ1	QBS Reference: ULQ2003AQDRQ1
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-
ESD	E2	ESD CDM	-	500 Volts	-	1/3/0	1/3/0	1/3/0
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	1/3/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	1/3/0	1/6/0	1/6/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	3/90/0	3/90/0

- QBS: Qual By Similarity
- Qual Device ULN2803CDWR 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-2210-058

For questions regarding this notice, e-mails can be sent to Change Management team or your local Field Sales Representative.

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