



**PCN#20250324002.1**

**Qualification of TI Clark as an additional Assembly site for select devices  
Change Notification / Sample Request**

**Date:** March 24, 2025

**To:** Mouser PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within 60 days of the date of this notice. Lack of acknowledgement of this notice within 60 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within 60 days of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

TI values customer engagement and feedback related to TI changes. Customers should contact TI if there are questions or concerns regarding a change notification.

Sincerely,

Change Management Team  
SC Business Services

**20250324002.1****Attachment: 1****Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TSER9615RHBT	NULL

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

<b>PCN Number:</b>	20250324002.1			<b>PCN Date:</b>	March 24, 2025
<b>Title:</b>	Qualification of TI Clark as an additional Assembly site for select devices				
<b>Customer Contact:</b>		Change Management team	<b>Dept:</b>	Quality Services	
<b>Proposed 1<sup>st</sup> Ship Date:</b>		\$CRF_1stCustShip _190\$	<b>Sample Requests accepted until:</b>	May 23, 2025*	
<b>*Sample requests received after May 23, 2025 will not be supported.</b>					
<b>Change Type:</b>					
<input checked="" type="checkbox"/> Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material	
<input type="checkbox"/> Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process	
<input type="checkbox"/> Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Fab Site	
<input type="checkbox"/> Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material	
<input checked="" type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process	
<b>PCN Details</b>					
<b>Description of Change:</b>					
Texas Instruments Incorporated is announcing the qualification of TI Clark as an additional Assembly site option for the device listed below. No material differences between sites.					
<b>Reason for Change:</b>					
Supply continuity					
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>					
None					
<b>Impact on Environmental Ratings</b>					
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.					
<b>RoHS</b>	<b>REACH</b>	<b>Green Status</b>	<b>IEC 62474</b>		
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change		
<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>		
TI CDAT	CSZ	CHN	Jiangsu		
<b>TI Clark</b>	<b>QAB</b>	<b>PHL</b>	<b>Angeles City, Pampanga</b>		
Sample product shipping label (not actual product label)					
 <b>TEXAS INSTRUMENTS</b> MADE IN: Malaysia 2DC: 20: MSL 2 /260C/1 YEAR <b>SEAL DT</b> MSL 1 /235C/UNLIM 03/29/04 OPT: ITEM: 39 <b>LBL: 5A (L)T0:1750</b>	 	<p>(1P) <b>SN74LS07NSR</b>  (Q) <b>2000</b> (D) <b>0336</b>  (31T) LOT: 3959047MLA  (4W) TKY(1T) 7523483SI2  (P)  (2P) REV: (V) 0033317  (20L) CS0: SHE (21L) CCO:USA  (22L) AS0:MLA (23L) AC0: MYS </p>			
<b>Product Affected:</b>					
TSER953RHBR	TSER953RHBT	TSER9615RHBR	TSER9615RHBT		

**Automotive Qualification Summary**  
 (As per AEC-Q100 Rev. J and JEDEC Guidelines)  
 Approve Date 12-March-2025

**Product Attributes**

Attributes		Qual Device: <b>DP83TC812RRHARQ1</b>	Qual Device: <b>DP83TG721SRHARQ1</b>	QBS Package, Process Reference: <b>DS90UH949TRGCRQ1</b>	QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>	QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>
<b>Automotive Grade Level</b>	Grade 1	Grade 1	Grade 1	Grade 2	Grade 2	Grade 2
<b>Operating Temp Range (C)</b>	-40 to 125	-40 to 125	-40 to 105	-40 to 105	-40 to 105	-40 to 105
<b>Product Function</b>	Signal Chain	Signal Chain	Interface	-	-	-
<b>Wafer Fab Supplier</b>	DMOS6	DMOS6	DMOS6	UMCI	TSMC-F14	
<b>Assembly Site</b>	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	
<b>Package Group</b>	QFN	QFN	-	QFN	QFN	
<b>Package Designator</b>	RHA	RHA	RGC	RGZ	RGZ	
<b>Pin Count</b>	36	36	64	48	48	

QBS: Qual By Similarity, also known as Generic Data

Qual Device DP83TC812RRHARQ1 is qualified at MSL3 260C

Qual Device DP83TG721SRHARQ1 is qualified at MSL3 260C

**Qualification Results**

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

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: <b>DP83TC812RRHARQ1</b>	Qual Device: <b>DP83TG721SRHARQ1</b>	QBS Package, Process Reference: <b>DS90UH949TRGCRQ1</b>	QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>	QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>
<b>Test Group A - Accelerated Environment Stress Tests</b>												
PC	A1	JEDEC J-STD-020 JEDEC JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	1/0/0	3/0/0	3/924/0	1/308/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	110C/85%RH	264 Hours	-	-	3/231/0	3/231/0	1/77/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	110C/85%RH	264 Hours	-	-	-	3/231/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/125C	1000 Cycles	-	-	-	3/231/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	1/77/0	3/231/0	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	1/5/0	1/5/0	1/5/0	1/5/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	500 Hours	-	-	3/135/0	3/231/0	1/77/0
<b>Test Group B - Accelerated Lifetime Simulation Tests</b>												
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	105C	1000 Hours	-	-	2/154/0	3/231/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125	1000 Hours	-	-	2/154/0	3/231/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	105C	48 Hours	-	-	-	2/1600/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	24 Hours	-	-	2/1600/0	1/800/0	-
<b>Test Group C - Package Assembly Integrity Tests</b>												
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0	1/30/0	1/5/0	3/90/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0	1/30/0	1/5/0	3/90/0	1/30/0
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	-	-	1/15/0	-

SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	-	-	-	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0	1/10/0	-	3/30/0	1/10/0
<b>Test Group D - Die Fabrication Reliability Tests</b>												
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements				
TDDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements				
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements				
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements				
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements				
<b>Test Group E - Electrical Verification Tests</b>												
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	-	-	-	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	-	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	-	-	1/6/0	-
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	1/30/0	-	3/90/0	-

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 Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I) : -40C to +85C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : AC/uHAST

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-CHG-2411-037

**Automotive Qualification Summary**  
 (As per AEC-Q100 Rev. J and JEDEC Guidelines)  
 Approve Date 21-February-2025

**Product Attributes**

Attributes		Qual Device: <b>DS90UB953TRHBRQ1</b>		Qual Device: <b>DS90UB971RHBRQ1</b>		QBS Package, Process Reference: <b>DS90UH949TRGCRQ1</b>		QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>		QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>	
<b>Automotive Grade Level</b>		Grade 2		Grade 1		Grade 2		Grade 2		Grade 2	
<b>Operating Temp Range (C)</b>		-40 to 105		-40 to 125		-40 to 105		-40 to 105		-40 to 105	
<b>Product Function</b>		Signal Chain		Signal Chain		Interface		-		-	
<b>Wafer Fab Supplier</b>		DMOS6		DMOS6		DMOS6		UMCI		TSMC-F14	
<b>Assembly Site</b>		CLARK-AT		CLARK-AT		CLARK-AT		CLARK-AT		CLARK-AT	
<b>Package Group</b>		QFN		QFN		-		QFN		QFN	
<b>Package Designator</b>		RHB		RHB		RGC		RGZ		RGZ	
<b>Pin Count</b>		32		32		64		48		48	

QBS: Qual By Similarity, also known as Generic Data

Qual Device DS90UB953TRHBRQ1 is qualified at MSL3 260C

Qual Device DS90UB971RHBRQ1 is qualified at MSL3 260C

**Qualification Results**

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

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: <b>DS90UB953TRHBRQ1</b>	Qual Device: <b>DS90UB971RHBRQ1</b>	QBS Package, Process Reference: <b>DS90UH949TRGCRQ1</b>	QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>	QBS Package Reference: <b>XCC2642R1TWRGZRQ1</b>
<b>Test Group A - Accelerated Environment Stress Tests</b>												
PC	A1	JEDEC J-STD-020 JEDEC JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	1/0/0	3/0/0	3/924/0	1/308/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	110C/85%RH	264 Hours	-	-	3/231/0	3/231/0	1/77/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	110C/85%RH	264 Hours	-	-	-	3/231/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-55C/125C	1000 Cycles	-	-	-	3/231/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	1/77/0	3/231/0	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	-	1/5/0	1/5/0	1/5/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	500 Hours	-	-	3/135/0	3/231/0	1/77/0
<b>Test Group B - Accelerated Lifetime Simulation Tests</b>												
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	105C	1000 Hours	-	-	2/154/0	3/231/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125	1000 Hours	-	-	2/154/0	3/231/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	105C	48 Hours	-	-	-	2/1600/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	24 Hours	-	-	2/1600/0	1/800/0	-
<b>Test Group C - Package Assembly Integrity Tests</b>												
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0	1/30/0	1/5/0	3/90/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	1/30/0	1/30/0	1/5/0	3/90/0	1/30/0
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	-	-	1/15/0	-

SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	-	-	-	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0	1/10/0	-	3/30/0	1/10/0
<b>Test Group D - Die Fabrication Reliability Tests</b>												
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements				
TDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements				
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements				
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements				
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements				
<b>Test Group E - Electrical Verification Tests</b>												
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	-	-	-	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	-	-	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	-	-	1/6/0	-
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	1/30/0	-	3/90/0	-

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

#### **Ambient Operating Temperature by Automotive Grade Level:**

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I) : -40C to +85C

#### **E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):**

Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : AC/uHAST

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-CHG-2409-002

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

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