



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20250324002.1A

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

Date: March 25, 2025

To: MOUSER PCN

Dear Customer:

Revision A is to update the proposed 1st ship date & the assembly site information for TI CDAT. We apologize for any inconvenience this may have caused.

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

20250324002.1A
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).

PCN Number:	20250324002.1A			PCN Date:	March 25, 2025
Title:	Qualification of TI Clark as an additional Assembly site for select devices				
Customer Contact:	Change Management team		Dept:	Quality Services	
Proposed 1st Ship Date:	June 23, 2025		Sample Requests accepted until:	May 24, 2025*	
*Sample requests received after May 24, 2025 will not be supported.					
Change Type:					
☒	Assembly Site	☐	Design	☐	Wafer Bump Material
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Process
☐	Assembly Materials	☐	Part number change	☐	Wafer Fab Site
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Material
☒	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Process
PCN Details					
Description of Change:					
Revision A is to update the proposed 1 st ship date & the assembly site information for TI CDAT.					
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.					
Reason for Change:					
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	
☒ No Change		☒ No Change		☒ No Change	
IEC 62474					
☒ No Change					
Changes to product identification resulting from this PCN:					
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City		
TI CDAT	CDA	CHN	Chengdu		
TI Clark	QAB	PHL	Angeles City, Pampanga		
Sample product shipping label (not actual product label)					
Product Affected:					
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: DP83TC812RRHARQ1	Qual Device: DP83TG721SRHARQ1	QBS Package, Process Reference: DS90UH949TRGCRQ1	QBS Package Reference: XCC2642R1TWRGZRQ1	QBS Package Reference: XCC2642R1TWRGZRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 2	Grade 2	Grade 2
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 105	-40 to 105	-40 to 105
Product Function	Signal Chain	Signal Chain	Interface	-	-
Wafer Fab Supplier	DMOS6	DMOS6	DMOS6	UMCI	TSMC-F14
Assembly Site	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT
Package Group	QFN	QFN	-	QFN	QFN
Package Designator	RHA	RHA	RGC	RGZ	RGZ
Pin Count	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: DP83TC812RRHARQ1	Qual Device: DP83TG721SRHARQ1	QBS Package, Process Reference: DS90UH949TRGCRQ1	QBS Package Reference: XCC2642R1TWRGZRQ1	QBS Package Reference: XCC2642R1TWRGZRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 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
Test Group B - Accelerated Lifetime Simulation Tests												
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	-
Test Group C - Package Assembly Integrity Tests												
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
Test Group D - Die Fabrication Reliability Tests												
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDD8	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests												
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: DS90UB953TRHBRQ1	Qual Device: DS90UB971RHBRQ1	QBS Package, Process Reference: DS90UH949TRGCRQ1	QBS Package Reference: XCC2642R1TWRGZBQ1	QBS Package Reference: XCC2642R1TWRGZRQ1
Automotive Grade Level	Grade 2	Grade 1	Grade 2	Grade 2	Grade 2
Operating Temp Range (C)	-40 to 105	-40 to 125	-40 to 105	-40 to 105	-40 to 105
Product Function	Signal Chain	Signal Chain	Interface	-	-
Wafer Fab Supplier	DMOS6	DMOS6	DMOS6	UMCI	TSMC-F14
Assembly Site	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT	CLARK-AT
Package Group	QFN	QFN	-	QFN	QFN
Package Designator	RHB	RHB	RGC	RGZ	RGZ
Pin Count	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: DS90UB953TRHBRQ1	Qual Device: DS90UB971RHBRQ1	QBS Package, Process Reference: DS90UH949TRGCRQ1	QBS Package Reference: XCC2642R1TWRGZBQ1	QBS Package Reference: XCC2642R1TWRGZRQ1
Test Group A - Accelerated Environment Stress Tests												
PC	A1	JEDEC J-STD-020 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
ACU/HAST	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
Test Group B - Accelerated Lifetime Simulation Tests												
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	-
Test Group C - Package Assembly Integrity Tests												
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
Test Group D - Die Fabrication Reliability Tests												
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDb	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests												
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

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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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