12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN Number:	20260717000.1A	PCN Issued	September 08, 2026
Qualification of RFAB as an additional Fab site option, Design change, BOM change, Datasheet update and TI CDAT as an additional Assembly site options for select devices		Sample request deadline:	October 05, 2026
		Estimated 1st ship date:	November 04, 2026
***Sample requests received after** October 05, 2026 **will not be supported.**			

Change type(s)
Assembly Site
Assembly Material
Packing/Shipping/Labeling
Design
Data Sheet/Electrical Specification
Wafer Fab Site
Wafer Fab Material
Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of a new fab & process technology (RFAB, LBC7) and additional Assembly site (CDAT) option for selected devices as listed below in the product affected section.

Addendum A is adding revision history from datasheet referenced below for more clarity on changes reflected in this PCN.

Current Fab Site			Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
FFAB	ASLC10	200mm	RFAB	LBC7	300mm

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

Construction Differences are as follows:

	Current	Additional
Assembly Site	MLA	CDAT
Bond Wire Composition/diameter	Cu, 0.96mil	Cu, 0.8mil
Mold Compound	4208625	4222198
Mount Compound	4205846	4207123

The datasheets will be changing as a result of the above mentioned changes. The datasheet change details can be reviewed in the datasheet revision history shown below. The links to the revised datasheets are available in the table below.

TEXAS INSTRUMENTS — SN74AVC4T774
SCES693I – FEBRUARY 2008 – REVISED FEBRUARY 2025

Changes from Revision H (May 2024) to Revision I (February 2025)	Page
• Updated RGY and PW thermal information	7

TEXAS INSTRUMENTS — SN74AVCH4T245
SCES577F – JUNE 2004 – REVISED FEBRUARY 2025

Changes from Revision E (November 2015) to Revision F (February 2025)	Page
• Updated PW and RGY *Thermal Information*	8

TEXAS INSTRUMENTS — SN74AVC4T245
SCES576I – JUNE 2004 – REVISED FEBRUARY 2025

Changes from Revision H (March 2024) to Revision I (February 2025)	Page
• Updated PW and RGY thermal information	8

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
SN74AVC4T774	SCES693H	SCES693I	http://www.ti.com/product/SN74AVC4T774
SN74AVCH4T245	SCES577E	SCES577F	http://www.ti.com/product/SN74AVCH4T245
SN74AVC4T245	SCES576H	SCES576I	http://www.ti.com/product/SN74AVC4T245

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 200-millimeter 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:	• These devices include new die with schematic or behavior changes. • There are changes in the electrical tables. • Device quality has been impacted. • Review updated datasheets and/or the Standard Data Packet for more details on the changes. Evaluating samples is encouraged.
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
FFAB	TID	DEU	Freising
RFAB	**RFB**	**USA**	**Richardson**

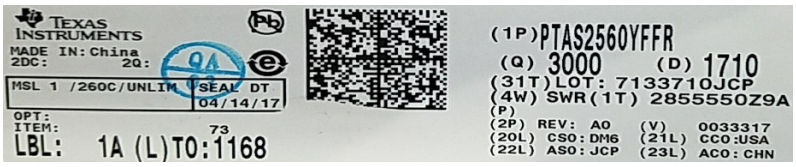
Die Rev:

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

Assembly Site Information

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
Malaysia	MLA	MYS	Kuala Lumpur
CDAT	**CDA**	**CHN**	**Chengdu**

Sample product shipping label (not actual product label):



Products Affected:			
74AVCH4T245RGYRG4	SN74AVC4T245RGYR	SN74AVC4T245RGYRG4	74AVC4T245RGYRG4
SN74AVC4T774RGYR	SN74AVCH4T245RGYR		

Automotive Qualification Summary
(As per AEC-Q100 Rev. J and JEDEC Guidelines)

FAB5 AVC4T RGY-CDAT (Automotive)
Approve Date 08-July -2025

Product Attributes

Attributes	Qual Device: 74AVC4T245QRGYRQ1	QBS Process Reference: SN3257QDYYRQ1	QBS Package Reference: CAXC4T774QBQBRQ1	QBS Package Reference: PSN74AXC4T245BQBR	QBS Package Reference: SN74HCS245QWRKSRQ1	QBS Package Reference: TXS0104EQWBQARQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1	QBS Product Reference: 74AVC4T774QWBQBRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Logic	Logic,Signal Chain	Logic	Logic	Logic	Logic	Interface	Interface
Wafer Fab Supplier	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB	RFAB
Assembly Site	CDAT	PHI	CDAT	CDAT	CDAT	CDAT	CDAT	CDAT
Package Group	QFN	SOT	QFN	QFN	QFN	QFN	QFN	QFN
Package Designator	RGY	DYY	BQB	BQB	RKS	BQA	BQB	BQB
Pin Count	16	16	16	16	20	14	16	16

- QBS: Qual By Similarity, also known as Generic Data.
- Qual Device 74AVC4T245QRGYRQ1 is qualified at MSL1 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: 74AVC4T245QRGYRQ1	QBS Process Reference: SN3257QDYYRQ1	QBS Package Reference: CAXC4T774QBQBRQ1	QBS Package Reference: PSN74AXC4T245BQBR	QBS Package Reference: SN74HCS245QWRKSRQ1	QBS Package Reference: TXS0104EQWBQARQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1	QBS Product Reference: 74AVC4T774QWBQBRQ1
Test Group A - Accelerated Environment Stress Tests															
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260C	-	1/All/0	3/All/0	1/All/0	1/All/0	1/All/0	All/0	1/All/0	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	1/77/0	1/77/0	1/77/0	1/77/0	1/77/0	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121C/15psig	96 Hours	-	3/231/0	1/77/0	1/77/0	-	-	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	1/77/0	1/77/0	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	1/77/0	1/77/0	1/77/0	3/231/0	1/77/0	-
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	1/5/0	-	-	-	-	1/5/0	1/5/0	-

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: 74AVC4T245QRGYRQ1	QBS Process Reference: SN3257QDYYRQ1	QBS Package Reference: CAXC4T774QBQBRQ1	QBS Package Reference: PSN74AXC4T245BQBR	QBS Package Reference: SN74HCS245QWRKSRQ1	QBS Package Reference: TXS0104EQWBQARQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1	QBS Product Reference: 74AVC4T774QWBQBRQ1
TC-SAM	A4	-	3	3	Post TC SAM	<50% delamination	-	1/12/0	-	-	-	-	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	1/45/0	1/45/0	1/45/0	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175C	500 Hours	-	-	-	-	-	1/45/0	1/45/0	-
Test Group B - Accelerated Lifetime Simulation Tests															
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	-	-	-	-	1/77/0	1/77/0	1/77/0	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150C	300 Hours	-	3/231/0	1/77/0	1/77/0	-	-	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	150C	24 Hours	-	3/2400/0	-	-	-	-	-	-
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	3/90/0	1/30/0	1/30/0	3/90/0	3/90/0	1/30/0	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	3/90/0	1/30/0	1/30/0	3/90/0	3/90/0	1/30/0	1/30/0
SD	C3	JEDEC J-STD-002	1	15	PB Solderability	>95% Lead Coverage	-	-	1/15/0	1/15/0	1/15/0	-	1/15/0	-	-
SD	C3	JEDEC J-STD-002	1	15	PB-Free Solderability	>95% Lead Coverage	-	1/15/0	1/15/0	1/15/0	1/15/0	-	1/15/0	1/15/0	-
PD	C4	JEDEC JESD22-B100 and B102	3	10	Physical Dimensions	Cpk>1.67	-	1/10/0	3/30/0	1/10/0	1/10/0	3/30/0	3/30/0	1/10/0	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	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	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	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	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	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	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	-	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: 74AVC4T245QRGYRQ1	QBS Process Reference: SN3257QDYYRQ1	QBS Package Reference: CAXC4T774QBQBRQ1	QBS Package Reference: PSN74AXC4T245BQBR	QBS Package Reference: SN74HCS245QWRKSRQ1	QBS Package Reference: TXS0104EQWBQARQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1	QBS Product Reference: 74AVC4T774QWBQBRQ1
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	3/90/0	3/90/0	3/90/0	3/90/0	3/90/0	2/60/0	1/30/0
Additional Tests															
BLR	T1	-	-	-	Board Level Reliability - Temp Cycle	-40/125C	1000 Cycles	-	-	-	-	-	1/22/0	-	-

- 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/430 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 & 25C/700 Cycles and -65C/150C/500 Cycles

Orderable Part Numbers

The following table contains a list of all TI Orderable Part Numbers (OPNs) released by this qualification per Product Qualification Family definition (AEC Q100 Appendix 1). Group E results shown above cover all part numbers listed here.

74AVC4T245QRGYRQ1

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-2302-057

Qualification Report

FAB5 AVC4T RGY-CDAT (Commercial)
Approve Date 08-July -2025

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74AVC4T245RGYR	Qual Device: SN74AVC4T774RGYR	Qual Device: SN74AVCH4T245RGYR	QBS Reference: SN3257QDYYRQ1	QBS Reference: CAXC4T774QBQBRQ1	QBS Reference: PSN74AXC4T245BQBR	QBS Reference: TXS0104EQWBQARQ1	QBS Reference: 74AVC4T245QWBQBRQ1	QBS Reference: 74AVC4T774QWBQBRQ1	QBS Reference: 74AVC4T245QRGYRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	1/77/0	1/77/0	1/77/0	1/77/0	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0	1/77/0	1/77/0	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	1/77/0	1/77/0	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	3/231/0	1/77/0	1/77/0	3/231/0	1/77/0	-	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	3/135/0	1/45/0	1/45/0	-	-	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	-	-	-	1/45/0	1/45/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	-	-	1/77/0	1/77/0	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	-	3/231/0	1/77/0	1/77/0	-	-	-	-
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	-	-	3/2400/0	-	-	-	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0	1/15/0	1/15/0	1/15/0	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	-	1/15/0	1/15/0	1/15/0	1/15/0	1/15/0	-	1/15/0
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	1/22/0	-	-	-	-	-	-	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	3/30/0	1/10/0	1/10/0	3/30/0	1/10/0	1/10/0	1/10/0
ESD	E2	ESD CDM	-	500 Volts	-	-	-	1/3/0	1/3/0	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	1/3/0	1/3/0	-
LU	E4	Latch-Up	Per JESD78	-	-	-	-	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	1/6/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	1/30/0	1/30/0	3/90/0	3/90/0	3/90/0	3/90/0	2/60/0	1/30/0	1/30/0

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device SN74AVC4T245RGYR is qualified at MSL1 260C
- Qual Device SN74AVC4T774RGYR is qualified at MSL1 260C
- Qual Device SN74AVCH4T245RGYR 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-2308-058

Automotive Qualification Summary
(As per AEC-Q100 Rev. J and JEDEC Guidelines)

FAB5 AVC4T RGY-CLARK (Automotive)
Approve Date 28-August-2025

Product Attributes

Attributes	Qual Device: 74AVC4T245QRGYRQ1	QBS Process Reference: SN3257QDYYRQ1	QBS Package Reference: LP5912Q1.1DRVRQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Product Function	Interface	Logic,Signal Chain	Power Management	Interface
Wafer Fab Supplier	RFAB	RFAB	MH8	RFAB
Assembly Site	CLARK-AT	PHI	CLARK-AT	CDAT
Package Group	QFN	SOT	QFN	QFN
Package Designator	RGY	DYY	DRV	BQB
Pin Count	16	16	6	16

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device 74AVC4T245QRGYRQ1 is qualified at MSL1 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: 74AVC4T245QRGYRQ1	QBS Process Reference: SN8257QDYYRQ1	QBS Package Reference: LP5912Q1.1DRVRQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1
Test Group A - Accelerated Environment Stress Tests											
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260 C	-	3/All/0	3/All/0	3/All/0	1/All/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	110 C/85%RH	264 Hours	3/231/0	-	-	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	130 C/85%RH	96 Hours	-	-	-	1/77/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121 C/15psig	96 Hours	-	-	3/231/0	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	110 C/85%RH	264 Hours	3/231/0	-	-	-
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Unbiased HAST	130 C/85%RH	96 Hours	-	-	-	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	-	-	1/77/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	1/5/0	-	-	1/5/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150 C	1000 Hours	1/45/0	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	175 C	500 Hours	-	-	-	1/45/0
Test Group B - Accelerated Lifetime Simulation Tests											

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: 74AVC4T245QRGYRQ1	QBS Process Reference: SN8257QDYYRQ1	QBS Package Reference: LP5912Q1.1DRVRQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125 C	1000 Hours	1/77/0	-	-	1/77/0
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	150 C	300 Hours	-	3/231/0	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	150 C	24 Hours	-	3/2400/0	-	-
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	3/90/0	3/90/0	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	3/90/0	3/90/0	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	1/15/0	-	1/15/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	-	3/30/0	3/30/0	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
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
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

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: 74AVC4T245QRGYRQ1	QBS Process Reference: SN8257QDYYRQ1	QBS Package Reference: LP5912-Q1-1DRVRQ1	QBS Product Reference: 74AVC4T245QWBQBRQ1
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
SM	D5	-	-	-	Stress Migration	-	-	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	-	1/3/0
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	750 Volts	1/3/0	1/3/0	-	1/3/0
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	-	1/6/0	-	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	1/30/0	3/90/0	-	2/60/0
Additional Tests											
BLR	T1	-	-	-	Board Level Reliability-Temp Cycle	-40/125C	1000 Cycles	1/32/0	-	-	-

- 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-2308-059

Automotive Qualification Summary
(As per AEC and JEDEC Guidelines)

20.32 Cu on Al Pad in QFN at CDAT
Approve Date 21-September-2023 | Update Date 8-July-2025

Attributes	Qual Device: 74AVC4T245QRGYRQ1	Qual Device: TXS0104EQWBQARQ1	QBS Package Reference: SN74HCS595QBQBRQ1
Automotive Grade Level	Grade 1	Grade 1	Grade 1
Operating Temp Range (C)	-40 to 125	-40 to 125	-40 to 125
Product Function	Logic	Logic	Logic
Wafer Fab Supplier	RFAB	RFAB	RFAB
Assembly Site	CDAT	CDAT	CDAT
Package Group	QFN	QFN	QFN
Package Designator	RGY	BQA	BQB
Pin Count	16	14	16

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: 74AVC4T245QRGYRQ1	Qual Device: TXS0104EQWBQARQ1	QBS Reference: SN74HCS595QBQBRQ1
Test Group A - Accelerated Environment Stress Tests										
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL1 260C	-	-	3/0/0	3/0/0
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	-	3/66/0	3/66/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	-	3/66/0	3/66/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	-	-	-
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	-	-	-
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	-	-	-
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	-	-	-
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	130C/85%RH	192 Hours	-	-	3/231/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	-	-	3/66/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	-	-	3/3/0
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	-	-	3/9/0

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: 74AVC4T245QRGYRQ1	Qual Device: TXS0104EQWBQARQ1	QBS Reference: SN74HCS595QBQBRQ1
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	-	-	3/9/0
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	-	-	3/9/0
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	-	3/66/0	3/66/0
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	-	3/3/0	3/3/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	-	3/9/0	3/9/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	-	3/9/0	3/9/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	-	3/9/0	3/9/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	-	3/231/0	3/231/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	-	3/66/0	3/66/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	-	3/3/0	3/3/0

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: 74AVC4T245QRGYRQ1	Qual Device: TXS0104EQWBQARQ1	QBS Reference: SN74HCS595QBQBRQ1
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	-	3/9/0	3/9/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	-	3/9/0	3/9/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	-	3/9/0	3/9/0
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	-	-	3/3/0
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	2000 Hours	-	-	3/135/0
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	-	-	3/3/0
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	-	3/90/0	3/90/0
WBP	C2	MIL-STD883 Method 2011	1	30	Wire Bond Pull	Minimum of 5 devices, 30 wires Cpk>1.67	Wires	-	3/90/0	3/90/0

- QBS: Qual By Similarity, also known as Generic Data
- Qual Device 74AVC4T245QRGYRQ1 is qualified at MSL1 260C

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TI Qualification ID: R-NPD-2209-078

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