12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20241209001.1
Qualification of RFAB as an additional Fab site option, Die Revision, Assembly Site (TFME, CDAT) & BOM options for select devices
Change Notification / Sample Request

Date: December 10, 2024
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 **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within **30 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.

Sincerely,

Change Management Team
SC Business Services

20241209001.1
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
SN74LVC10APWR	NULL
SN74LVC74ARGYR	SN74LVC74ARGYR
SN74LVC74APWR	NULL
SN74LVC86APWR	SN74LVC86APWR
SN74LVC157APWRE4	NULL
SN74LVC257APWR	NULL
SN74LVC157APWR	SN74LVC157APWR
SN74LVC74ANSR	SN74LVC74ANSR

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

PCN Number:	20241209001.1	**PCN Date:**	December 10, 2024
Title:	Qualification of RFAB as an additional Fab site option, Die Revision, Assembly Site (TFME, CDAT) & BOM options for select devices		
Customer Contact:	Change Management Team	**Dept:**	Quality Services
Proposed 1st Ship Date:	March 10, 2025	**Sample requests accepted until:**	January 09, 2025*

*Sample requests received after January 09, 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:

Texas Instruments is pleased to announce the qualification of RFAB as an additional Fab site option in addition to Assembly Site (TFME, CDAT) & BOM options for the devices listed below.

Current Fab Site			Additional Fab site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab site**	**Process**	**Wafer Diameter**
FR-BIP-1	ASLNONC 10	200mm	RFAB	LBC7	300mm

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

Construction differences are as follows:

Group 1 Device: (Fab, Die rev, BOM)

	Current	Proposed
Bond wire composition, diameter	Cu, 0.96 mil	Cu, 0.8 mil

Group 2 Device: (Fab, Die rev, Assembly site)

	MLA	CRS	CDAT
Bond wire composition, diameter	Cu, 0.96 mil	Cu, 1.0 mil	Cu, 0.8 mil
Mount Compound	4205846	435143	4207123
Mold Compound	4208625	435370	4222198

Group 3 Device: (Fab, Die rev, Assembly site)

	MLA	ASESH	TFME
Bond wire composition, diameter	Cu, 0.96 mil	Cu, 0.8 mil	Cu, 0.8 mil
Mount Compound	4147858	EY1000063	A-03
Mold Compound	4211471	EN2000508	R-31
Lead finish	NiPdAu	Matte Sn	Matte Sn

Upon expiry of this PCN, TI will combine lead finish solutions in a single standard part number. For example, a customer order for 7500 units of a specific TI part number with 2500 units SPQ (Standard Pack Quantity per reel) may be fulfilled in the following ways:

- 3 reels of NiPdAu finish.
- 3 reels of Matte Sn finish
- 2 reels of Matte Sn and 1 reel of NiPdAu finish
- 2 reels of NiPdAu and 1 reel of Matte Sn finish

Group 4 Device: (Fab, Die rev, BOM)

	Current	Proposed
Bond wire composition, diameter	Cu, 0.96 mil	Cu, 0.8 mil

Qual details are provided in the Qual Data Section.

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	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
FR-BIP-1	TID	DEU	Freising
RFAB	**RFB**	**USA**	**Richardson**

Die Rev: Group 1 & 2

Current	New
Die Rev [2P]	**Die Rev [2P]**
B, K	**A**

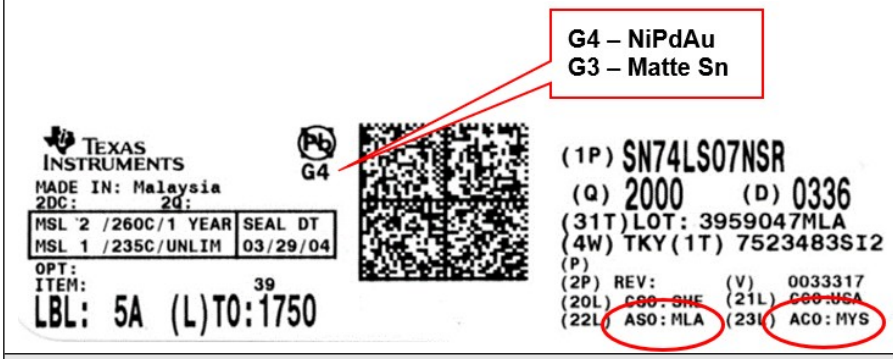
Die Rev: Group 3 & 4

Current	New
Die Rev [2P]	**Die Rev [2P]**
A, J	**A**

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
MLA	MLA	MYS	Kual Lumpur
CRS	CRS	MYS	Jelapang, Ipoh
ASESH	ASH	CHN	Shanghai
CDAT	**CDA**	**CHN**	**Chengdu**
TFME	**NFM**	**CHN**	**Chongchuan**

Sample product shipping label (not actual product label):



Group 1 Product Affected: Fab, Die rev, BOM

SN74LVC10APWR	SN74LVC74ADBRG4	SN74LVC74APWR	SN74LVC86APWRG4
SN74LVC74ADBR	SN74LVC74ANSR	SN74LVC86APWR	

Group 2 Product Affected: Fab, Die rev, Assembly site

SN74LVC74ARGYR

Group 3 Product Affected: Fab, Die rev, Assembly site

SN74LVC157APWR	SN74LVC257APWR

Group 4 Product Affected: Fab, Die rev, BOM

SN74LVC157APWR	SN74LVC157APWRE4
SN74LVC157APWRG4	SN74LVC257APWR

Group 1
Qualification Report

Approve Date 17-OCTOBER-2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC74ANSR	QBS Reference: SN3257QDYYRQ1	QBS Reference: SN74LV14ANSR	QBS Reference: SN74LVC8T245NSR	QBS Reference: SN74LV244AQDGSRQ1	QBS Reference: SN74LV273AQDGSRQ1	QBS Reference: SN74LV541AQDGSRQ1	QBS Reference: SN74LVC125ANSR	QBS Reference: SN74LVC74AWBQARQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-	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	1/77/0	1/77/0	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	1/77/0	3/231/0	1/77/0	1/77/0	1/77/0	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-	3/231/0	1/45/0	1/45/0	1/45/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	-	1/77/0	-	-	-	-
HTOL	B1	Life Test	150C	300 Hours	-	3/231/0	-	-	-	-	-	-	-
ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	3/2400/0	-	-	-	-	-	-	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	-	-	1/76/0	-	-	-	-	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	-	-	1/76/0	-	-	-	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	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	-	-	-	-
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	1/10/0	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	-	-	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	1/3/0	-	-	-	-	1/3/0	-
ESD	E2	ESD CDM	-	500 Volts	-	-	-	-	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
LU	E4	Latch-Up	Per JESD78	-	-	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	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	-	1/30/0	1/30/0	1/30/0	-	1/30/0

QBS: Qual By Similarity, also known as Generic Data
Qual Device SN74LVC74ANSR 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/

Qualification Report

Approve Date 25-NOVEMBER-2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC74APWR	QBS Reference: SN3257QDYYRQ1	QBS Reference: SN74HCS74QPWRQ1	QBS Reference: SN74LVC11APWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	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	-
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	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	1/15/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	3/30/0	1/10/0
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-
ESD	E2	ESD CDM	-	500 Volts	-	-	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	1/30/0

QBS: Qual By Similarity, also known as Generic Data
Qual Device SN74LVC74APWR 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/

Qualification Report

Approve Date 07-MAY-2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC125APWR	Qual Device: SN74LVC02APWR	QBS Reference: SN74SYC01YRQ1	QBS Reference: SN74HCS74QPWRQ1	QBS Reference: SN74LVC11AWBQARQ1	QBS Reference: SN74LVC125AWBQARQ1	QBS Reference: SN74LVC11APWRQ1	QBS Reference: SN74LVC02AWBQARQ1	QBS Reference: SN74LVC132APWR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	3/231/0	1/77/0	-	1/77/0	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	3/231/0	3/231/0	-	-	-	-	-
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	3/231/0	1/77/0	-	1/77/0	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	3/135/0	1/45/0	-	1/45/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	-	3/231/0	1/77/0	-	-	-	-
HTOL	B1	Life Test	150C	300 Hours	-	-	3/231/0	-	-	-	-	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	-	-	3/2400/0	-	-	-	-	-
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	-	-	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	-	1/15/0	1/15/0	1/15/0	-	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	3/30/0	3/30/0	1/10/0	-	1/10/0	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	1/3/0	-
ESD	E2	ESD CDM	-	250 Volts	-	1/3/0	-	-	-	-	-	-	1/3/0
ESD	E2	ESD CDM	-	500 Volts	-	-	-	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
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/90/0	3/90/0	3/90/0	1/30/0	1/30/0	1/30/0	-

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

Qualification Report

Approve Date 17-OCT-2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC74ADBR	QBS Reference: SN3257QDYYRQ1	QBS Reference: TL494IDR	QBS Reference: TLC320AD77CDBR	QBS Reference: SN74LVC125ADBR	QBS Reference: SN74LVC74AWBQARQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	-	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-	3/231/0	-	-
HTOL	B1	Life Test	150C	300 Hours	-	3/231/0	-	-	-	-
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	-	-	-	-
SD	C3	PB-Free 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); PB-Free Solder;	-	-	-	-	-	1/22/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-	1/3/0	-
ESD	E2	ESD CDM	-	500 Volts	-	-	-	-	-	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-	-	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	-	-	-	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	-	1/30/0	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	-	-	1/30/0

QBS: Qual By Similarity, also known as Generic Data
Qual Device SN74LVC74ADBR 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/

Group 2 Qualification Report

Approve Date 22-AUGUST -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC74ARGYR	QBS Reference: SN3257QDYYRQ1	QBS Reference: CAXC8T245QRHLRQ1	QBS Reference: TXV0108QWRGYRQ1	QBS Reference: SN74LVC74AWBQARQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	1/77/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	1/77/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	3/135/0	1/45/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	1/77/0	-
HTOL	B1	Life Test	150C	300 Hours	-	3/231/0	-	-	-
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	-	-	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	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	3/30/0	1/10/0	-
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	-	-
ESD	E2	ESD CDM	-	500 Volts	-	-	-	1/3/0	1/3/0
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	1/3/0	1/3/0
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	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	1/30/0

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC74ARGYR 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/

Group 3 Qualification Report

Approve Date 02-DECEMBER -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC157APWR	QBS Reference: SN3257QDYYRQ1	QBS Reference: SN74HCS74PWR	QBS Reference: SN74LVC157AQPWRQ1	QBS Reference: SN74LVC166APWR	QBS Reference: SN74LVC2G100PWR	QBS Reference: SN74LVC166APWR	QBS Reference: SN74LVC158APWR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	-	-	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	-	-	-	-	-	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	-	-	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	-	-	-	-	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	3/231/0	-	-	-	-	-
HTOL	B1	Life Test	150C	300 Hours	-	3/231/0	-	-	-	-	-	-
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	-	-	-	-	-	-
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB Solder;	-	-	-	3/66/0	-	-	-	-	-
SD	C3	PB-Free 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); PB-Free Solder;	-	-	-	3/66/0	-	-	-	1/22/0	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	3/15/0	-	-	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-	-	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	1/3/0	-	-	-	-
ESD	E2	ESD CDM	-	250 Volts	-	-	3/9/0	-	1/3/0	1/3/0	1/3/0	1/3/0
ESD	E2	ESD CDM	-	500 Volts	-	-	-	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	-	-	-	-	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	1/3/0	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	-	1/6/0	-	1/3/0	1/3/0	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	3/90/0	-	1/30/0	1/30/0	1/30/0	1/30/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	1/30/0	-	-	-	-

QBS: Qual By Similarity, also known as Generic Data

Qual Device SN74LVC157APWR 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/

Group 4 Qualification Report

Approve Date 02-DECEMBER -2024

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: SN74LVC157APWR	QBS Reference: SN3257QDYYRQ1	QBS Reference: SN74HCS74QPWRQ1	QBS Reference: SN74LVC2G100PWRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	3/231/0	1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	1/77/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	3/135/0	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	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	-
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	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	3/30/0	1/10/0
ESD	E2	ESD CDM	-	1500 Volts	-	1/3/0	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-
ESD	E2	ESD CDM	-	500 Volts	-	-	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	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	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	1/30/0

QBS: Qual By Similarity, also known as Generic Data
Qual Device SN74LVC157APWR 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/

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