Texas Instruments **12500 TI Boulevard, MS 8640, Dallas, Texas 75243**

PCN# 20230906001.1
Qualification of RFAB using qualified Process Technology, Die Revision and additional Assembly site/BOM options for select devices
Change Notification / Sample Request

Date: September 06, 2023
To: Newark/Farnell PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments (TI). The details of this change are on the following pages, and are in alignment with our standard product change notification (PCN) process.

TI 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, given that samples are not built ahead of the change.

The Proposed First Ship date in this PCN letter is the earliest possible date that customers could receive the changed material. It is our commitment that the changed device will not ship before that date. If samples are requested within the 30 day sample request window, customers will still have 30-days to complete their evaluation regardless of the proposed 1st ship date.

This particular PCN is related to TI's multiyear transition plan for our two remaining factories with 150-millimeter production (DFAB in Dallas, Texas, and SFAB in Sherman, Texas). DFAB will remain open, but will focus on 200-mm production, with a smaller set of technologies. SFAB will close no earlier than 2024 and no later than 2025. As referenced in the "reason for change" below, these changes are part of our multiyear plan to transition these products to newer, more efficient manufacturing processes and technologies, underscoring our commitment to product longevity and supply continuity.

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. As always, we thank you for your continued business.

Change Management Team
SC Business Services

20230906001.1
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
LP2985AIM5-3.3/NOPB	null
LP2985AIM5-5.0/NOPB	null
LP2985IM5-3.0/NOPB	null
LP2985AIM5-1.8/NOPB	null

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

PCN Number:	20230906001.1	**PCN Date:**	September 06, 2023
Title:	Qualification of RFAB Wafer Fab site using qualified Process Technology, Die Revision and additional Assembly site/BOM options for select devices		
Customer Contact:	Change Management team	**Dept:**	Quality Services
Proposed 1st Ship Date:	Dec 6, 2023	**Sample requests accepted until:**	Oct 6, 2023*

***Sample requests received after October 6, 2023 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 Materials
☒	Packing/Shipping/Labeling	☐	Test Process	☒	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the addition of RFAB using the LBC7 qualified process technology and additional Assembly sites (PHI & CDAT) for the devices listed below in the product affected section.

Current Fab Site			Additional Fab Site		
Current Fab Site	**Process**	**Wafer Diameter**	**Additional Fab Site**	**Process**	**Wafer Diameter**
GFAB6	VIP1P	150 mm	RFAB	LBC7	300 mm
GFAB8	VIP1P	200 mm			
DL-LIN	VIP1P	200 mm			
SFAB	JI1	150 mm			

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

Construction differences are as follows:

Group 1 - (RFAB/Process migration + PHI & CDAT as additional Assembly sites):

	TFME	HNC	PHI	CDAT
Mount Compound	SID#A-03	SID#400154	8095733	4207123
Mold Compound	SID# R-17	SID#450228	4222198	4222198
Lead finish	Matte Sn	NiPdAu	NiPdAu	Matte Sn

Upon expiry of this PCN TI will combine lead free solutions in a single ***standard part number***, for the devices in groups 1 & 2. For example; ***LP2985-30DBVR*** – can ship with both Matte Sn and NiPdAu/Ag.

Example:

- Customer order for 7500 units of LP2985-30DBVR with 2500 units SPQ (Standard Pack Quantity per Reel).

- TI can satisfy the above order in one of the following ways.
  - I. 3 Reels of NiPdAu finish.
  - II. 3 Reels of Matte Sn finish
  - III. 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
  - IV. 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

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 150-millimeter and 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 (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
GFAB6	GF6	GBR	Greenock
GFAB8	GF8	GBR	Greenock
DL-LIN	DLN	USA	Dallas
SH-BIP-1	SHE	USA	Sherman
RFAB	**RFB**	**USA**	**Richardson**

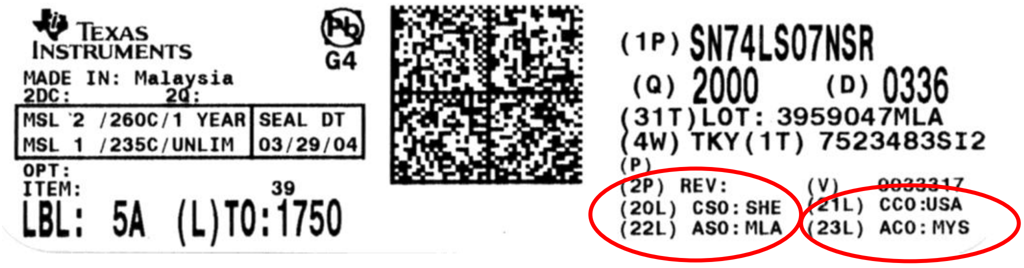
Die Rev:

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

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TFME	NFM	CHN	Economic Development Zone
HNC	CHS	CHN	Jiaxing City
PHI	**PHI**	**PHL**	**Baguio City**
CDAT	**CDA**	**CHN**	**Chengdu**

Sample product shipping label (not actual product label)



TEXAS INSTRUMENTS
G4
MADE IN: Malaysia
2DC:
2Q:
MSL 2 /260C/1 YEAR SEAL DT
MSL 1 /235C/UNLIM 03/29/04
OPT:
ITEM: 39
LBL: 5A (L)TO:1750
(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T)LOT: 3959047MLA
(4W) TKY(1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) CSO: SHE (21L) CCO:USA
(22L) ASO: MLA (23L) ACO: MYS

Product Affected:

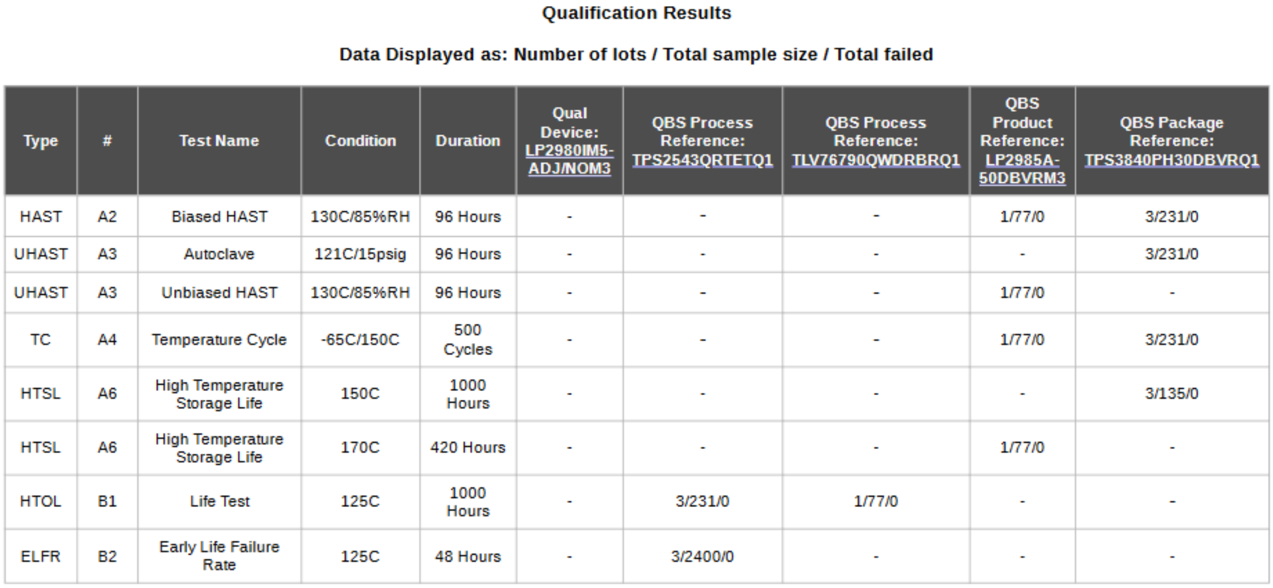
Group 1 Device List (RFAB/Process migration + PHI & CDAT as additional Assembly sites):

LP2985-18DBVR	LP2985-33DBVT	LP2985A-25DBVR	LP2985A-33DBVT
LP2985-30DBVR	LP2985-50DBVR	LP2985A-33DBVR	LP2985A-33DBVTG4
LP2985-33DBVR	LP2985-50DBVT	LP2985A-33DBVRG4	LP2985A-50DBVR
LP2985-33DBVRG4	LP2985A-18DBVR		

Group 2 Device List (RFAB/Process migration only):

LP2980AIM5-2.5/NOPB	LP2980IM5X-ADJ/NOPB	LP2985AIM5X-1.8/NOPB	LP2985IM5-3.5/NOPB
LP2980AIM5-3.0/NOPB	LP2985-25DBVR	LP2985AIM5X-2.5/NOPB	LP2985IM5-3.6/NOPB
LP2980AIM5-3.3/NOPB	LP2985-28DBVR	LP2985AIM5X-2.8/NOPB	LP2985IM5-3.8/NOPB
LP2980AIM5-5.0/NOPB	LP2985A-30DBVR	LP2985AIM5X-3.0/NOPB	LP2985IM5-4.0/NOPB
LP2980AIM5X-3.0/NOPB	LP2985A-50DBVT	LP2985AIM5X-3.3/NOPB	LP2985IM5-4.5/NOPB
LP2980AIM5X-3.3/NOPB	LP2985AIM5-1.8/NOPB	LP2985AIM5X-3.6/NOPB	LP2985IM5-5.0/NOPB
LP2980AIM5X-5.0/NOPB	LP2985AIM5-2.5/NOPB	LP2985AIM5X-4.0/NOPB	LP2985IM5X-1.8/NOPB
LP2980IM5-3.0/NOPB	LP2985AIM5-3.0/NOPB	LP2985AIM5X-4.5/NOPB	LP2985IM5X-2.5/NOPB
LP2980IM5-3.3/NOPB	LP2985AIM5-3.3/NOPB	LP2985AIM5X-5.0/NOPB	LP2985IM5X-2.8/NOPB
LP2980IM5-5.0/NOPB	LP2985AIM5-3.6/NOPB	LP2985IM5-1.8/NOPB	LP2985IM5X-3.0/NOPB
LP2980IM5-ADJ/NOPB	LP2985AIM5-3.8/NOPB	LP2985IM5-2.5/NOPB	LP2985IM5X-3.3/NOPB
LP2980IM5X-2.5/NOPB	LP2985AIM5-4.0/NOPB	LP2985IM5-2.8/NOPB	LP2985IM5X-4.0/NOPB
LP2980IM5X-3.0/NOPB	LP2985AIM5-4.5/NOPB	LP2985IM5-3.0/NOPB	LP2985IM5X-4.5/NOPB
LP2980IM5X-3.3/NOPB	LP2985AIM5-5.0/NOPB	LP2985IM5-3.3/NOPB	LP2985IM5X-5.0/NOPB
LP2980IM5X-5.0/NOPB			

For alternate parts with similar or improved performance, please visit the product page on TI.com



Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LP2980IM5-ADJ/NOM3	QBS Process Reference: TPS2543QRTETQ1	QBS Process Reference: TLV76790QWDRBRQ1	QBS Product Reference: LP2985A-50DBVRM3	QBS Package Reference: TPS3840PH30DBVRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	3/231/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	1/77/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	1/77/0	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	3/135/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	1/77/0	-
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	1/77/0	-	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-	-

Type	#	Test Name	Condition	Duration	Qual Device: LP2980IM5-ADJ/NOM3	QBS Process Reference: TPS2543QRTETQ1	QBS Process Reference: TLV76790QWDRBRQ1	QBS Product Reference: LP2985A-50DBVRM3	QBS Package Reference: TPS3840PH30DBVRQ1
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
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	-	-	3/30/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-	-	-
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	-	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/PASS	-	-	-	-

- Qual Device LP2980IM5-ADJ/NOM3 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-NPD-2304-007

Qualification Results

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

	Type	#	Test Name	Condition	Duration	Qual Device: LP2985-50DBVRM3	QBS Product/Process Reference: TPS2543QRTE	QBS Product/Package Reference: TLV70233DBVR	QBS Product/Package Reference: TPS2514DBVR	QBS Product/Package Reference: TPS2552DBVR
	HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-	3/231/0
	ACLV	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-	3/231/0
	UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	-	
	TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	3/231/0
	HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	-
	HTSL	A6	High Temperature Storage Life	170C	420 Hours		3/135/0	3/231/0		3/231/0
	HTOL	B1	Life Test	150C	408 Hours	-	3/231/0	-	-	-
	ELFR	B2	Early Life Failure Rate	150C	24 Hours	-	3/2400/0	-	-	-
	WBS	C1	Wire Bond Pull	-	-	-	-	3/228/0	3/228/0	3/228/0

	WBP	C2	Wire Bond Shear	-	-	-	-	3/228/0	3/228/0	3/228/0
	SD	C3	Solderability	-	-	-	-	3/66/0	-	
	PD	C4	Physical Dimension	-	-	-	-	3/15/0	3/15/0	3/15/0
	ESD	E2	ESD HBM	-	1000 Volts	1/3/0	1/3/0	-	-	-
	ESD	E2	ESD HBM	-	2500 Volts	1/3/0	1/3/0	-	-	-
	ESD	E3	ESD CDM	-	250 Volts	1/3/0	1/3/0	-	-	-
	ESD	E3	ESD CDM	-	1500 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	3/90/0	-	-	-
	MQ	-	MQ (Assembly)	Per Site Specification	-	1/30/0	-	-	-	-

- QBS: Qual By Similarity
- Qual Device LP2985-50DBVRM3 is qualified at LEVEL1-260C
- Concurrently qualifies the following product families:
- LP2985: LP2985-33DBVR, LP2985-50DBVR, LP2985-18DBVR, LP2985-33DBVT, LP2985-50DBVT
  LP2985-33DBVRM3, LP2985-50DBVRM3, LP2985-18DBVRM3, LP2985-33DBVTM3, LP2985-50DBVTM3
  LP2985A: LP2985A-33DBVR, LP2985A-50DBVR, LP2985A-33DBVT, LP2985A-50DBVT, LP2985A-33DBVRM3 and LP2985A-50DBVRM3
  LP2985-N: LP2985AIM5-3.3/NO, LP2985IM5-3.3/NOPB, LP2985AIM5X-3.3/NO, LP2985AIM5X-3.3/S1, LP2985AIM5X-5.0/NO, LP2985IM5X-3.3/NO, LP2985AIM5-5.0/NO and LP2985IM5-3.3/NOM3

- 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/

Green/Pb-free Status:

Qualified Pb-Free (SMT) and Green

TI Qualification ID: R-NPD-2202-124

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LP2980AIM5X-5.0/NO	QBS Process Reference: TPS2543QRTETQ1	QBS Package Reference: TLV9061IDBVR	QBS Process/Product Reference: TLV76790QWDRBRQ1	QBS Package/Process/Product Reference: LP2985A-50DBVRM3
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	1/77/0
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	1/77/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	3/231/0	-	1/77/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	-	3/231/0	-	1/77/0
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	-	1/77/0	-
ELFR	B2	Early Life Failure Rate	125C	48 Hours	-	3/2400/0	-	-	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	-	-	3/228/0	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	-	-	3/228/0	-	-

Type	#	Test Name	Condition	Duration	Qual Device: LP2980AIM5X-5.0/NO	QBS Process Reference: TPS2543QRTETQ1	QBS Package Reference: TLV9061IDBVR	QBS Process/Product Reference: TLV76790QWDRBRQ1	QBS Package/Process/Product Reference: LP2985A-50DBVRM3
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	-	-	3/66/0	-	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	3/15/0	-	-
ESD	E2	ESD CDM	-	250 Volts	-	-	-	-	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	-
LU	E4	Latch-Up	Per JESD78	-	-	-	-	1/6/0	1/6/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	-	-	-	-	1/PASS
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	3/PASS	-
FTY	E6	Final Test Yield	-	-	1/PASS	-	-	-	-

- QBS: Qual By Similarity
- Qual Device LP2980AIM5X-5.0/NO 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

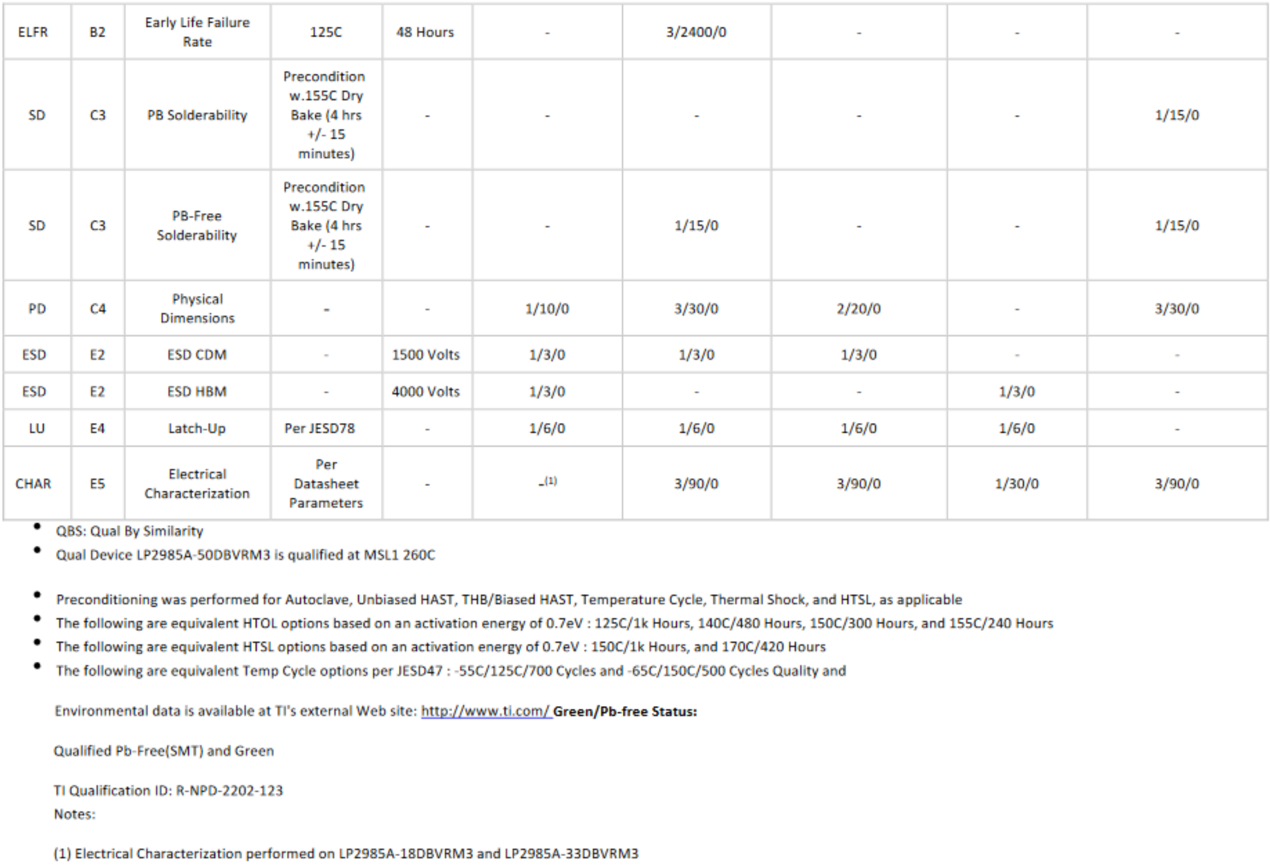
Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

TI Qualification ID: R-CHG-2305-084

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: LP2985A50DBVRM3	QBS Reference: TPS2543QRTETQ1	QBS Reference: TLV76790QWDRBRQ1	QBS Reference: LP298550DBVRM3	QBS Reference: TPS3840PH30DBVRQ1
HAST	A2	Biased HAST	130C/85%RH	96 Hours	1/77/0	3/231/0	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	1/77/0	3/231/0	3/231/0	-	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	1/77/0	3/231/0	3/231/0	-	3/231/0
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	-	-	3/135/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	1/77/0	-	-	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-	3/135/0	3/231/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	3/231/0	1/77/0	-	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	-	-	1/15/0
PD	C4	Physical Dimensions	-	-	1/10/0	3/30/0	2/20/0	-	3/30/0
ESD	E2	ESD CDM	-	1500 Volts	1/3/0	1/3/0	1/3/0	-	-
ESD	E2	ESD HBM	-	4000 Volts	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]	3/90/0	3/90/0	1/30/0	3/90/0

- QBS: Qual By Similarity
- Qual Device LP2985A-50DBVRM3 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/ **Green/Pb-free Status:**

Qualified Pb-Free(SMT) and Green

TI Qualification ID: R-NPD-2202-123
Notes:

(1) Electrical Characterization performed on LP2985A-18DBVRM3 and LP2985A-33DBVRM3

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

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

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