PCN Number: 20		202	20221031004.1		PC	N Date:	November 01, 2022		
		new Fab site (RFAB) using qualified Pro e and additional Assembly site options							
Cus	tomer	Contact:		PCN N	<u>lanager</u>	Dept:	Qua		ality Services
_			lan 31 2023 Sam		-	ted until: Nov 30, 2022*		v 30, 2022*	
*Sa	mple ı	requests rece	ived	l afte	r November 30, 2	022 will no	ot be	support	ed.
Cha	nge Ty	/pe:							
\boxtimes	Assen	nbly Site			Assembly Process			Assemb	ly Materials
\boxtimes	Desigi	n		\square	Electrical Specification			Mechan	ical Specification
Test Site			\square	Packing/Shipping/Labeling			Test Process		
Wafer Bump Site				Wafer Bump Material			Wafer Bump Process		
Wafer Fab Site			\square	Wafer Fab Materials		\boxtimes	Wafer F	ab Process	
			Part number change						
	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 (MLA) for selected devices listed below in the product affected section.

С	urrent Fab Site	9	Additional Fab Site		
Current Fab Site	Process	Wafer Diameter	Additional Fab Site	Process	Wafer Diameter
DL-LIN	LBC2	150 mm			
DL-LIN	LBC2	200 mm			200 mm
SFAB	OI	200 mm	RFAB	LBC7	300 mm
SFAB	JI1	200 mm			

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

Additionally, there will be a BOM/Assembly options introduced for these devices:

Group 1 (RFAB/Process migration & no construction differences)

Group 2 (RFAB/Process migration & MLA as an additional Assembly site, no construction differences):

Group 3 (RFAB/Process migration & CDAT as an additional Assembly site [CARZ])

	CARZ	CDAT	
Mold Compound	SID#441086	4222198	
Mound Compound	SID#435143	4207123	

Group 4 (RFAB/Process migration & CDAT as an additional Assembly site [CRS])

	CRS	CDAT
Mold Compound	SID#441272	4222198
Mound Compound	SID#435143	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. The links to the revised datasheets are available in the table below.

ia	TEXAS
	12/010
	INSTRUMENTS

SLLS003F - OCTOBER 1985 - REVISED OCTOBER 2022

INSTRUMENTS	SLLS003F – OCTOBER 1985 – REVISED OCTOBER 2022
hanges from Revision E (June 2008) to Revision I	F (October 2022) Pag
anges from Revision E (June 2008) to Revision F (October 2022) Changed the data sheet format to the latest data sheet format. Changed the <i>Thermal Information</i> table. TEXAS INSTRUMENTS TEXAS INSTRUMENTS TEXAS INSTRUMENTS SUBSLECT80, SN65LE SUBSTRUMENTS SUBSLECT80, SN65LE SUBSTRUMENTS SUBSLECT80, SN65LE SUBSTRUMENTS SUBSTRUMENTS SUBSLECT9, SN65LE SUBSTRUMENTS SUBSTRUME	
	SN75ALS18
- INSTROMENTS	SLLS152E – DECEMBER 1992 – REVISED OCTOBER 202
anges from Revision E (June 2008) to Revision F (October 2022) Changed the data sheet format to the latest data sheet format. Changed the <i>Thermal Information</i> table. TEXAS SUBSTRUMENTS	
INCTRUMENTS	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022
hanges from Revision H (June 2022) to Revision I	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Information Texas	I (October 2022) Pag
Added the Pin Configuration and Functions SILLSISE DECEMBER 197 TEXAS SULSISE DECEMBER 197 Added the Pin Configuration and Functions Deleted the Package thermal impedance from the Absolute Maximum Ratings Added the Pin Configuration and Functions Deleted the Package thermal impedance from the Absolute Maximum Ratings Added the Detailed Description section. SILLSISE DECEMBER 197 TEXAS SILLSITAL FEBRUARY 1994 Added the Detailed Description section. SILLSITAL FEBRUARY 1994 hanges from Revision H (June 2022) to Revision I (October 2022) Changed RSA (QFN) values in the Thermal Information Table SILLSITAG – JANUARY 199 hanges from Revision F (April 2006) to Revision G (October 2022) Changed the data sheet format to the latest data sheet format. Added the Thermal Information table. Added the Thermal Information table. SILLSITAG – JANUARY 199 Hanges from Revision F (April 2006) to Revision G (October 2022) Changed the data sheet format to the latest data sheet format. Added the Thermal Information table. SILLSITAG – JANUARY 199 Hanges from Revision F (April 2006) to Revision G (October 2022) Changed the data sheet format to the latest data sheet format. Added the Thermal Information table. SILLSITAG – JANUARY 199 Hanges from Revision F (April 2006) to Revision G (October 2022) Changed the data sheet format to the latest data sheet format. Added the Thermal Information table. SILLSITAG – JANUARY 1994 Hanges from Revision H (December 2010) to Revision I (October 2022) Changed the Configuration and Functions section, Thermal Information tables, Detailed De Device Functional Modes, Device and Documentation Support section, and Mechanical, Added Pin Configuration and Functions section, Thermal Information, tables, Detailed De Device Functional Modes, Device and Documentati	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table SN75LBC179, SN65LBC179, SN65LBC179 SLLS173G – JANUARY 1994 – REVISED OCTOBER 20 G (October 2022) Pag
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Informa TEXAS INSTRUMENTS hanges from Revision F (April 2006) to Revision Changed the data sheet format to the latest data sh	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Informat Texas INSTRUMENTS hanges from Revision F (April 2006) to Revision Changed the data sheet format to the latest data sh	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Informat TEXAS INSTRUMENTS changes from Revision F (April 2006) to Revision O Changed the data sheet format to the latest data sh Added the Thermal Information table	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table SN75LBC179, SN65LBC179, SN65LBC179 SLLS173G – JANUARY 1994 – REVISED OCTOBER 20 G (October 2022) Pag heet format.
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Informat TEXAS INSTRUMENTS changes from Revision F (April 2006) to Revision O Changed the data sheet format to the latest data sh Added the Thermal Information table	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Informat Texas INSTRUMENTS Changes from Revision F (April 2006) to Revision C Changed the data sheet format to the latest data sh Added the Thermal Information table	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table
INSTRUMENTS hanges from Revision H (June 2022) to Revision I Changed RSA (QFN) values in the Thermal Informat TEXAS INSTRUMENTS changes from Revision F (April 2006) to Revision C Changed the data sheet format to the latest data sh Added the Thermal Information table Changes from Revision H (December 2010) to Revi Added Pin Configuration and Functions section, The Device Functional Modes, Device and Documentati	SLLS174I – FEBRUARY 1994 – REVISED OCTOBER 2022 I (October 2022) Pag ation Table SN75LBC179, SN65LBC179, SN65LBC179, SN65LBC179 SLLS173G – JANUARY 1994 – REVISED OCTOBER 20 G (October 2022) G (October 2022) Pag heet format. SN55LBC176, SN65LBC176, SN75LBC176 SLLS067I – AUGUST 1990 – REVISED OCTOBER 2022 Page ermal Information tables, Detailed Description section, ion Support section, and Mechanical, Packaging, and

INSTRUMENTS	SN75176A SLLS100C – JUNE 1984 – REVISED OCTOBER 2022
Changes from Revision B (January 2015) to Revision C (Oct	tober 2022) Page
 Deleted the ESD Ratings table Changed the Thermal Information table 	

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
SN75179B	SLLS003E	SLLS003F	http://www.ti.com/product/SN75179B
SN75ALS181	SLLS152D	SLLS152E	http://www.ti.com/product/SN75ALS181
SN65LBC180, SN55LBC180	SLLS174H	SLLS174I	http://www.ti.com/product/SN55LBC180
SN65LBC179	SLLS173F	SLLS173G	http://www.ti.com/product/SN75LBC179
SN65LBC176	SLLS067H	SLLS067I	http://www.ti.com/product/SN55LBC176
SN75176A	SLLS100B	SLLS100C	http://www.ti.com/product/SN75176A

Temp and Tube variants of the devices are included in EOL notice PDN# 20221031005.3

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-milimeter 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
DL-LIN	DLN	USA	Dallas
SH-BIP-1	SHE	USA	Sherman
RFAB	RFB	USA	Richa rdson

Die Rev:

Current	New
Die Rev [2P]	Die Rev [2P]
A, B, F	-

Assembly Site Information:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
FMX	MEX	MEX	Aguascalientes
CARZ	CSZ	CHN	Jiangsu
CRS	CRS	MYS	Jelapang, Ipoh
MLA	MLA	MYS	KUALA LUMPUR
CDAT	CDA	CHN	Chengdu

Sample product ship	ping label (not actual pr	oduct label)	
TEXAS INSTRUMENTS MADE IN: Malaysia 20C: 20: MSL 2 /260C/1 YEAR S MSL 1 /235C/UNLIM O OPT: ITEM: LBL: 5A (L)TO:	3/29/04 39	(1P) SN74LS07NSR (Q) 2000 (D) 03((31T) LOT: 3959047ML (4W) TKY (1T) 752348 (P) (2P) REV: (V) 9032 (20L) CS0: SHE (21L) CC0 (22L) AS0: MLA (23L) ACO	A 3512 1917
Product Affected:		ation 9 no constructi	
SN75179BP	t (RFAB/Process migr SN75179BPSR	SN75ALS181NSR	SN75ALS181NSRG4
SN75179BPE4			
Group 2 Device lis construction differ		sN75176ADRE4	ditional Assembly site, no
SN75179BDR	SN65LBC179DR	SN75179BDRG4	SN65LBC179DRG4
[CARZ]) SN65LBC180RSAR			dditional Assembly site
[CRS])	t (KFAB/Process migr	ation & CDA I as an ac	ditional Assembly site
SN55LBC180RSAR			

For alternate parts with similar or improved performance, please visit the product page on $\underline{\text{TI.com}}$

Qualification Report Approve Date 10-October-2022

Qualification Results

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

Туре	#	Test Name	Condition	Duration	Qual Device: SN65LBC176DR	Qual Device: SN65LBC179DR	Qual Device: SN55LBC180RSAR	QBS Reference: TCAN1044VDRQ1	QBS Reference: TCAN1044VDRQ1	QBS Reference: TPS51217DSCR	QBS Reference: TLIN10283DRBRQ1	QBS Reference: TLIN10285DRBRQ1	QBS Reference: <u>TCAN1043DQ1</u>	QBS Reference: IPS2590RSAR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-		-	-		3/231/0	-		-	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-		-	1/77/0	2/154/0		1/77/0	2/154/0	-	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours			-	-			-		3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-		-			3/231/0	-			1/77/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-		-	1/77/0	2/154/0		1/77/0	2/154/0	3/231/0	-
тс	Δ4	Temperature Cycle	-55C/150C	1000 Cycles	-		-				-	1/77/0	-	-
тс	Δ4	Temperature Cycle	-65C/150C	500 Cycles	-		-			3/231/0	-			1/77/0
тс	A4	Temperature Cycle	-65C/150C	500 Cycles	-		-	1/77/0	2/154/0		1/77/0	1/77/0	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours							1/77/0	2/154/0		-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-		-	-		3/231/0	-	-	-	-
HTSL	A6	High Temperature Storage Life	175C	500 Hours				1/45/0	2/90/0		-			
HTSL	A6	High Temperature Storage Life	175C	500 Hours	-		-				-	-	1/45/0	-
HTOL	81	Life Test	125C	1000 Hours				1/77/0	2/154/0				1/77/0	-
HTOL	81	Life Test	135C	635 Hours						3/231/0				-
HTOL	81	Life Test	150C	1000 Hours	-		-				1/77/0	2/154/0		-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	1/76/0	1/76/0	1/76/0				-			1/3/0
SD	СЗ	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)				-		1/15/0		-	1/15/0	1/15/0	

QBS: Qual By Similarity

Qual Device SN65LBC176DR is gualified at MSL1 260C

Qual Device SN65LBC179DR is qualified at MSL1 260C

Qual Device SN55LBC180R SAR is qualified at MSL2 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 0.7 eV : 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

Qualification Report Approve Date 10-October-2022

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

Гуре		Test Name	Condition	Duration	Qual Device: <u>SN75176ADR</u>	Qual Device: <u>SN75179BDR</u>	Qual Device: <u>SN75179BP</u>	Qual Device: <u>SN75179BPSR</u>	QBS Reference: TCAN1044VDRQ1	QBS Reference: TCAN1044VDRQ1	QBS Reference: <u>TL092CPS</u>	QBS Reference: TPS51217DSCR	QBS Reference: <u>SE555P</u>	QBS Reference: <u>SN104571P</u>	QBS Reference: <u>TPIC6A596NE</u>
IAST /	A2	Biased HAST	130C/85%RH	96 Hours	-		-	-	-	-	-	3/231/0			-
AST /	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	1/77/0	2/154/0	-	-	-	-	-
AST /	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	-	-	-	-		-		3/231/0
HAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	-	-	3/230/0	3/231/0	-		-
HAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	1/77/0	2/154/0	-	-	-	-	-
HAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	-	-	-	-	-	3/231/0	3/231/0	3/231/0
тс	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	-	-	3/231/0	3/231/0			-
тс	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	1/77/0	2/154/0	-	-	-	-	-
тс	A4	Temperature Cycle	-65C/150C	500 Cycles	-	-	-	-	-	-	-	-	3/231/0	3/231/0	3/231/0
ITSL /	A6	High Temperature Storage Life	170C	420 Hours	-	-	-	-	-	-	3/231/0	3/231/0			-
ITSL /	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	-	1/45/0	2/90/0	-	-	-	-	-
ITSL /	A6	High Temperature Storage Life	175C	500 Hours	-	-	-	-	-	-	-		3/135/0	3/135/0	3/135/0
	B1	Life Test	125C	1000 Hours	-	-	-	-	1/77/0	2/154/0					3/231/0
	81	Life Test	135C	635 Hours	-	-	-	-	-	-	-	3/231/0			-
WBS (C1	Ball Shear	76 balls, 3 units min	Wires	1/76/0	1/76/0	1/76/0	1/76/0	-	-	-	-	-	-	-
WBP (C2	Bond Pull	76 Wires, 3 units min	Wires	1/76/0	1/76/0	1/76/0	1/76/0	-	-	-	-			-
SD	СЗ	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)		-	-	-	-	-	1/15/0	-	-	3/45/0	3/45/0	3/45/0
SD	СЗ	PB Solderability	Precondition w:155C Steam Age (8 hrs +/- 15 minutes)		-	-	-	-	-	1/15/0			3/45/0	3/45/0	3/45/0
SD	СЗ	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)		-	-	-	-	-	1/15/0			3/45/0	3/45/0	3/45/0
SD	СЗ	PB-Free Solderability	Precondition w.155C Steam Age (8 hrs +/- 15 minutes)		-	-	-	-	-	1/15/0			3/45/0	3/45/0	3/45/0
PD	C4	Physical Dimensions	Cpk>1.67		-	-		-	1/10/0	2/20/0			3/30/0	3/30/0	3/30/0
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	-	-	-	-	3/9/0	-	-	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	1/3/0	1/3/0	1/3/0	-			-	-	-	-
ESD	E2	ESD HBM		1000 Volts	1/3/0	1/3/0	-	-						-	
ESD	E2	ESD HBM	-	15000 Volts	1/3/0	-	-	-	-	-		-	-	-	-
ESD	E2	ESD HBM		2000 Volts	-			-	•			3/9/0		-	
LU	E4	Latch-Up	Per JESD78	•	1/3/0	1/3/0	-	-	-	-	-	3/18/0	-	-	
HAR	E5	Electrical Characterization	Per Datasheet Parameters		1/30/0	1/30/0		-	-	-		3/60/0		-	
HAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	-	-	2/60/0	-	-	-	3/90/0	-	3/90/0
FTY	E6	Final Test Yield		-	1/1/0	1/1/0	1/1/0	1/1/0	-	-		-		-	

QBS: Qual By Similarity
 Qual Device SN75176ADR is qualified at MSL1 260C
 Qual Device SN75179BDR is qualified at MSL1 260C
 Qual Device SN75179BP gualified at MSL1 260C
 Qual Device SN75179BPSR 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 : 152C/L Hours, 140/1400 Hours, 150C/300 Hours, and 155C/240 Hours
 The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/L Hours, and 1702/420 Hours, and 155C/240 Hours
 The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/L Hours, and 1702/420 Hours, and 155C/240 Hours
 The following are equivalent Temp Cycle options per JESD47 : -55C/L25C/700 Cycles and -85C/L50C/500 Cycles

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

Qualification Report Approve Date 10-October-2022

Qualification Results

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

Туре	#	Test Name	Condition	Duration	Qual Device: <u>SN75ALS181NSR</u>	QBS Reference: <u>TL092CPS</u>	QBS Reference: <u>SN75ALS1177NS</u>	QBS Reference: TPS51217DSCR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/230/0	3/231/0	3/231/0
HTSL	A6	High Temperature Storage Life	170C	420 Hours	-	3/231/0	-	3/231/0
HTOL	B1	Life Test	135C	635 Hours	-	-	-	3/231/0
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	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	3/9/0
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	1000 Volts	1/3/0	-	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	-	-	3/9/0
LU	E4	Latch-Up	Per JESD78	-	1/3/0	-	-	3/18/0
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	3/60/0
FTY	E6	Final Test Yield	-	-	1/1/0	-	-	-

QBS: Qual By Similarity

Qual Device SN75ALS181NSR 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

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

Location	E-Mail					
WW Change Management Team	PCN ww admin team@list.ti.com					

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