

PCN Number:	20230307000.1		PCN Date:	April 11, 2023	
Title:	Qualify New Assembly Material set for Selected Device(s)				
Customer Contact:	PCN Manager	Dept:	Quality Services		
Proposed 1st Ship Date:	July 11, 2023	Sample requests accepted until:	May 11, 2023*		
*Sample requests received after (May 04, 2023) will not be supported.					
Change Type:					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials
				<input type="checkbox"/>	Wafer Fab Process
PCN Details					
Description of Change:					
Texas Instruments is pleased to announce the qualification of new assembly material for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:					
	Material	Current	Proposed		
	Wire type	0.8mil Au	0.8mil Cu		
	Mount compound	4221460	4221460 + 4226215		
	Mold compound	4210087	4222198		
Reason for Change:					
Continuity of supply.					
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	
	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	
Changes to product identification resulting from this PCN:					
None					
Product Affected:					
ADS7142IRUGR	OPA2316SIRUGR	SN74AUP1G126DSFR	SN74LVC1G08DSFR		
ADS7142IRUGT	OPA2316SIRUGT	SN74AUP1G32DSFR	SN74LVC2G07DSF2		

Qualification Report

Approve Date 05-Jan-2023

Qualification Results

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

Type	Test Name / Condition	Duration	QBS Device: SN74LVC1G3157DSFR	QBS Device: TCA39306DDFR
PC	Preconditioning	Level 1 - 260C	3/693/0	3/231/0
UHASt	Unbiased HAST, 130C	96 Hours	3/231/0	---
BHASt	Biased HAST, 130C	96 Hours	---	3/231/0
HTSL	High Temp Storage Life, 170C	420 Hours	3/231/0	---
TC	Temperature Cycle, -65C/150C	500 Cycles	3/231/0	---
CHAR	Electrical Characterization	Per datasheet parameters	3/90/0	---
SA	Salt Atmosphere	24 Hours	3/66/0	---
MQ	Manufacturability (Assembly)	(per mfg. site requirements)	3/PASS	---
PD	Physical Dimensions	(per package drawing requirements)	3/60/0	---
MSL	Moisture Sensitivity	Level 1 - 260C	3/36/0	---
SD	Solderability, Pb	155C Dry Bake Preconditioning	3/66/0	---
SD	Solderability, Pb-Free	155C Dry Bake Preconditioning	3/66/0	---
YLD	FTY and Bin Summary	-	3/PASS	---

QBS: Qual By Similarity

Qual Device SN74LVC1G3157DSFR is qualified at MSL1 260C

QBS Device TCA39306DDFR 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

Qualification Report

Approve Date 05-Dec-2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: ADS1115IRUGR	Qual Device: TLA4024IRUGR
HAST	A2	Biased HAST	130C/85%RH	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	-
HTSL	A6	High Temperature Storage Life	150C	1000 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	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes); PB-Free Solder;	-	1/22/0	-
MQ	-	Assembly MQ	-	-	3/3/0	3/3/0

QBS: Qual By Similarity

Qual Device ADS1115IRUGR is qualified at MSL1 260C

Qual Device TLA4024IRUGR 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

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