PCN Number:	20220503000.1	**PCN Date:**	May 04, 2022

Title:	Qualify TI Clark as an additional Assembly site for select devices

Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Aug 09, 2022	**Estimated Sample Availability:**	Date provided at sample request

Change Type:

☒	Assembly Site	☐	Design	☐	Wafer Bump Site
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☐	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☒	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of TI Clark as additional Assembly Site for Select Devices listed in the "Product Affected" Section. No material differences between sites.

Reason for Change:

Continuity of Supply

Anticipated impact on Fit, Form, 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:

Assembly Site		
TI Chengdu	Assembly Site Origin (22L)	ASO: CDA
TI Clark	Assembly Site Origin (22L)	ASO: QAB

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS
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

G4

(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

INA234AIYBJR	INA236AIYBJR

Qualification Report

Approve Date 10-Sep-2021

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: INA234AIYBJR	Qual Device: INA236AIYBJR	QBS Process Reference: OPA1671IDCK	QBS Package Reference: AMC60804YBH
-	Pb Free Solderability - Dip and Look	Pb Free/Solderability	-	3/75/0	-	-
-	Pb Solderability - Dip and Look	Pb/Solderability	-	3/75/0	-	-
-	WCSP Solder Ball Shear	Ball Shear	-	3/24/0	-	-
BLR	BLR - Mech. Shock	10kG, 6 sides, (3 per side)	-	1/33/0	-	-
BLR	BLR - Bend Test	4 point, Z axis (2mm/min, to failure)	-	1/33/0	-	-
BLR	BLR - Random Vibration	5-500Hz XYZ axis (30 min per axis)	-	1/33/0	-	-
BLR	BLR - Temp Cycle	-40C / +85C (1000 Cycles)	-	1/33/0	-	-
BLR	BLR - Temp Humidity	85c 85rH 100 hr reads(1000 Hours)	-	1/33/0	-	-
CDM	ESD - CDM	1000 V	-	1/3/0	-	-
CDM	ESD - CDM	1500 V	-	2/6/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	3/90/0	3/90/0	3/90/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2397/0	-
HAST	Biased HAST, 110C/85%RH	264 Hours	-	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	3/231/0	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	3/231/0	-
HBM	ESD - HBM	3000 V	-	3/9/0	-	3/9/0
HTOL	Life Test, 150C	300 Hours	-	3/231/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	3/231/0	-
HTSL	High Temp Storage Bake 150C	1000 Hours	-	-	-	3/231/0
LU	Latch-up	Per JESD78	-	3/18/0	3/18/0	6/36/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	-	3/Pass	3/Pass	3/Pass
MQ	Manufacturability (Bump MQ)	(per mfg. Site specification)	-	-	-	3/Pass
MQ	Manufacturability (Bump)	(per mfg. Site specification)	-	3/Pass	-	-
MQ	Manufacturability (Wafer Fab)	(per mfg. Site specification)	-	1/Pass	-	-
MSL	Moisture Sensitivity, L2	168 Hrs/85C/60%	-	-	3/36/0	-
PD	Physical Dimensions	Per Mechanical Drawing	-	3/60/0	3/15/0	-
TC	Temperature Cycle, -55/125C	700 Cycles	-	3/231/0	-	3/231/0
TC	Temperature Cycle, -	1000 Cycles	-	-	3/231/0	-

Type	Test Name / Condition	Duration	Qual Device: INA234AIYBJR	Qual Device: INA236AIYBJR	QBS Process Reference: OPA1671IDCK	QBS Package Reference: AMC60804YBH
	65/150C					
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	3/231/0	3/231/0	3/231/0

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable

- QBS: Qual By Similarity
- Qual Device INA234AIYBJR is qualified at LEVEL1-260C
- Qual Device INA236AIYBJR is qualified at LEVEL1-260C

- 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 22-Apr-2022

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: INA234AIYBJR	Qual Device: INA236AIYBJR	QBS Process Reference: OPA1671IDCK
BLR	BLR - Mech. Shock	10kG, 6 sides, (3 per side)	1/33/0	-	-
-	WCSP Moisture Sens. L1	Elect-1/25C	3/45/0	-	-
-	WCSP Solder Ball Shear	Ball Shear	3/18/0	-	-
BLR	BLR - Bend Test	4 point, Z axis (2mm/min, to failure)	1/33/0	-	-
BLR	BLR - Random Vibration	5-500Hz XYZ axis (30 min per axis)	1/33/0	-	-
BLR	BLR - Temp Cycle	-40C / +85C (1000 Cycles)	1/33/0	-	-
BLR	BLR - Temp Humidity	85c 85rH 100 hr reads(1000 Hours)	1/33/0	-	-
CDM	ESD - CDM	1500 V	3/12/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	1/30/0	3/90/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2397/0
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-	3/231/0
HBM	ESD - HBM	3000 V	3/9/0	-	-
HTOL	Life Test, 150C	300 Hours	3/231/0	-	3/231/0
HTOL	Life Test, 150C	450 Hours	-	-	3/231/0
HTOL	Life Test, 150C	600 Hours	-	-	2/154/0
HTSL	High Temp Storage Bake 170C	1000 Hours	-	-	1/77/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	-	3/231/0
HTSL	High Temp Storage Bake 170C	600 Hours	-	-	1/77/0
HTSL	High Temp Storage Bake 170C	630 Hours	-	-	2/154/0
LU	Latch-up	Per JESD78	3/18/0	-	3/18/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	1/Pass	-	3/Pass

Type	Test Name / Condition	Duration	Qual Device: INA234AIYBJR	Qual Device: INA236AIYBJR	QBS Process Reference: OPA1671IDCK
MQ	Manufacturability (Bump)	(per mfg. Site specification)	1/Pass	-	-
MQ	Manufacturability (Wafer Fab)	(per mfg. Site specification)	1/Pass	-	-
PD	Physical Dimensions	Per Mechanical Drawing	-	-	3/15/0
SD	Pb Free Surface Mount Solderability	Pb Free/Solderability	3/75/0	-	-
SD	Pb Free Surface Mount Solderability	Pb/Solderability	3/75/0	-	-
TC	Temperature Cycle, -55/125C	700/-55/125	3/231/0	-	-
TC	Temperature Cycle, -65/150C	1000 Cycles	-	-	3/231/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	3/231/0	-	3/231/0

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- QBS: Qual By Similarity
- Qual Device INA234AIYBJR is qualified at LEVEL1-260C
- Qual Device INA236AIYBJR is qualified at LEVEL1-260C

- 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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Location	E-Mail
WW PCN Team	PCN_ww_admin_team@list.ti.com

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