PCN Number:	20221219003.1	PCN Date:	December 22, 2022
Title:	Qualification of TI CDAT as Additional Assembly Site for Select Package Device		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Mar 22, 2023	Sample requests accepted until:	Jan 22, 2023*

*Sample requests received after (Jan 22, 2023) will not be supported.

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 Incorporated is announcing the qualification TI CDAT as Additional Assembly Site for select device listed in the "Product Affected" Section. Current assembly sites and Material differences are as follows.

Assembly Site	Assembly Site Origin	Assembly Country Code	Assembly Site City
ASEN	ASN	CHN	Suzhou
TI CDAT	CDA	CHN	Chengdu

Material Differences:

	ASEN	TI CDAT
Wire type	1.0 mil Au	0.8mil Cu
Mount Compound	1400230112	4207123
Mold Compound	1800819111	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
☒ No Change	☒ No Change	☒ No Change	☒ No Change

Changes to product identification resulting from this PCN:

Assembly Site		
ASEN	Assembly Site Origin (22L)	ASO: ASN
TI-CDAT	Assembly Site Origin (22L)	ASO: CDA

Sample product shipping label (not actual product label)

Product Affected:

ESD401DPYR	TPD1E01B04DPYT	TPD1E0B04DPYT
TPD1E01B04DPYR	TPD1E0B04DPYR	TPD1E1B04DPYR

Qualification Report

Approve Date 29-Jul-2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TPD1E01B04DPYR	QBS Reference: TPS2546QRTERQ1	QBS Reference: PTPDTESTULCDQAR	QBS Reference: TCAN1048AVDMTRQ1	QBS Reference: TPD1E04U04DPYR	QBS Reference: TPD1E01B04DPLR
HAST	A2	Biased HAST	130C/85 %RH	96 Hours	-	3/231/0	3/231/0	1/77/0	-	-
UHAST	A3	Autoclave	121C/15 psig	96 Hours	-	3/231/0	3/231/0	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	3/231/0	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	-	1/800/0	-	-	-	-
WBS	C1	Ball Shear	76 balls, 3 units min	Wires	1/76/0	-	-	-	1/76/0	-

WBP	C2	Bond Pull	30 Wires, 3 units min	Wires	-	-	3/90/0	-	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	3/228/0	-	-	-	1/76/0	-
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	-	-	-	-
PD	C4	Physical Dimensions	(per mechanical drawing)	-	-	-	-	-	1/5/0	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	3/9/0	1/3/0	-	-
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	-	12000 Volts	-	-	-	1/3/0	-	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-	-	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	3/9/0	1/3/0	-	-
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	-	-

QBS: Qual By Similarity
Qual Device TPD1E01B04DPYR 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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