

PCN Number:	20221219002.1B		PCN Date:	April 05, 2023	
Title:	Qualification of CDAT as an alternate Assembly site for select devices				
Customer Contact:	PCN Manager	Dept:	Quality Services		
Proposed 1st Ship Date:	Mar 19, 2023	Sample Requests accepted until:	Apr 15, 2023*		
*Sample requests received after Apr 15, 2023 will not be supported.					
Change Type:					
<input checked="" 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:					
<p>Revision B is to announce the <u>retraction</u> of the TPD4E02B04DQAR. This device will continue to be manufactured as prior and will not be subjected to the change described in this notification. Affected device is identified with a strikethrough and is highlighted in yellow in the Product Affected Section.</p> <p>Texas Instruments Incorporated is announcing the qualification of CDAT as an additional Assembly site for set of devices listed below. Construction differences are as follows:</p>					
	ASEN	CIRTEK	JCETJY	CDAT	
Mold Compound	SID#1800819111	SID#B8240AB16A	S#120903003709 or S#120903003009	4222198	
Mount Compound	SID#1400329111 or SID#1400230112	SID#NMS607CO10	S#120402007300 or S#120402002600	4207123	
Bond wire composition, diameter	Au, 0.8 mil	Au, 0.8 mil	Au, 0.8 mil	Cu, 0.8 mil	
Reason for Change:					
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		
<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:					
Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City		

ASEN	ASN	CHN	Suzhou
CIRTEK	CTK	PHL	Binan City
JCETJY	JC8	CHN	Jiangyin
CDAT	CDA	CHN	Chengdu

Sample product shipping label (not actual product label)

TEXAS INSTRUMENTS
 MADE IN: Malaysia
 2DC: 20:
 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:

ESD321DPYR	TPD1E04U04DPYT	TPD1E10B06DPYR	TPD4E02B04DQAR
ESD351DPYR	TPD1E05U06DPYR	TPD1E10B09DPYR	TPD4E05U06DQAR
TPD1E04U04DPYR			

TI Information
Selective Disclosure

Qualification Report
Approve Date 29-September-2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TPD4E05U06DQAR	QBS Reference: TPS2546QRTERQ1	QBS Reference: TPD2E2U06QDCKRQ1	QBS Reference: TPD4E05U06DQAR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	3/231/0	-	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	3/231/0	-	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	3/231/0	3/231/0	-
UHAST	A3	Unbiased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0
TC	A4	Temperature Cycle	-55C/150C	400 Cycles	-	-	3/231/0	-
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	3/231/0	-	-	3/231/0
TC	A4	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0	-	-
HTSL	A6	High Temperature Storage Life	(Dry bake at 150C)	500 Hours	-	-	3/15/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	3/135/0	-	-
HTSL	A6	High Temperature Storage Life	170C	420 Hours	3/231/0	-	-	3/231/0
HTOL	B1	High Temperature Reverse Bias	125C	1000 Hours	-	-	3/231/0	-
HTOL	B1	Life Test	125C	1000 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	3/228/0	-	-	-
WBP	C2	Bond Pull	76 Wires, 3 units min	Wires	3/228/0	-	-	3/228/0
SD	C3	PB Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	1/10/0	-
SD	C3	PB-Free Solderability	Precondition w.155C Dry Bake (4 hrs +/- 15 minutes)	-	-	1/15/0	1/10/0	-
SD	C3	PB-Free Solderability	8 Hours Steam Age	-	-	-	-	3/66/0
PD	C4	Physical Dimensions	(per mechanical drawing)	-	3/15/0	-	-	3/15/0
PD	C4	Physical Dimensions	Cpk>1.67	-	-	3/30/0	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	1/30/0	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	1/3/0
ESD	E2	ESD CDM	-	1500 Volts	-	-	1/10/0	-
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	-	10000 Volts	-	-	1/10/0	-
ESD	E2	ESD HBM	-	2000 Volts	-	1/3/0	-	-
ESD	E2	ESD HBM	-	6000 Volts	-	-	1/10/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	1/30/0	-	-	1/30/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	3/90/0	-	-
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/75/0	-

- QBS: Qual By Similarity
- Qual Device TPD4E05U06DQAR 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-CHG-2205-019

Rev A Qual Memo

Qualification Report
Approve Date 22-November-2022

Qualification Results

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

Type	#	Test Name	Condition	Duration	Qual Device: TPD1E04U04DPYR	Qual Device: TPD1E04U04DPYR	QBS Reference: TPS2546QRTERQ1	QBS Reference: PTPDTESTULCDQAR	QBS Reference: TPD1E04U04DPYR
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	-	3/231/0	-
HAST	A2	Biased HAST	130C/85%RH	96 Hours	-	-	3/231/0	-	-
UHAST	A3	Autoclave	121C/15psig	96 Hours	-	-	-	3/231/0	-
UHAST	A3	Autoclave	121C/15psig	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	-	-	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	-	-	3/231/0	-
HTSL	A6	High Temperature Storage Life	150C	1000 Hours	-	-	3/135/0	-	-
HTOL	B1	Life Test	125C	1000 Hours	-	-	3/231/0	-	-

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	3/228/0	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)	-	3/15/0	1/5/0	-	-	-
PD	C4	Physical Dimensions	Cpk>1.67	-	-	-	3/30/0	-	-
ESD	E2	ESD CDM	-	1500 Volts	-	-	-	3/9/0	-
ESD	E2	ESD CDM	-	250 Volts	1/3/0	-	-	-	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	-	-
ESD	E2	ESD HBM	-	4000 Volts	-	-	-	3/9/0	-
CHAR	E5	Electrical Characterization	Per Datasheet Parameters	-	-	-	-	-	1/30/0
CHAR	E5	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	-	-	3/90/0	-	-

- QBS: Qual By Similarity
- Qual Device TPD1E04U04DPYR is qualified at MSL1 260C
- Qual Device TPD1E04U04DPYR 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-CHG-2205-018

For questions regarding this notice, e-mails can be sent to the contacts shown 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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