

PCN Number:	20231103001.2		PCN Date:	November 03, 2023												
Title:	Qualification of CDAT as an alternate Assembly/Test site for the TPS22918TDBVxQ1															
Customer Contact:	Change Management Team		Dept:	Quality Services												
Proposed 1st Ship Date:	May 1, 2024	Sample Requests accepted until:	Dec 3, 2023*													
*Sample requests received after Dec 3, 2023 will not be supported.																
Change Type:																
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Material											
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Process											
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Fab Site											
<input type="checkbox"/>	Mechanical Specification	<input checked="" type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Material											
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Process											
PCN Details																
Description of Change:																
<p>Texas Instruments Incorporated is announcing the qualification of CDAT as an additional Assembly/Test site for set of devices listed below. Construction differences are as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>TFME</th> <th>CDAT</th> </tr> </thead> <tbody> <tr> <td>Mount Compound</td> <td>SID# A-03</td> <td>4207123</td> </tr> <tr> <td>Mold Compound</td> <td>SID#R-17</td> <td>4222198</td> </tr> <tr> <td>MSL</td> <td>3</td> <td>1</td> </tr> </tbody> </table> <p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ</p>						TFME	CDAT	Mount Compound	SID# A-03	4207123	Mold Compound	SID#R-17	4222198	MSL	3	1
	TFME	CDAT														
Mount Compound	SID# A-03	4207123														
Mold Compound	SID#R-17	4222198														
MSL	3	1														
Reason for Change:																
Supply continuity																
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																
None																
Impact on Environmental Ratings																
<p>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.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>					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				
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													
TFME	NFM	CHN	Economic Development Zone													
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)T0:1750

(1P) SN74LS07NSR
(Q) 2000 (D) 0336
(31T) LOT: 3959047MLA
(4W) TKY (1T) 7523483SI2
(P)
(2P) REV: (V) 0033317
(20L) CS0: SHE (21L) CC0: USA
(22L) AS0: MLA (23L) AC0: MYS

Product Affected:

TPS22918TDBVRQ1

TPS22918TDBVTQ1



TI Information
Selective Disclosure

Automotive New Product Qualification Summary (As per AEC-Q100, AEC-Q006, and JEDEC Guidelines)

1.3 mil and 0.8 mil Cu Wire in SOT-23, CDAT
Approved 25-Jul-2022
Updated with 1.3 mil 13-Sep-2023

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

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TPS22918TDBVRQ1	Qual Device: LM2775QDSGRQ1	Qual Device: TPS3840PH30DBVRQ1
Test Group A – Accelerated Environment Stress Tests									
PC	A1	-	3	22	SAM Analysis, Pre Stress	Completed	1/22/0	3/66/0	3/66/0
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 1-260C	No fails	-	No fails
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 2-260C	-	No fails	-
PC	A1	-	3	22	SAM Analysis, Post Stress	Completed	1/22/0	3/66/0	3/66/0
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	3/231/0	3/231/0
HAST	A2	-	3	1	Cross Section, Post bHAST 96 Hours	Completed	-	3/3/0	-
HAST	A2	-	3	30	Wire Bond Shear, Post bHAST, 96 Hours	Wires	-	3/90/0	-
HAST	A2	-	3	30	Bond Pull over Stitch, post bHAST, 96 Hours	Wires	-	3/90/0	-
HAST	A2	-	3	30	Bond Pull over Ball, Post bHAST, 96 Hours	Wires	-	3/90/0	-
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	192 Hours	-	3/210/0	3/210/0
HAST	A2	-	3	1	Cross Section, Post bHAST 192 Hours	Completed	-	3/3/0	3/3/0
HAST	A2	-	3	22	SAM Analysis, Post bHAST, 192 Hours	Completed	-	3/66/0	3/66/0

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TPS22918TDBVRQ1	Qual Device: LM2775QDSGRQ1	Qual Device: TPS3840PH30DBVRQ1
HAST	A2	-	3	30	Wire Bond Shear, Post bHAST, 192 Hours	Wires	-	3/90/0	3/90/0
HAST	A2	-	3	30	Bond Pull over Stitch, post bHAST, 192 Hours	Wires	-	3/90/0	3/90/0
HAST	A2	-	3	30	Bond Pull over Ball, Post bHAST, 192 Hours	Wires	-	3/90/0	3/90/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0	3/231/0
TC	A4	-	3	1	Cross Section, Post T/C 500 Cycles	Completed	-	3/3/0	-
TC	A4	-	3	22	SAM Analysis, Post T/C, 500 Cycles	Completed	-	3/66/0	-
TC	A4	-	3	30	Wire Bond Shear, Post T/C 500 Cycles	Wires	-	3/90/0	-
TC	A4	-	3	30	Bond Pull over Stitch Post T/C 500 Cycles	Wires	-	3/90/0	-
TC	A4	-	3	30	Bond Pull over Ball Post T/C 500 Cycles	Wires	-	3/90/0	-
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	1000 Cycles	1/70/0	3/210/0	3/210/0
TC	A4	-	3	1	Cross Section, Post T/C 1000 Cycles	Completed	1/1/0	3/3/0	3/3/0
TC	A4	-	3	22	SAM Analysis, Post T/C, 1000 Cycles	Completed	1/22/0	3/66/0	3/66/0
TC	A4	-	3	30	Wire Bond Shear, Post T/C 1000 Cycles	Wires	1/30/0	3/90/0	3/54/0
TC	A4	-	3	30	Bond Pull over Stitch, Post T/C, 1000 Cycles	Wires	1/30/0	3/90/0	3/54/0
TC	A4	-	3	30	Bond Pull over Ball, Post T/C, 1000 Cycles	Wires	1/30/0	3/90/0	3/90/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle - 40/125C	1000 Cycles	-	1/45/0	NA
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle - 40/125C	2000 Cycles	-	1/45/0	NA
HTSL	A6	JEDEC JESD22-A103	3	45	High Temp Storage Bake 150C	1000 Hours	-	-	3/135/0
HTSL	A6	-	3	1	Cross Section, Post HTSL 1000 Hours	Completed	-	-	3/3/0
HTSL	A6	JEDEC JESD22-A103	3	44	High Temp Storage Bake 150C	2000 Hours	-	-	3/132/0
HTSL	A6	-	3	1	Cross Section, Post HTSL 2000 Hours	Completed	-	-	3/3/0
HTSL	A6	JEDEC JESD22-A103	3	45	High Temp Storage Bake 175C	500 Hours	-	3/135/0	-

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TPS22918TDBVRQ1	Qual Device: LM2775QDSGRQ1	Qual Device: TPS3840PH30DBVRQ1
HTSL	A6	-	3	1	Cross Section, Post HTSL 500 Hours	Completed	-	3/3/0	-
HTSL	A6	JEDEC JESD22-A103	3	44	High Temp Storage Bake 175C	1000 Hours	-	3/132/1*	-
HTSL	A6	-	3	1	Cross Section, Post HTSL 1000 Hours	Completed	-	3/3/0	-
Test Group C – Package Assembly Integrity Tests									
WBS	C1	AEC Q100-001	3	30	Wire Bond Shear, Cpk>1.67	Wires	1/30/0	3/90/0	3/90/0
WBP	C2	MIL-STD883 Method 2011	3	30	Bond Pull over Ball, Cpk >1.67	Wires	1/30/0	3/90/0	3/90/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I): -40C to +85C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED

Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room: AC/uHAST

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Note: * 1 failure due to trim bit data change. Not Cu wire related.

TI Qualification ID: 20201126-137339, 20170720-122597, R-CHG-2207-059

ZVEI IDs: SEM-PA-07, SEM-PA-11, SEM-PA-18, SEM-TF-01, SEM-PS-02

For questions regarding this notice, e-mails can be sent to Change Management team or your local Field Sales Representative.

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