

PCN Number:	20210406001.1A	PCN Date:	July 27, 2021												
Title:	Qualify New Assembly Material set for Selected Device(s)														
Customer Contact:	PCN Manager	Dept:	Quality Services												
Proposed 1st Ship Date:	Jul 15, 2021	Estimated Sample Availability:	Date provided at sample request												
Change Type:															
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design												
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet												
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change												
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site												
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process												
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site												
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material												
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process												
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site												
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials												
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process												
PCN Details															
Description of Change:															
<p>Revision A is to announce the <u>addition</u> of new devices that were not included on the original PCN notification. These new devices are highlighted and bolded in the device list below. The expected first shipment date for these new devices will be 90 days from this notice (Oct. 27, 2021) for these newly added devices only. The proposed 1st ship date of Jul 15, 2021 still applies for the original set of devices.</p> <p>Texas Instruments is pleased to announce the qualification of new assembly material set for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:</p>															
<table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Mount compound</td> <td>4221460</td> <td>4223872</td> </tr> <tr> <td>Mold compound</td> <td>4210087</td> <td>4222198</td> </tr> <tr> <td>Wire type</td> <td>Au</td> <td>Cu</td> </tr> </tbody> </table>				Material	Current	Proposed	Mount compound	4221460	4223872	Mold compound	4210087	4222198	Wire type	Au	Cu
Material	Current	Proposed													
Mount compound	4221460	4223872													
Mold compound	4210087	4222198													
Wire type	Au	Cu													
Reason for Change:															
<p>Continuity of supply.</p> <ol style="list-style-type: none"> 1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties 2) Maximize flexibility within our Assembly/Test production sites. 3) Cu is easier to obtain and stock 															
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):															
None.															
Anticipated impact on Material Declaration															
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI Eco-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.												
Changes to product identification resulting from this PCN:															
None.															
Product Affected:															

SN1205066PDQNR	TLV70727PDQNT	TLV717185PDQNR	TLV71733PDQNT
SN1206013PDQNR	TLV707285DQNR	TLV717185PDQNT	TLV74010PDQNR
TLV70712PDQNR	TLV707285DQNT	TLV71718PDQNR	TLV74012PDQNR
TLV70712PDQNT	TLV707285PDQNR	TLV71718PDQNT	TLV74018PDQNR
TLV70719PDQNR	TLV707285PDQNT	TLV71727PDQNR	TLV74028PDQNR
TLV70719PDQNT	TLV70732DQNR	TLV71727PDQNT	TLV74033PDQNR
TLV70725PDQNR	TLV70732DQNT	TLV71729PDQNR	TLV70718PDQNR
TLV70725PDQNT	TLV70736PDQNR	TLV71729PDQNT	TLV70718PDQNT
TLV70727PDQNR	TLV70736PDQNT	TLV71733PDQNR	

Qualification Report

Approve Date 31-Mar-2021

Product Attributes

Attributes	Qual Device: <u>TLV707285PDQNR</u>	Qual Device: <u>TLV74033PDQNR</u>	QBS Package Reference: <u>TLV9024RTER</u>	QBS Package Reference: <u>TLV9034RTER</u>
Assembly Site	CDAT	CDAT	CDAT	CDAT
Package Family	X2QFN	X2QFN	WQFN	WQFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	MIHO	RFAB	RFAB	RFAB
Wafer Fab Process	LBC7	LBC7	LBC9	LBC9

- QBS: Qual By Similarity

- Qual Device TLV707285PDQNR and TLV74033PDQNR are qualified at LEVEL1-260CG

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>TLV707285PDQNR</u>	Qual Device: <u>TLV74033PDQNR</u>	QBS Package Reference: <u>TLV9024RTER</u>	QBS Package Reference: <u>TLV9034RTER</u>
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	1/30/0	-	-	-
HTSL	High Temp Storage Bake, 170C	420 Hours	3/231/0	3/231/0	-	1/77/0
MQ	Manufacturability	(per mfg. Site specification)	PASS	PASS	-	-
TC	Temperature Cycle, -65C/150C	500 Cycles	3/231/0	3/231/0	1/77/0	2/154/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	1/77/0	2/154/0
HBM	ESD - HBM	4000 V	-	-	1/3/0	2/6/0
LU	Latch-up	(Per JESD78)	-	-	1/6/0	2/12/0
UHAST	Unbiased HAST 130C/85%RH	96 Hours	-	-	1/77/0	2/154/0
HTOL	Life Test, 150C	300 Hours	-	-	-	1/77/0

- 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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