

<b>PCN Number:</b>	20201216000.2		<b>PCN Date:</b>	Jan. 15, 2020															
<b>Title:</b>	Qualify New Assembly Material set for Selected Device(s)																		
<b>Customer Contact:</b>	<a href="#">PCN Manager</a>	<b>Dept:</b>	Quality Services																
<b>Proposed 1<sup>st</sup> Ship Date:</b>	July 15, 2021	<b>Estimated Sample Availability:</b>	Date provided at sample request																
<b>Change Type:</b>																			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site														
<input 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														
<b>PCN Details</b>																			
<b>Description of Change:</b>																			
Texas Instruments is pleased to announce the qualification of new assembly material for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:																			
<table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Mount compound</td> <td>4042500</td> <td>4147858</td> </tr> <tr> <td>Mold compound</td> <td>4205694</td> <td>4211880</td> </tr> <tr> <td>Leadframe</td> <td>Non-roughened</td> <td>Roughened (single side)</td> </tr> <tr> <td>Leadframe thickness</td> <td>10mils</td> <td>6mils</td> </tr> </tbody> </table>					Material	Current	Proposed	Mount compound	4042500	4147858	Mold compound	4205694	4211880	Leadframe	Non-roughened	Roughened (single side)	Leadframe thickness	10mils	6mils
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Mold compound	4205694	4211880																	
Leadframe	Non-roughened	Roughened (single side)																	
Leadframe thickness	10mils	6mils																	
Note: Leadframe thickness applicable to wide body SOIC (DW) device only																			
<b>Reason for Change:</b>																			
Continuity of supply																			
<b>Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):</b>																			
None																			
<b>Anticipated impact on Material Declaration</b>																			
<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 at the site link below <a href="http://www.ti.com/quality/docs/materialcontentsearch.tsp">http://www.ti.com/quality/docs/materialcontentsearch.tsp</a>																
<b>Changes to product identification resulting from this PCN:</b>																			
None																			
<b>Product Affected:</b>																			
CD74ACT86MDREP	SN74AHCT244MDWREP	V62/03607-02XE	V62/04665-01XE																
CD74HCT574QM96EP	SN74AHCT541IDWREP	V62/03649-01YE	V62/04666-01XE																
MPD23751DREP	SN74BCT760MDWREP	V62/03650-01YE	V62/04739-01XE																
SN74AC244MDWREP	SN74HC244MDWREP	V62/03657-01YE	V62/04760-01XE																
SN74AC245IDWREP	SN74HC244QDWREP	V62/03662-02YE	V62/04761-01XE																
SN74AC373MDWREP	SN74LV14AMDREP	V62/04619-01XE	V62/06604-01XE																
SN74ACT244IDWREP	SN74LV244AMDWREP	V62/04620-01XE	V62/06620-01XE																
SN74ACT244MDWREP	SN74LVC32AMDREP	V62/04620-02XE	V62/06672-01XE																
SN74ACT373MDWREP	SN74LVC540AQDWREP	V62/04621-01XE																	
SN74AHC244MDWREP	SN74LVC541AQDWREP	V62/04622-01XE																	
SN74AHC245MDWREP	V62/03607-01XE	V62/04661-02XE																	



## Qualification Report

Approved 11/19/2020

### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>SN74HC244MDWREP</u>	QBS Package Reference: <u>1M16374QDLREP</u>	QBS Package Reference: <u>1R16214CDL</u>	QBS Package Reference: <u>SN75976A1DL</u>	QBS Package Reference: <u>ULN2003ADR</u>
MSL	Moisture Sensitivity, JEDEC	Level 2-260C	-	-	-	3/36/0	-
MSL	Moisture Sensitivity, L1	Level 1-260C	2/30/0	3/36/0	3/36/0	-	-
ED	Electrical Characterization, side by side	-	-	Pass	Pass	Pass	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	1/77/0
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	-	-	1/77/0
HAST	Biased HAST, 130C/85%RH	288 Hours	-	-	-	-	1/77/0
AC	Autoclave 121C	96 Hours	-	3/231/0	3/231/0	3/231/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	-	3/231/0	3/231/0	3/231/0	-
HTSL	High Temp Storage Bake 170C	420 Hours	-	3/231/0	-	3/231/0	-

- QBS: Qual By Similarity

- Qual Device SN74HC244MDWREP is qualified at LEVEL1-260CG

- 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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