

<b>PCN Number:</b>	20201104000.1		<b>PCN Date:</b>	Dec. 18, 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>	Mar. 18, 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"/>		<input type="checkbox"/>	Wafer Fab Process											
<b>PCN Details</b>																
<b>Description of Change:</b>																
<p>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:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Lead frame thickness</td> <td>10 mils</td> <td>10mils, 6mils</td> </tr> <tr> <td>Mount compound</td> <td>4042500</td> <td>4147858</td> </tr> <tr> <td>Mold compound</td> <td>4205694</td> <td>4211880</td> </tr> </tbody> </table>					Material	Current	Proposed	Lead frame thickness	10 mils	10mils, 6mils	Mount compound	4042500	4147858	Mold compound	4205694	4211880
Material	Current	Proposed														
Lead frame thickness	10 mils	10mils, 6mils														
Mount compound	4042500	4147858														
Mold compound	4205694	4211880														
<b>Reason for Change:</b>																
Continuity of supply.																
<b>Anticipated impact on Fit, Form, 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 from the <a href="#">TI ECO website</a> .													
<b>Changes to product identification resulting from this PCN:</b>																
None.																
<b>Product Affected:</b>																
CD74HC154M	CD74HC154M96G4	CD74HC154MG4	CDC204DW													

# Qualification Report

Approve Date 12-May-2016

## Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: ADS1213U	Qual Device: ADS820U	Qual Device: ADS8504IBD W	Qual Device: MSP430F123I DWR	Qual Device: SN65LBC170 DW
AC	Autoclave 121C	96 Hours	1/77/0	-	1/77/0	1/77/0	1/77/0
ED	Electrical Characterization, side by side	Per datasheet parameters	Pass	Pass	Pass	-	Pass
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-
HTSL	High Temp Storage Bake 170C	420 Hours	1/77/0	-	1/77/0	1/77/0	1/77/0
MQ	Manufacturability (Assembly)	(per mfg. Site specificatio n)	Pass	Pass	Pass	Pass	Pass
TC	Temperature Cycle, - 65/150C	500 Cycles	1/77/0	3/231/0	1/77/0	1/77/0	1/77/0

Type	Test Name / Condition	Duration	Qual Device: SN65LBC17 0DW_ SSTN	Qual Device: SN74LVC541 ADW	Qual Device: SN74LVC541 ADW_ SSTN	QBS Package Reference: TL494IDR	QBS Package Reference: ULQ2003AQD RQ1_STDLF
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	-	3/231/0
ED	Electrical Characterization, side by side	Per datasheet parameters	Pass	Pass	Pass	-	-
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	-	3/231/0	3/217/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	3/231/0	3/231/0	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	-	-
TC	Temperature Cycle, - 65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	-	3/231/0

- QBS: Qual By Similarity

- Qual Devices qualified at LEVEL1-260C: SN65LBC170DW, SN74LVC541ADW, MSP430F123IDWR, TL494IDR, ULQ200AQDRQ1

- Qual Devices qualified at LEVEL2-260C: ADS1213U, ADS8504IBDW, ADS820U

- 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

# Qualification Report

Approve Date 07-Aug-2017

## Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: SN74HCT573DWR _RLF_AU	Qual Device: SN74HCT573DWR _RLF_CU	Qual Device: SN74LVC244ADWR _RLF_AU	Qual Device: SN74LVC244ADWR _RLF_CU
LI	Lead Fatigue	Leads	3/66/0	3/66/0	1/66/0	3/66/0
LI	Lead Pull to Destruction	Leads	3/66/0	3/66/0	1/66/0	3/66/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass
PD	Physical Dimensions	--	3/15/0	3/15/0	3/15/0	3/15/0
SD	Solderability	8 Hours Steam Age	3/66/0	3/66/0	3/66/0	3/66/0
TC	Temperature Cycle, -65C/150C	500 Cycles	3/231/0	3/231/0	3/231/0	3/231/0
WBP	Bond Pull	Wires	3/228/0	3/228/0	3/228/0	3/228/0
WBP	Bond Strength	Wires	3/228/0	3/228/0	3/228/0	3/228/0

- Qual Devices qualified at LEVEL1-260C: SN74HCT573DWR\_RLF\_AU, SN74HCT573DWR\_RLF\_CU, SN74LVC244ADWR\_RLF\_CU, SN74LVC244ADWR\_RLF\_AU

- 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

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Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

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