

<b>PCN Number:</b>	20181217000.1.A	<b>PCN Date:</b>	Feb 25, 2019						
<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>Change Type:</b>									
<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						
<b>PCN Details</b>									
<b>Description of Change:</b>									
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:									
<table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Mold compound</td> <td>8064463</td> <td>8095181</td> </tr> </tbody> </table>				Material	Current	Proposed	Mold compound	8064463	8095181
Material	Current	Proposed							
Mold compound	8064463	8095181							
<b>Reason for Change:</b>									
Revision A is to update from RoHS compliancy to Halogen Free mold compound. We apologize for any inconvenience this may have caused.									
Continuity of supply.									
<del>ROHS compliancy</del> <b>Halogen Free mold compound</b>									
<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-Info website</a> . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.						
<b>Changes to product identification resulting from this PCN:</b>									
Sample product shipping label (not actual product label)									
<div style="border: 1px solid green; padding: 5px; display: inline-block;">           Current: E3  <b>Proposed: G3 (where applicable)</b> </div>									
<p> <b>TEXAS INSTRUMENTS</b>            MADE IN: Malaysia            2DC: 20:            MSL 2 /260C/1 YEAR SEAL DT            MSL 1 /235C/UNLIM 03/29/04            OPT: 39            ITEM: 5A (L)TO:1750            (Pb) E3            (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         </p>									

**Product Affected:**

LMP2234AMT/NOPB	LMP2234BMT/NOPB	LMP2234BMTX/NOPB	LMP7709MT/NOPB
LMP2234AMTE/NOPB	LMP2234BMTE/NOPB	LMP7704MT	LMP7709MTX/NOPB

## Qualification Report

Approve Date 20-Jan-2019

### Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>LMP2234AMTNOBP</u>	QBS Package Reference: <u>LM3464MH</u>	QBS Package Reference: <u>LM3492HCQMH</u>	QBS Package Reference: <u>LM3492QMH</u>	QBS Package Reference: <u>LM20143QMH</u>
AC	Autoclave 121C	96 Hours	3/231/0	3/230/0	-	-	3/231/0
CDM	ESD - CDM	1000 V	-	-	1/3/0	1/3/0	1/3/0
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-	-	3/231/0
ELFR	Early Life Failure Rate, 125C	48 Hours	-	3/1600/0	-	-	-
ELFR	Early Life Failure Rate, 125C	72 Hours	-	3/796/0	-	-	-
ELFR	Early Life Failure Rate, 150C	48 Hours	-	3/231/0	1/77/0	1/77/0	-
GL	Gate Leakage, 155C	-400 V/+400 V	-	-	-	1/3/0	1/3/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	3/230/0	-	-	3/231/0
HBM	ESD - HBM	2000V	-	1/3/0	-	-	-
HBM	ESD - HBM	2500 V	-	-	1/3/0	1/3/0	1/3/0
HTOL	Life Test, 150C	408 Hours	-	-	-	-	1/77/0
HTOL	Life Test, 150C	500 Hours	-	3/231/0	1/77/0	1/77/0	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	1/45/0	-	1/45/0	1/77/0
LU	Latch-up	(per JESD78)	-	1/6/0	1/6/0	1/6/0	1/6/0
MM	ESD - MM	150V	-	1/3/0	-	-	-
MM	ESD - MM	200V	-	-	1/3/0	1/3/0	-
MM	ESD - MM	250 V	-	-	-	-	1/3/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass	Pass
PD	Physical Dimension	--	-	-	-	-	3/90/0
PTC	Power Temperature Cycle (-40/150C)	1000 Cycles	-	-	-	1/45/0	-
SD	Solderability	Pb free	3/66/0	-	-	-	3/90/0

Type	Test Name / Condition	Duration	Qual Device: <u>LMP2234AMTNOPB</u>	QBS Package Reference: <u>LM3464MH</u>	QBS Package Reference: <u>LM3492HCQMH</u>	QBS Package Reference: <u>LM3492QMH</u>	QBS Package Reference: <u>LM20143QMH</u>
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	-	-	3/231/0
WBP	Bond Pull	Wires	-	-	-	-	3/90/0
WBS	Bond Shear	Wires	-	-	-	-	3/90/0

- QBS: Qual By Similarity

- Qual Device LMP2234AMTNOPB is qualified at LEVEL1-260CP

- 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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