

PCN Number:	20200728003.1	PCN Date:	Jul 31, 2020
Title:	Die Coating material change for Select Devices		
Customer Contact:	PCN Manager	Dept:	Quality Services
Proposed 1st Ship Date:	Oct 31, 2020	Estimated Sample Availability:	Date provided at sample request.
Change Type:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process
<input type="checkbox"/>	Design	<input type="checkbox"/>	Assembly Materials
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Electrical Specification
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Packing/Shipping/Labeling
<input type="checkbox"/>		<input checked="" type="checkbox"/>	Test Process
<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 Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process
<input type="checkbox"/>		<input type="checkbox"/>	Part number change
PCN Details			
Description of Change:			
This notification is to announce the change to the Die Coating material for the selected devices listed in "Product Affected" section.			
Change From		Change To	
NONE		POLYIMIDE	
Qual details are provided in the Qual Data Section.			
Reason for Change:			
Manufacturing Enhancement			
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):			
None			
Changes to product identification resulting from this PCN:			
None			
Product Affected:			
LM4040AIM3-2.5	LM4040CEM3-2.5/E7001881	LM4040DIM3-2.5	
LM4040AIM3-2.5/NOPB	LM4040CEM3-2.5/NOPB	LM4040DIM3-2.5/NOPB	
LM4040AIM3X-2.5	LM4040CIM3-2.5	LM4040DIM3X-2.5	
LM4040AIM3X-2.5/NOPB	LM4040CIM3-2.5/NOPB	LM4040DIM3X-2.5/NOPB	
LM4040BIM3-2.5	LM4040CIM3X-2.5	LM4040EEM3-2.5/NOPB	
LM4040BIM3-2.5/NOPB	LM4040CIM3X-2.5/NOPB	LM4040EIM3-2.5	
LM4040BIM3X-2.5	LM4040DEM3-2.5/NOPB	LM4040EIM3-2.5/NOPB	
LM4040BIM3X-2.5/NOPB	LM4040DEM3-2.5/S4000169	LM4040EIM3X-2.5	
LM4040CEM3-2.5	LM4040DEM3X-2.5/NOPB	LM4040EIM3X-2.5/NOPB	

Qualification Report

Approve Date 20-July-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Vehicle: LM4040AIM3-2.5 (GFAB)	QBS Product Reference: LM4040AIM3-2.5 (SFAB)	QBS Product Reference: LM4040AIM3-2.5 CTRL (GFAB)	QBS Product Reference: LM4040QCEM3- 5.0/NOPB
AC	Autoclave 121C	96 Hours	1/77/0	1/77/0	1/77/0	3/231/0
ED	Electrical Characterization	-	1/30/0	1/30/0	1/30/0	-
ELFR	Early Life Failure Rate, 140C	48 Hours	-	-	-	3/2400/0
CDM	ESD - CDM	750 V	-	-	-	1/3/0
CDM	ESD - CDM	1000 V	-	-	-	1/3/0
HBM	ESD - HBM	2000 V	-	-	-	1/3/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0
HTOL	Life Test, 125C	1000 Hours	1/77/0	1/77/0	1/77/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	-	-	-	1/45/0
LU	Latch-up	Per JESD78, 25C	-	-	-	1/6/0
	Latch-up	Per JESD78, 125C	-	-	-	1/6/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	1/Pass	1/Pass	1/Pass	-
MSL	Moisture Sensitivity	-	1/12/0	1/12/0	1/12/0	-
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	3/231/0
WBP	Bond Pull	Post/T/C	-	-	-	1/5/0
YLD	FTY and Bin Summary	-	1/Pass	1/Pass	1/Pass	-

- QBS: Qual By Similarity

- Qual Device LM4040AIM3-2.5 is qualified at LEVEL1-260C

- 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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