PCN Number:	20150911001	**PCN Date:**	09/14/2015
Title:	Die Coating Material Change		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	12/14/2015	**Estimated Sample Availability:**	Date provided at sample request

Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site
☐	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☐	Assembly Materials	☐	Part number change	☒	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of an alternate die coat material for the WCSP chip contained in the devices listed below as follows:

	Die Coat Material
Current	BCB (Benzocyclobutene)
New	**PI (polyimide)**

Reason for Change:

Increase manufacturing flexibility to improve continuity of supply

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	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 website.

Changes to product identification resulting from this PCN:

None

Product Affected:

LMZ10503EXTTZ/NOPB	LMZ12002EXTTZ/NOPB	LMZ14201HTZE/NOPB	LMZ22003TZE/NOPB
LMZ10503EXTTZE/NOPB	LMZ12002EXTTZE/NOPB	LMZ14201HTZX/NOPB	LMZ22003TZX/NOPB
LMZ10503EXTTZX/NOPB	LMZ12002EXTTZX/NOPB	LMZ14201TZ-ADJ/NOPB	LMZ22005TZ/NOPB
LMZ10503TZ-ADJ/NOPB	LMZ12002TZ-ADJ/NOPB	LMZ14201TZE-ADJ/NOPB	LMZ22005TZE/NOPB
LMZ10503TZE-ADJ/NOPB	LMZ12002TZE-ADJ/NOPB	LMZ14201TZX-ADJ/NOPB	LMZ22005TZX/NOPB
LMZ10503TZX-ADJ/NOPB	LMZ12002TZX-ADJ/NOPB	LMZ14202EXTTZ/NOPB	LMZ22008TZ/NOPB
LMZ10504EXTTZ/NOPB	LMZ12003EXTTZ/NOPB	LMZ14202EXTTZE/NOPB	LMZ22008TZE/NOPB
LMZ10504EXTTZE/NOPB	LMZ12003EXTTZE/NOPB	LMZ14202EXTTZX/NOPB	LMZ22010TZ/NOPB
LMZ10504EXTTZX/NOPB	LMZ12003EXTTZX/NOPB	LMZ14202HTZ/NOPB	LMZ22010TZE/NOPB
LMZ10504TZ-ADJ/NOPB	LMZ12003TZ-ADJ/NOPB	LMZ14202HTZE/NOPB	LMZ23603TZ/NOPB
LMZ10504TZE-ADJ/NOPB	LMZ12003TZE-ADJ/NOPB	LMZ14202HTZX/NOPB	LMZ23603TZE/NOPB
LMZ10504TZX-ADJ/NOPB	LMZ12003TZX-ADJ/NOPB	LMZ14202TZ-ADJ/NOPB	LMZ23603TZX/NOPB
LMZ10505EXTTZ/NOPB	LMZ12008TZ/NOPB	LMZ14202TZE-ADJ/NOPB	LMZ23605TZ/NOPB
LMZ10505EXTTZE/NOPB	LMZ12008TZE/NOPB	LMZ14202TZX-ADJ/NOPB	LMZ23605TZE/NOPB
LMZ10505EXTTZX/NOPB	LMZ12010TZ/NOPB	LMZ14203EXTTZ/NOPB	LMZ23605TZX/NOPB
LMZ10505TZ-ADJ/NOPB	LMZ12010TZE/NOPB	LMZ14203EXTTZE/NOPB	LMZ23608TZ/NOPB
LMZ10505TZE-ADJ/NOPB	LMZ13608TZ/NOPB	LMZ14203EXTTZX/NOPB	LMZ23608TZE/NOPB
LMZ10505TZX-ADJ/NOPB	LMZ13608TZE/NOPB	LMZ14203HTZ/NOPB	LMZ23610TZ/NOPB
LMZ12001EXTTZ/NOPB	LMZ13610TZ/NOPB	LMZ14203HTZE/NOPB	LMZ23610TZE/NOPB
LMZ12001EXTTZE/NOPB	LMZ13610TZE/NOPB	LMZ14203HTZX/NOPB	WPMDH1102401JT/NOPB
LMZ12001EXTTZX/NOPB	LMZ14201EXTTZ/NOPB	LMZ14203TZ-ADJ/NOPB	WPMDH1152401JT/NOPB
LMZ12001TZ-ADJ/NOPB	LMZ14201EXTTZE/NOPB	LMZ14203TZE-ADJ/NOPB	WPMDH1200601JT/NOPB
LMZ12001TZE-ADJ/NOPB	LMZ14201EXTTZX/NOPB	LMZ14203TZX-ADJ/NOPB	WPMDH1302401JT/NOPB
LMZ12001TZX-ADJ/NOPB	LMZ14201HTZ/NOPB	LMZ22003TZ/NOPB	WPMDM1500602JT/NOPB

Reliability Data

Polyimide Qualification

Product Attributes

Attributes	Qual Device: LMZ10503EXTTZ Approved 17-Aug-2015	Qual Device: LMZ14203EXTTZ Approved 24-Aug-2015	Qual Device: LMZ23610TZNOPB Approved 24-Aug-2015
Wafer Fab Supplier	MFAB	GFAB	MFAB
Wafer Process	CMOS7	ABCD150	ABCD5
Package Attributes			
Assembly Site	TIEM	TIEM	TIEM
Package Family	TOPMOD	TOPMOD	TOPMOD
Die Coating	Polyimide	Polyimide	Polyimide
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0

- Qual Devices LMZ10503EXTTZ, LMZ14203EXTTZ,& LMZ23610TZNOPB are qualified at LEVEL3-245C
- LMZ23605TZ family is qualified by the LMZ23610TZNOPB qualification vehicle

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

Type	Test Name / Condition	Duration	Qual Device: LMZ10503EXTTZ	Qual Device: LMZ14203EXTTZ	Qual Device: LMZ23610TZNOPB
VVF	Vibration Variance Frequency	20G, 20Hz-2kHz	1/45/0	1/45/0	-
AC	Autoclave 121C	96 hours	3/231/0	3/231/0	3/231/0
HAST	Biased HAST, 110C/85%RH	264 hours	3/231/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 hours	3/231/0	3/231/0	1/77/0
MSHK	Mechanical Shock	1500G, 0.5ms pulse	1/45/0	1/45/0	-
PTC	Power Temperature Cycle, -40/125C	1440 cycles	-	-	1/77/0
PTC	Power Temperature Cycle, -55/125C	700 cycles	1/77/0	1/45/0	-
PC	PreCon Level 3	245C	5/1091/0	3/1059/0	6/847/0
TC	Temperature Cycle, -55/125C	1000 cycles	3/231/0	3/231/0	-
TC	Temperature Cycle, -40/125C	1440 cycles	-	-	3/231/0

- Preconditioning was performed for Autoclave, Power Temperature Cycle, THB/Biased HAST, Temperature Cycle, Thermal Shock, Mechanical Shock, Vibration Variance Frequency and HTSL as applicable
- The following are equivalent HTSL options based on 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

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com