



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20180207001
Qualification of new Underfill Material for select devices
Change Notification / Sample Request

Date: February 09, 2018
To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. If you require samples or additional data to support your evaluation, please request within 30 days.

The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager ([PCN ww admin team@list.ti.com](mailto:PCN_ww_admin_team@list.ti.com)).

Sincerely,
PCN Team
SC Business Services

20180207001A
Attachment: 1

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
AM3894CCYGA120	null
TMS320DM8168CCYG4	null
TMS320DM8168SCYG2	null
AM3894CCYG120	null
TMS320DM8168CCYG2	null

Technical details of this Product Change follow on the next page(s).

PCN Number:	20180207001			PCN Date:	Feb 9, 2018						
Title:	Qualification of new Underfill Material for select devices										
Customer Contact:	PCN Manager	Dept:	Quality Services								
Proposed 1st Ship Date:	May 9, 2018	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 Incorporated is announcing the qualification of new Underfill Material for select devices listed in the "Product Affected" Section. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Underfill Material</td> <td>4202191</td> <td>4221437</td> </tr> </tbody> </table>							Current	Proposed	Underfill Material	4202191	4221437
	Current	Proposed									
Underfill Material	4202191	4221437									
Reason for Change:											
Continuity of supply. Discontinuation of LOCTITE ECCOBOND 4202191 underfill material due to raw material discontinuation.											
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-Info website . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.								
Changes to product identification resulting from this PCN:											
None											
Product Affected:											
AM3892CCYG120	F781934AAAA	TMS320DM8168CCYG	TMS320DM8168SCYG4								
AM3892CCYG135	F781934BAAA	TMS320DM8168CCYG2	TMS320DM8168SCYGA2								
AM3894CCYG120	TMS320DM8165SCYG	TMS320DM8168CCYG2H	TMS320DM8169CCYG								
AM3894CCYG135	TMS320DM8165SCYG2	TMS320DM8168CCYG4	TMS320DM8169MCCYG4								
AM3894CCYGA120	TMS320DM8165SCYG4	TMS320DM8168CCYG4H	VCBUC8168CCYG2								
F781739AAM	TMS320DM8166SCYG2	TMS320DM8168CCYGA2	VCBUP8168CCYG2								
F781775AAAB-B	TMS320DM8167SCYG	TMS320DM8168CCYGH	VCBUP8168CCYGH								
F781776AAAC	TMS320DM8167SCYG2	TMS320DM8168SCYG									
F781778AAB-H	TMS320DM8167SCYG4	TMS320DM8168SCYG2									

Qualification Report

Solder Bump FCBGA Underfill Conversion to Namics 4221437

Approve Date - 01/12/2018

Product Attributes

Attributes	Qual Device: <u>KELVIN2</u>	Qual Device: <u>NETRA 2.1</u>	Qual Device: <u>SAPIR</u>	Qual Device: <u>SD6181</u>
Die Attributes	-	-	-	-
Wafer Fab Supplier	DMOS5	TSMC12	TSMC12	TMSC12
Wafer Process	120nm	40nm	40nm	40nm
Passivation	PBO	Polyimide	Polyimide	Polyimide
Package Attributes	-	-	-	-
Assembly Site	PHI (TIPI)	PHI (TIPI)	PHI (TIPI)	PHI (TIPI)
Package Family	Organic FCBGA	Organic FCBGA	Organic FCBGA	Organic FCBGA
Package Designator	ZLZ	CYG	AAM	AAB
Package Size (mm)	23 x 23	25 x 25	47 x 47	29 x 29
Pin Count	532	1031	2112	780
Solder Ball Composition	SnAgCu	SnAgCu	SnAgCu	SnAgCu
Green Status	RoHS	RoHS	RoHS	RoHS

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: <u>KELVIN2</u>	Qual Device: <u>NETRA 2.1</u>	Qual Device: <u>SAPIR</u>	Qual Device: <u>SD6181</u>
TC	Temperature Cycle, -55/125C	700 Cycles	4/199/0	-	3/125/0	3/123/0
UHA	Unbiased HAST, 110C/85%RH	264 Hours	4/219/0	-	3/120/0	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass

- 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

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