PCN Number:	20150826000	PCN Date:	09/21/2015
Title:	Qualify New Assembly Material set for Selected Device(s)		
Customer Contact:	PCN Manager	Dept.:	Quality Services
Proposed 1st Ship Date:	12/21/2015	Estimated Sample Availability:	Date provided at sample request

Change Type:

☐	Assembly Site	☒	Assembly Process	☒	Assembly Materials
☐	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☐	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments is pleased to announce the qualification of new assembly material set to add Cu as an additional bond wire option for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:

Group 1 Device:

Material	Current	Proposed
Wire	Au	Cu
Controller Die Mount compound	4220838 (Solder Paste)	4207123 (Conductive Epoxy)

Group 2 Device:

Material	Current	Proposed
Wire	Au	Cu
Controller Die Mount compound	4207768 (Conductive Epoxy)	4207123 (Conductive Epoxy)

Reason for Change:

Continuity of supply.

1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties
2) Maximize flexibility within our Assembly/Test production sites.
3) Cu is easier to obtain and stock

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.

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

None.

Changes to product identification resulting from this PCN:

None.

Product Affected Group 1 Device:

SN1401043RVER	TPS53513RVER	TPS53515RVET
SN1402065RVER	TPS53513RVET	TPS53915RVER
SN1402065RVET	TPS53515RVER	TPS53915RVET

Product Affected Group 2 Device:

SN1203064RVFR	TPS544B20RVFT	TPS544C22RVFR	UCD74111RVFT
SN1203066RVFR	TPS544B22RVFR	TPS544C22RVFT	UCD74120RVFR
TPS544A22RVFR	TPS544B22RVFT	UCD74110RVFR	UCD74120RVFT
TPS544A22RVFT	TPS544C20RVFR	UCD74110RVFT	
TPS544B20RVFR	TPS544C20RVFT	UCD74111RVFR	

Qualification Report – Group 1
Cu Wire Qualification on DCu bond pads for Clip QFN Devices in TI Clark

Product Attributes

Attributes	Qual Device: TPS53915RVER	QBS Package: CSD97374Q4M	QBS Package: CSD95379Q3M
Assembly Site	CLARK AT	CLARK AT	CLARK AT
Package Family	QFN	QFN	QFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	CFAB, MH8	CFAB, MH8	CFAB, MH8
Wafer Fab Process	N35ULD09L1P1M0C1, LBC7	N35ULD11L1P1M0C5, LBC7	N35ULD09L1P1M0C10, LBC7

- QBS: Qual By Similarity
- Qual Device TPS53915RVER GOLDEN EYE SR is qualified at LEVEL2-260C
- Device TPS53915RVER GOLDEN EYE SR contains multiple dies.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS53915RVER	QBS Package: CSD97374Q4M	QBS Package: CSD95379Q3M
HAST	Biased HAST 130C/85%RH	96 Hours	-	-	3/231/0
AC	Autoclave 121C	96 Hours	-	3/231/0	3/231/0
TC	Temperature Cycle, -40/125C	1000 Cycles	-	3/231/0	3/231/0
TC	Temperature Cycle, -55/125C	700 Cycles	3/229/0	-	-
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	3/231/0	-

- 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:

Not qualified for Pb-free or Green

Qualification Report - Group 2
Cu Wire Qualification on BOAC bond pads for Clip QFN Devices in TI Clark

Product Attributes

Attributes	Qual Device: TPS544C20RVFT
Assembly Site	CLARK AT
Package Family	QFN
Flammability Rating	UL 94 V-0
Wafer Fab Supplier	CFAB, CFAB, MH8
Wafer Fab Process	N35ULD11L1P1M0C5, N35ULD11L1P1M0C5, LBC7

- QBS: Qual By Similarity
- Qual Device TPS544C20RVFT qualified at LEVEL2-260C
- Device TPS544C20RVFT multiple dies.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TPS544C20RVFT
AC	Autoclave 121C	96 Hours	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0
HTSL	High Temp Storage Bake 150C	1000 Hours	3/231/0
TC	Temperature Cycle, -55/125C	700 Cycles	2/154/0
TC	Temperature Cycle, -65/150C	700 Cycles	1/77/0

- 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:

Not qualified for Pb-free or 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
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