TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20150915001
Qualification of 100% Cu wire bonding on select nfBGA Devices
Change Notification / Sample Request

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).

Sincerely,

PCN Team
SC Business Services

PCN# 20150915001
Attachment: 1

Products Affected:

According to our records, there are the affected device(s) that you have purchased within the past twenty-four (24) months. Technical details of this Product Change follow on the next page(s).

PCN Number:	20150915001	**PCN Date:**	09/21/2015

Title:	Qualification of 100% Cu wire bonding on select nfBGA Devices

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	☐	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 100% Cu bonding for the nfBGA devices listed below.

What	Current Bonding	New Bonding
55um Bond Pads	Cu, 0.8 mil	Cu, 0.70 mil
45um Bond Pads	Au, 0.8 mil	Cu, 0.70 mil

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 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:

DM365ZCES
DM365ZCEW
DM365ZCEZ
DM368ZCEDZ
DM368ZCEZ
DMVA1ZCE
DMVA1ZCED
DMVA25ZCE
DMVA2ZCE
DMVA2ZCED
DMVA2ZCEDR
DMVA2ZCER
TMS320DM361ZCE
TMS320DM362ZCE
TMS320DM362ZCE30
TMS320DM365ZCE
TMS320DM365ZCE21
TMS320DM365ZCE27
TMS320DM365ZCE30
TMS320DM365ZCED30
TMS320DM365ZCEF
TMS320DM365ZCEZ
TMS320DM367ZCE
TMS320DM367ZCE30
TMS320DM367ZCED
TMS320DM367ZCED30
TMS320DM367ZCEF
TMS320DM368GZCEF
TMS320DM368ZCE
TMS320DM368ZCE48
TMS320DM368ZCED
TMS320DM368ZCED48F
TMS320DM368ZCEDF
TMS320DM368ZCEF
TMS320DM368ZCEG
TMS320DM369ZCE
TMS320DM369ZCED
TMS320DM369ZCEDF
TMS320DM369ZCEF
VCBU65WMCE30
VCBU68WMCE30
VS3673UNION
VS3674PITTA
VS3674UNION
VVLOG365ZCE

TEXAS INSTRUMENTS

TI Information
Selective Disclosure

Qualification Report

0.70mil Cu Qual - Freon 361ZWT nfBGA driver
Approve Date 08-Jun-2015

Product Attributes

Attributes	Qual Device: TMS320C6748BZWTA3E	QBS Product Reference: 771570ZCE365	QBS Package Reference: TNETV1061ZWC
Assembly Site	PHI (TIPI)	PHI (TIPI)	PHI (TIPI)
Package Family	NFBGA	NFBGA	NFBGA
Wafer Fab Supplier	UMC FAB12I	UMCI	DMOS6
Wafer Fab Process	1218C021.M6	1218C021.M7	1533C035.15C2

- QBS: Qual By Similarity
- Qual Device TMS320C6748BZWTA3E is qualified at LEVEL3-260CG

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

Type	Test Name / Condition	Duration	Qual Device: TMS320C6748BZWTA3E	QBS Product Reference: 771570ZCE365	QBS Package Reference: TNETV1061ZWC
PC	PreCon Level 3	3XIR/260C	3/960/0	3/870/0	-
PC	PreCon Level 4	3XIR/260C	-	-	3/1080/0
HTOL	Life Test, 125C	1000hrs/125C	-	3/240/0	3/240/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000hrs/85C/85%RH	3/78/0	-	-
UHAST	Unbiased HAST 110C/85%RH	264hrs/110C/85%RH	3/240/0	3/240/0	3/300/0
TC	Temperature Cycle, -55/125C	1000cyc/-55C/125C	3/240/0	3/240/0	3/240/0
HTSL	High Temp Storage Bake 150C	1000hrs/150C	3/240/0	3/300/0	3/179/0
WBP	Bond Strength	76 ball bonds, min. 3 units	3/Pass	-	3/228/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass	3/Pass	3/Pass
PD	Physical Dimensions	(per mechanical drawing)	-	-	1/10/0
YLD	FTY and Bin Summary	-	3/Pass	-	3/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