

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:														
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site									
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material									
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process									
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site									
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials									
				<input type="checkbox"/>	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.														
<table border="1"> <thead> <tr> <th>What</th> <th>Current Bonding</th> <th>New Bonding</th> </tr> </thead> <tbody> <tr> <td>55um Bond Pads</td> <td>Cu, 0.8 mil</td> <td>Cu, 0.70 mil</td> </tr> <tr> <td>45um Bond Pads</td> <td>Au, 0.8 mil</td> <td>Cu, 0.70 mil</td> </tr> </tbody> </table>						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
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														
<input type="checkbox"/>	No Impact to the Material Declaration	<input checked="" type="checkbox"/>	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	TMS320DM361ZCE	TMS320DM367ZCE30	TMS320DM368ZCEG
DM365ZCEW	TMS320DM362ZCE	TMS320DM367ZCED	TMS320DM369ZCE
DM365ZCEZ	TMS320DM362ZCE30	TMS320DM367ZCED30	TMS320DM369ZCED
DM368ZCEDZ	TMS320DM365ZCE	TMS320DM367ZCEF	TMS320DM369ZCEDF
DM368ZCEZ	TMS320DM365ZCE21	TMS320DM368GZCEF	TMS320DM369ZCEF
DMVA1ZCE	TMS320DM365ZCE27	TMS320DM368ZCE	VCBU65WMCE30
DMVA1ZCED	TMS320DM365ZCE30	TMS320DM368ZCE48	VCBU68WMCE30
DMVA25ZCE	TMS320DM365ZCED30	TMS320DM368ZCED	VS3673UNION
DMVA2ZCE	TMS320DM365ZCEF	TMS320DM368ZCED48F	VS3674PITTA
DMVA2ZCED	TMS320DM365ZCEZ	TMS320DM368ZCEDF	VS3674UNION
DMVA2ZCEDR	TMS320DM367ZCE	TMS320DM368ZCEF	VVLOG365ZCE
DMVA2ZCER			



**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