



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20160606003
Qualify New Assembly Material set for Selected Device(s)
Change Notification / Sample Request

Date: 6/21/2016
To: Newark/Farnell 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 changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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

20160606003
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
CD74AC273M	null
CD74HC244M	null
CDC203DW	null
SN74ABT244ADW	null
SN74ABT574ADW	null
SN74AC244DW	null
SN74AC244DWR	null
SN74ACT374DW	null
SN74ACT573DW	null
SN74AHC541DW	null
SN74AHCT541DWR	null
SN74ALS240ADW	null
SN74ALS245ADW	null
SN74ALS541DW	null
SN74ALS640B-1DW	null
SN74ALS641A-1DW	null
SN74AS756DW	null
SN74F244DW	null
SN74F245DW	null
SN74HC244DW	null
SN74HC244DWR	null
SN74HC245DW	null
SN74HC273DW	null
SN74HC273DWR	null
SN74HC373DW	null
SN74HC373DWR	null
SN74HC540DWR	null
SN74HC541DWR	null
SN74HC573ADW	null
SN74HC574DW	null
SN74HC574DWR	null
SN74HC640DWR	null
SN74HCT244DW	null
SN74HCT245DW	null
SN74HCT540DW	null
SN74HCT541DW	null
SN74HCT573DW	null
SN74HCT574DW	null
SN74LS240DW	null
SN74LS244DW	null
SN74LS244DWR	null
SN74LS245DW	null
SN74LS273DW	null
SN74LS273DWR	null
SN74LS373DW	null
SN74LS541DW	null
SN74LVC244ADW	null
SN74LVC541ADW	null
SN74LVC573ADW	null
SN74LVT245BDWG4	null
SN74LVTH244ADW	null

SN75174DW
SN75ALS160DWR
SN74AHC273DW
SN74LVC245ADW

null
null
null
null

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

PCN Number:	20160606003	PCN Date:	06/21/2016															
Title:	Qualify New Assembly Material set for Selected Device(s)																	
Customer Contact:	PCN Manager	Dept:	Quality Services															
Proposed 1st Ship Date:	09/21/2016	Estimated Sample Availability:	Date provided at sample request															
Change Type:																		
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design															
<input checked="" type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet															
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change															
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site															
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process															
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site															
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material															
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process															
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site															
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials															
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process															
PCN Details																		
Description of Change:																		
<p>Texas Instruments is pleased to announce the qualification of new assembly material for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Wire (mils)</td> <td>0.80, 0.96, 1.15mils Au</td> <td>0.96mils Cu</td> </tr> <tr> <td>Lead frame thickness</td> <td>10 mils</td> <td>10mils, 6mils</td> </tr> <tr> <td>Mount compound</td> <td>4042500</td> <td>4147858</td> </tr> <tr> <td>Mold compound</td> <td>4205694</td> <td>4211880</td> </tr> </tbody> </table>				Material	Current	Proposed	Wire (mils)	0.80, 0.96, 1.15mils Au	0.96mils Cu	Lead frame thickness	10 mils	10mils, 6mils	Mount compound	4042500	4147858	Mold compound	4205694	4211880
Material	Current	Proposed																
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Lead frame thickness	10 mils	10mils, 6mils																
Mount compound	4042500	4147858																
Mold compound	4205694	4211880																
Reason for Change:																		
<p>Continuity of supply.</p> <p>1) To align with world technology trends and use assembly materials with enhanced mechanical and electrical properties</p> <p>2) Maximize flexibility within our Assembly/Test production sites.</p>																		
Anticipated impact on Fit, Form, 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:																		
Please see page two of this document for your list of PCN affected devices.																		

Qualification Report

**Universal BOM Mold 4211880 and Die Attach 4147858
for SOIC DW Packages in TITL and MLA
Approve Date 12-May-2016**

Product Attributes

Attributes	Qual Device: ADS1213U	Qual Device: ADS820U	Qual Device: ADS8504IBDW	Qual Device: MSP430F123IDWR	Qual Device: SN65LBC170DW
Assembly Site	TAI	TAI	TAI	TAI	MLA
Package Family	SOIC	SOIC	SOIC	SOIC	SOIC
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	OKI	TSMC WF2	D MOS5	TSMC	DFAB
Wafer Fab Process	OKIDALSATFAB_BICMOS	0.60UM-TSMC	50HPA07	0.35UM-TSMC	LBC3S

Attributes	Qual Device: SN65LBC170DW_SSTN	Qual Device: SN74LVC541ADW	Qual Device: SN74LVC541ADW_SSTN	QBS Package Reference: TL494IDR	QBS Package Reference: ULQ2003AQDRQ1
Assembly Site	MLA	MLA	MLA	FMX	FMX
Package Family	SOIC	SOIC	SOIC	SOIC	SOIC
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V0	UL 94 V-0
Wafer Fab Supplier	DFAB	FFAB	FFAB	SFAB	SFAB
Wafer Fab Process	LBC3S	ASLC10	ASLC10	J11	J11-SLM

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL1-260C: SN65LBC170DW, SN74LVC541ADW, MSP430F123IDWR, TL494IDR, ULQ200AQDRQ1
- Qual Devices qualified at LEVEL2-260C: ADS1213U, ADS8504IBDW, ADS820U

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: ADS1213U	Qual Device: ADS820U	Qual Device: ADS8504IBDW	Qual Device: MSP430F123IDWR	Qual Device: SN65LBC170DW
AC	Autoclave 121C	96 Hours	1/77/0	-	1/77/0	1/77/0	1/77/0
ED	Electrical Characterization, side by side	Per datasheet parameters	Pass	Pass	Pass	-	Pass
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	-	-	-
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	-	-
HTSL	High Temp Storage Bake 170C	420 Hours	1/77/0	-	1/77/0	1/77/0	1/77/0
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass	Pass
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	3/231/0	1/77/0	1/77/0	1/77/0

Type	Test Name / Condition	Duration	Qual Device: SN65LBC170 DW_ SSTN	Qual Device: SN74LVC541A DW	Qual Device: SN74LVC541A DW_ SSTN	QBS Package Reference: TL494IDR	QBS Package Reference: ULQ2003AQDR Q1_STDLF
AC	Autoclave 121C	96 Hours	3/231/0	3/231/0	3/231/0	-	3/231/0
ED	Electrical Characterization, side by side	Per datasheet parameters	Pass	Pass	Pass	-	-
HAST	Biased HAST, 130C/85%RH	192 Hours	-	-	-	3/231/0	3/217/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	-	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	3/231/0	3/231/0	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	-	-
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0	3/231/0	3/231/0	-	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:

Qualified Pb-Free(SMT) and Green

Qualification Report

SOIC-DW 6 mil thick, 2X12 HD, TIM Leadframe Qualification Approve Date 12-May-2016

Product Attributes

Attributes	Qual Device: SN65LBC170DW_SSROUGH	Qual Device: SN65LBC170DW_STD_AU	Qual Device: SN74LVC541ADW_SSROUGH	Qual Device: SN74LVC541ADW_STD_AU
Assembly Site	TIM	TIM	TIM	TIM
Package Family	SOIC	SOIC	SOIC	SOIC
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Supplier	DFAB	DFAB	FFAB	FFAB
Wafer Fab Process	LBC3S	LBC3S	A3C10TLM	A3C10TLM

- QBS: Qual By Similarity

- Qual Devices qualified at LEVEL1-260CG: SN65LBC170DW, SN74LVC541ADW

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: SN65LBC170DW_ SSROUGH	Qual Device: SN65LBC170DW_ STD_AU	Qual Device: SN74LVC541ADW_ SSROUGH	Qual Device: SN74LVC541ADW_ STD_AU
AC	Autoclave 121C	96 Hours	3/231/0	1/77/0	3/231/0	3/231/0
HTSL	High Temp Storage Bake 170C	420 Hours	3/231/0	1/77/0	3/231/0	3/231/0
LI	Lead Fatigue	Leads	3/66/0	-	-	-
LI	Lead Pull	Leads	3/66/0	-	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	Pass	Pass	Pass	Pass
PD	Physical Dimensions	(per mechanical drawing)	3/15/0	-	-	-
SD	Solderability	8 Hours Steam Age, Pb free	3/66/0	-	-	-
TC	Temperature Cycle, - 65/150C	500 Cycles	3/231/0	1/77/0	3/231/0	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

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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