12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN#20241001003.1**
**Qualification of additional Assembly sites for select devices in the LQFP package**
**Change Notification / Sample Request**

**Date:** October 01, 2024
**To:** MOUSER 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.

Texas Instruments requires acknowledgement of receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance and approval of this change. If samples or additional data are required, requests must be received within **30 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the proposed first ship date 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 or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

Change Management Team
SC Business Services

**20241001003.1**
**Attachment: 1**

## Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

| DEVICE | CUSTOMER PART NUMBER |
|---|---|
| DP83848CVV/NOPB | NULL |
| DP83848CVVX/NOPB | NULL |
| DP83848EVV/NOPB | NULL |
| DP83848IVV/NOPB | NULL |
| DP83848IVVX/NOPB | NULL |

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

| | | | |
|---|---|---|---|
| **PCN Number:** | PCN#20241001003.1 | **PCN Date:** | October 01, 2024 |
| **Title:** | Qualification of additional Assembly sites for select devices in the LQFP package | | |
| **Customer Contact:** | Change Management Team | **Dept:** | Quality Services |
| **Proposed 1st Ship Date:** | December 30, 2024 | **Sample requests accepted until:** | October 31, 2024* |

***Sample requests received after October 31, 2024 will not be supported.**

**Change Type:**

| | | | | | |
|---|---|---|---|---|---|
| ☒ | Assembly Site | ☐ | Design | ☐ | Wafer Bump Material |
| ☒ | Assembly Process | ☐ | Data Sheet | ☐ | Wafer Bump Process |
| ☒ | Assembly Materials | ☐ | Part number change | ☐ | Wafer Fab Site |
| ☐ | Mechanical Specification | ☐ | Test Site | ☐ | Wafer Fab Material |
| ☒ | Packing/Shipping/Labeling | ☐ | Test Process | ☐ | Wafer Fab Process |

## PCN Details

**Description of Change:**

Texas Instruments Incorporated is announcing the qualification of additional Assembly sites for devices in the LQFP package listed below. Construction options are as follows:

| QFP/LQFP/TQFP Build Sites | |
|---|---|
| **Assembly Sites** | TIEM, PHI, TAI, ASEK, AP1 |
| **Moold Compound** | 8072833<br>4211649-0042<br>SID#096695<br>8095183<br>4225114-0006<br>SID#096641<br>4212581<br>4212581<br>4205442<br>4209640<br>SID#101320866<br>SID#101306314 |
| **Mount Compound** | 4208458<br>4211470<br>8001746<br>8001756<br>SID#096580<br>SID#096588<br>4042504<br>SID# 101227300<br>SID#101175696 |
| **LeadFrame Finish** | NiPdAu, Matte Sn |
| **Bond Wire (mil)** | Cu (0.8, 0.96, 1.0, 1.15, 1.2, 1.31, 1.98), Au (0.8, 0.96, 1.0, 1.15, 1.2, 1.31, 1.98) |

As of today and until this PCN expires, the standard part number (for example, DP83848CVV/NOPB) is shipping with NiPdAu or Matte Sn lead finish. Upon expiration of this

PCN, the standard part number may continue to ship with either MatteSn or NiPdAu lead finish. See example ship possibilities below. Customers who desire NiPdAu lead finish should order either a G4 or E4 equivalent (for example, DP83848CVV/NOPBG4). Note that part numbers with a G4 or E4 suffix will run through NiPdAu-only flows. For reference, details of TI's labeling and symbolization are available here.

As two examples:

(A) For a customer order of 750 units of DP83848CVV/NOPB with 250 units SPQ (Standard Pack Quantity per Reel), TI can satisfy in one of the following ways:
- 3 Reels of NiPdAu finish.
- 3 Reels of Matte Sn finish
- 2 Reels of Matte Sn and 1 reel of NiPdAu finish.
- 2 Reels of NiPdAu and 1 reel of Matte Sn finish.

(B) For a customer order of 750 units of DP83848CVV/NOPBG4 with 250 units SPQ (Standard Pack Quantity per Reel), TI can satisfy in 3 Reels of NiPdAu finish.

**Reason for Change:**

Supply continuity

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

None

**Impact on Environmental Ratings**

Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.

| RoHS | REACH | Green Status | IEC 62474 |
|---|---|---|---|
| ☒ No Change | ☒ No Change | ☒ No Change | ☒ No Change |

**Changes to product identification resulting from this PCN:**

| Assembly Site | Assembly Site Origin (22L) | Assembly Country Code (23L) | Assembly City |
|---|---|---|---|
| AP1 | AKR | PHL | Cupang, Muntinlupa City |
| ASEK | ASF | TWN | Kaohsiung |
| TIPI | PHI | PHL | Baguio City |
| TI Taiwan | TAI | TWN | Chung Ho, New Taipei City |
| TI Melaka | CU6 | MYS | Melaka |

Sample product shipping label (not actual product label)


**Product Affected:**

| | | | |
|---|---|---|---|
| DP83848CVV/NOPB | DP83848CVVX/NOPBG4 | DP83848EVVX/NOPB | DP83848IVVX/NOPB |
| DP83848CVV/NOPBG4 | DP83848EVV/NOPB | DP83848IVV/NOPB | DP83848IVVX/NOPBG4 |

| | | |
|---|---|---|
| DP83848CVVX/NOPB | DP83848EVV/NOPBG4 | DP83848IVV/NOPBG4 |



# QFP Qualification Report

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

| | Stress Test | Duration | PHI BQ76952PFB | TIEMA DS90C241IVTSZ6 |
|---|---|---|---|---|
| TC | Temperature Cycling -65/150C Or Temperature Cycling -55/125C | 500 Cycles Or 700 Cycles | 3/231/0 | 3/231/0 |
| HAST/ THB | Biased HAST 130C/85%RH Or Biased HAST 110C/85%RH Or Temperature Humidity Bias, 85C/85%RH | 96 hours Or 264 hours Or 1000 hours | 3/231/0 | 3/231/0 |
| HTSL | High Temp. Storage Bake 150C Or High Temp. Storage Bake 170C | 1000 hours Or 420 hours | 3/231/0 | 3/231/0 |
| UHAST /AC | Unbiased HAST, 130C/85%RH Or Autoclave 121C | 96 hours | 3/231/0 | 3/231/0 |
| SD | Solderability | 8 Hour Steam age or 155C Dry Bake | 3/66/0 | 3/66/0 (DP83865DVHNOPB) |
| MQ | Manufacturability | - | Pass | Pass |

| | Stress Test | Duration | ASEK LM97593VH/NOPB | TAI MSP430V541IPZ |
|---|---|---|---|---|
| TC | Temperature Cycling -65/150C Or Temperature Cycling -55/125C | 500 Cycles Or 700 Cycles | 3/231/0 | 3/231/0 |
| HAST/ THB | Biased HAST 130C/85%RH Or Biased HAST 110C/85%RH Or Temperature Humidity Bias, 85C/85%RH | 96 hours Or 264 hours Or 1000 hours | 3/231/0 | 3/231/0 |
| HTSL | High Temp. Storage Bake 150C Or High Temp. Storage Bake 170C | 1000 hours Or 420 hours | 3/231/0 | 3/231/0 |
| UHAST /AC | Unbiased HAST, 130C/85%RH Or Autoclave 121C | 96 hours | 3/231/0 | 3/231/0 |
| SD | Solderability | 8 Hour Steam age or 155C Dry Bake | 3/66/0 | 3/66/0 (MSP430FR6989IPZ MSP430FR5989IPM) |
| MQ | Manufacturability | - | Pass | Pass |

| | Stress Test | Duration | AP1 ADC08D1000K9F5 SN74V3680-15PEU |
|---|---|---|---|
| TC | Temperature Cycling -65/150C Or Temperature Cycling -55/125C | 500 Cycles Or 700 Cycles | 3/231/0 |
| HAST/ THB | Biased HAST 130C/85%RH Or Biased HAST 110C/85%RH Or | 96 hours Or 264 hours Or | 3/231/0 |

| | Stress Test | Duration | AP1<br>ADC08D1000K9F5<br>SN74V3680-15PEU |
|---|---|---|---|
| | Temperature Humidity Bias, 85C/85%RH | 1000 hours | |
| HTSL | High Temp. Storage Bake 150C<br>Or<br>High Temp. Storage Bake 170C | 1000 hours<br>Or<br>420 hours | 3/231/0 |
| UHAST /AC | Unbiased HAST, 130C/85%RH<br>Or<br>Autoclave 121C | 96 hours | 3/231/0 |
| SD | Solderability | 8 Hour Steam age or 155C Dry Bake | 3/66/0<br>(TL28L92FR) |
| MQ | Manufacturability | - | Pass |

Devices DS90C241IVTSZ6, SN74V3680-15PEU, ADC08D1000K9F5, SN74V3680-15PEU, MSP430V541IPZ, and LM97593VH/NOPB qualified at MSL3 rating. Device BQ76952PFB qualified at MSL2 rating

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, and HTSL, as applicable
- The following are equivalent HTSL options based on activation energy of 0.7eV: 150C/1k Hours, and 170C/420 Hours

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 Change Management team or your local Field Sales Representative.

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