12500 TI Boulevard, MS 8640, Dallas, Texas 75243

# PCN# 20070809002
# Ceramic Hermetic Flipchip seal process change
# Final Change Notification / Sample Request

Dear Customer:

This is an announcement of change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

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.

We request you acknowledge receipt of this notification within **30** days of the date of this notice. If you require samples to conduct an evaluation, please make any request within the 30 days—samples are not built ahead of the change. Please see the schedule on the following pages for availability dates. You may contact the PCN Manager or your local Field Sales Representative to acknowledge this PCN and request samples.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification. This notification period is per TI's standard process. Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

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
Phone: (214) 480-6037
Fax: (214) 480-6659

| **PCN Number:** | 20070809002 | **PCN Date:** | 08/17/2007 |
|---|---|---|---|
| **Title:** | Ceramic Hermetic Flipchip seal process change | | |
| **Customer Contact:** | PCN Manager | **Phone:** (214) 480-6037 | **Dept:** Quality Services |
| **Proposed 1st Ship Date:** | 11/17/2007 | **Estimated Sample Availability:** | 10/31/2007 |

**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:**

Changing from a AuSn solder seal process to a parallel seam seal welding process.

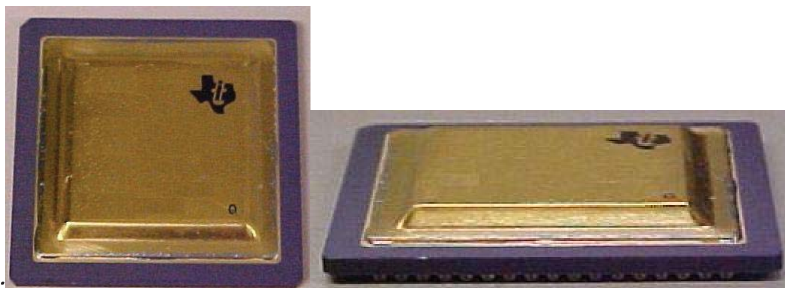
**Reason for Change:**

To provide a more robust sealing process that also reduces assembly cycle time and allows the current assembly subcon (Kyocera San Diego) to provide a turnkey assembly solution.

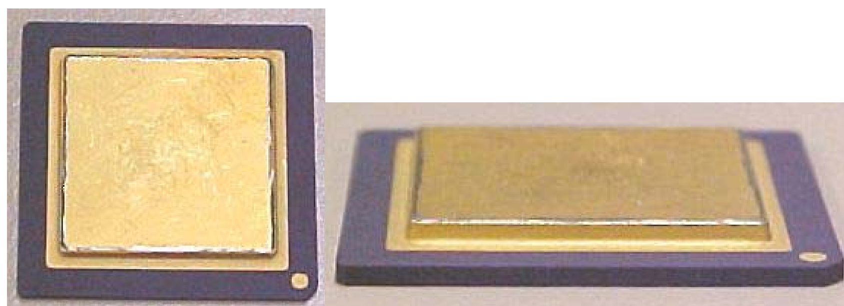
**Anticipated impact on Fit, Form, Function & Reliability (positive / negative):**

Form: visual appearance changes slightly. The old version has a top-hat lid that has sloped lid design whereas the new version lid is perpendicular to the substrate in design.

*Change From:*



*Change To:*



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

None.

**Product Affected:**

| | | |
|---|---|---|
| 5962-9866101VXA | SM320C6701GLPS16 | SM320C6201BGLPW15 |
| 5962-9866102VXA | SM320C6701GLPW14 | SMJ320C6701GLPW14 |
| SMJ320C6201BGLPW15 | SMJ320C6203GLPM20 | |
| SM320C6203GLPM20 | SM320C6201BGLPS20 | |

## Qualification Data:

| This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications. | | | |
|---|---|---|---|
| **Qualification Schedule:** | **Start:** 02/2007 | **End:** 08/2007 | |

**Qualification Device Construction Details:**

| | Qual Vehicle |
|---|---|
| Device: | SMC6701GLPW14 |
| Wafer Fab: | DP1DM5 |
| Wafer Technology: | DSP |
| Die Size: | 459 X 444 mils |
| Assembly Site: | Kyocera San Diego |
| Package Type/Code: | Ceramic Flipchip / GLP |
| Package Pins: | 429 CBGA SnPbBi spheres |
| Mold Compound: | N/A |
| Mold Compound Supplier: | N/A |
| Substrate: | 4207695-0001 (429 CBGA) |
| Composition: | $Al_2O_3$ |
| Die Attach: | SnPb solder bumps & underfill |
| Die Attach Supplier: | N/A |
| Moisture Level: | Not Rated - Package is Hermetic |

**Qualification:** ☐ **Plan** ☒ **Test Results**

| Reliability Test | Conditions | Sample Size (PASS/FAIL) |
|---|---|---|
| D3 - D3 Sequence | MIL-PRF-38535 Grp D3 | 15/0 |
| D4 – D4 Sequence | MIL-PRF-38535 Grp D4 | 15/0 |
| IW - Internal Water Vapor | Method 1018 Grp D6 | 3/0 |
| PD - Physical Dimensions | Method 2016 | 15/0 |
| MF - Manufacturability | (Per applicable A/T, W/F Reqm'ts) | 1 lot/0 |
| VM - Visual Mechanical | Method 2009 | 1 lot/0 |
| XR - X-ray (1) | X-Ray will be replace with Cross-sections | 5/0 |
| Thermal Shock | -65C/150C, 100cyc | 25/0 |

Notes:
Qualification tests "pass" on zero fails for each test

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 |