

|   |  |                                     |                           |
|---|--|-------------------------------------|---------------------------|
| <b>PCN Number:</b>                        | 20170331000B                           | <b>PCN Date:</b>                    | Feb 12 2018               |
| <b>Title:</b>                             | New 23x23 trays for Select BGA Devices |                                     |                           |
| <b>Customer Contact:</b>                  | <a href="#">PCN Manager</a>            | <b>Dept:</b>                        | Quality Services          |
| <b>Proposed 1<sup>st</sup> Ship Date:</b> | July 5 2017                            |                                     |                           |
| <b>Change Type:</b>                       |  |                                     |                           |
| <input type="checkbox"/>                  | Assembly Site                          | <input type="checkbox"/>            | Assembly Process          |
| <input type="checkbox"/>                  | Design                                 | <input type="checkbox"/>            | Electrical Specification  |
| <input type="checkbox"/>                  | Test Site                              | <input checked="" type="checkbox"/> | Packing/Shipping/Labeling |
| <input type="checkbox"/>                  | Wafer Bump Site                        | <input type="checkbox"/>            | Wafer Bump Material       |
| <input type="checkbox"/>                  | Wafer Fab Site                         | <input type="checkbox"/>            | Wafer Fab Materials       |
|   |  | <input type="checkbox"/>            | Part number change        |
|   |  | <input type="checkbox"/>            | Assembly Materials        |
|   |  | <input type="checkbox"/>            | Mechanical Specification  |
|   |  | <input type="checkbox"/>            | Test Process              |
|   |  | <input type="checkbox"/>            | Wafer Bump Process        |
|   |  | <input type="checkbox"/>            | Wafer Fab Process         |

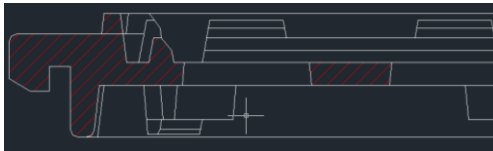
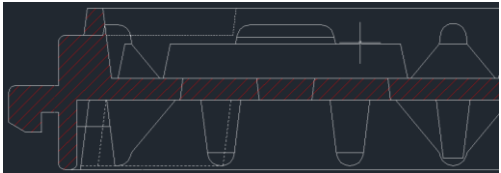

### PCN Details

#### Description of Change:

**Revision B** is to correct the thickness "to" value dimension in the below comparison table. The correction is shown in bold highlight.

Texas Instruments is pleased to announce the qualification of a new improved tray for select BGA devices in the list below. A comparison summary of the differences as follows:

#### 23 x 23 BGA Tray Change

| What             | From   | To  |
|------------------|--|---|
| Stock #/Supplier | 4212091/Daewan, 4212396/Kostat   | 4222079/Daewon  |
| Weight           | 100/104 grams  | 169 grams   |
| Thickness        | 7.62mm   | <del>12.9</del> <b>12.19mm</b>  |
| Floor Design     | "X", Square  | "X"   |
| Pocket Design    | "X", Square  | "X"   |
| Design           | 4212091<br> | 4222079<br> |
|                  | 4212396<br> |   |

## DIMENSIONAL COMPARISON

| ITEM DESCRIPTION                                 | CURRENT TRAY : 4212091-0001 |              |              | CURRENT TRAY :4212396-0001 |              |              | PROPOSED: 4222079-0001          |              |              | COMMENT   |
|--|-----------------------------|--------------|--------------|----------------------------|--------------|--------------|---------------------------------|--------------|--------------|-----------|
|  | DIM                         | Upper Limits | Lower Limits | DIM                        | Upper Limits | Lower Limits | DIM                             | Upper Limits | Lower Limits |           |
| Overall Length                                   | 322.6                       | 322.85       | 322.35       | 322.6                      | 322.85       | 322.35       | 322.6                           | 322.85       | 322.35       | NO CHANGE |
| Layout Length                                    | 315.0                       | 315.25       | 314.75       | 315.0                      | 315.25       | 314.75       | 315.0                           | 315.25       | 314.75       | NO CHANGE |
| Layout Width                                     | 135.9                       | 136.15       | 135.65       | 135.9                      | 136.15       | 135.65       | 135.9                           | 136.15       | 135.65       | NO CHANGE |
| Layout Length on Top Stack frame                 | 311.15                      | 311.40       | 311.02       | 311.15                     | 311.40       | 311.02       | 311.15                          | 311.40       | 311.02       | NO CHANGE |
| Layout Width on Top Stack frame                  | 132.08                      | 132.33       | 131.95       | 132.08                     | 132.33       | 131.95       | 132.08                          | 132.33       | 131.95       | NO CHANGE |
| Layout Length on Bottom Stack frame              | 311.66                      | 311.91       | 311.53       | 311.66                     | 311.91       | 311.53       | 311.66                          | 311.91       | 311.53       | NO CHANGE |
| Layout Width on Bottom Stack frame               | 132.59                      | 132.84       | 132.46       | 132.59                     | 132.84       | 132.46       | 132.59                          | 132.84       | 132.46       | NO CHANGE |
| End Tab Length                                   | 92.1                        | 92.35        | 91.85        | 92.1                       | 92.35        | 91.85        | 92.1                            | 92.35        | 91.85        | NO CHANGE |
| Overall Height                                   | 7.62                        | 7.75         | 7.49         | 7.62                       | 7.75         | 7.49         | 12.19                           | 12.32        | 12.06        | CHANGE    |
| Stack Height                                     | 1.27                        | 1.40         | 1.14         | 1.27                       | 1.40         | 1.14         | 2.03                            | 2.16         | 1.90         | CHANGE    |
| Tray Matrix No.                                  | 5x12                        |              |              | 5x12                       |              |              | 5x12                            |              |              | NO CHANGE |
| Pitch M  | 16.95                       | 17.08        | 16.82        | 16.95                      | 17.08        | 16.82        | 16.95                           | 17.08        | 16.82        | NO CHANGE |
| Pitch M3   | 25.50                       | 25.63        | 25.37        | 25.50                      | 25.63        | 25.37        | 25.50                           | 25.63        | 25.37        | NO CHANGE |
| Pitch M1   | 17.25                       | 17.38        | 17.12        | 17.25                      | 17.38        | 17.12        | 17.25                           | 17.38        | 17.12        | NO CHANGE |
| Pitch M2   | 25.50                       | 25.63        | 25.37        | 25.50                      | 25.63        | 25.37        | 25.50                           | 25.63        | 25.37        | NO CHANGE |
| Distance of tray singulation from corner of tray | 34.3                        | 34.43        | 34.17        | 34.3                       | 34.43        | 34.17        | 34.3                            | 34.43        | 34.17        | NO CHANGE |
| Tray singulation width                           | 25.4                        | 25.65        | 25.15        | 25.4                       | 25.65        | 25.15        | 25.4                            | 25.65        | 25.15        | NO CHANGE |
| Tray Lifting surface height                      | 2.54                        | 2.67         | 2.41         | 2.54                       | 2.67         | 2.41         | 2.54                            | 2.67         | 2.41         | NO CHANGE |
| Cavity Size                                      | 23.3                        | 23.38        | 23.22        | 23.3                       | 23.38        | 23.22        | 23.3                            | 23.38        | 23.22        | NO CHANGE |
| Pedestal Design                                  | Slope design                |              |              | Slope design               |              |              | Slope design with corner relief |              |              | CHANGE    |
| Package seating height (Top)                     | 1.52                        | 1.62         | 1.42         | 1.66                       | 1.79         | 1.53         | 2.7                             | 2.8          | 2.6          | CHANGE    |
| Package seating height (Bottom)                  | 1.1                         | 1.2          | 1            | 0.60                       | 0.73         | 0.47         | 1.3                             | 1.4          | 1.2          | CHANGE    |

### Reason for Change:

Quality Improvement

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

None

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

New tray

### Product Affected:

|                |                    |                    |                    |
|----------------|--------------------|--------------------|--------------------|
| AM3871CCYE100  | TMS320C6414TBGLZA6 | TMS320DM8127SCYEA0 | TMS32C6414EGLZA6E3 |
| AM3871CCYE80   | TMS320C6414TBGLZA7 | TMS320DM8127SCYED0 | TMS32C6414EZLZ5E0  |
| AM3874BCYE100  | TMS320C6414TBGLZA8 | TMS320DM8127SCYED1 | TMS32C6414EZLZ6E3  |
| AM3874CCYE100  | TMS320C6415TBCLZ1  | TMS320DM8127SCYED2 | TMS32C6414EZLZ7E3  |
| AM3874CCYE80   | TMS320C6415TBCLZ6  | TMS320DM8127SCYED3 | TMS32C6414EZLZA5E0 |
| AM3874CCYEA100 | TMS320C6415TBCLZ7  | TMS320DM8147BCYE1  | TMS32C6414EZLZA6E3 |
| AM3874CCYEA80  | TMS320C6415TBCLZA6 | TMS320DM8147SCYE0  | TMS32C6414EZLZW5E0 |
| AM5716AABCD    | TMS320C6415TBCLZA8 | TMS320DM8147SCYE1  | TMS32C6414EZLZW6E3 |
| AM5716AABCD A  | TMS320C6415TBCLZW6 | TMS320DM8147SCYE2  | TMS32C6414TBCLZWA6 |
| AM5716AABCDEA  | TMS320C6415TBCLZW7 | TMS320DM8148BCYE1  | TMS32C6414TBCLZWA8 |
| AM5716AABCX    | TMS320C6415TBGLZ1  | TMS320DM8148BCYE2  | TMS32C6414TBGLZWA8 |
| AM5716AABCXA   | TMS320C6415TBGLZ6  | TMS320DM8148CCYE0  | TMS32C6415EGLZ5E0  |
| AM5716AABCXEA  | TMS320C6415TBGLZ7  | TMS320DM8148CCYE1  | TMS32C6415EGLZ6E3  |

|                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| AM5716ABCXA        | TMS320C6415TBGLZA8 | TMS320DM8148CCYE2  | TMS32C6415EGLZA5E0 |
| AM5717AABCXEA      | TMS320C6415TBGLZW8 | TMS320DM8148CCYE2F | TMS32C6415EGLZA6E3 |
| AM5718AABCX        | TMS320C6416TBCLZ1  | TMS320DM8148CCYEA0 | TMS32C6415EGLZW6E3 |
| AM5718AABCXA       | TMS320C6416TBCLZ6  | TMS320DM8148SCYE0  | TMS32C6415EZLZ5E0  |
| AM5718AABCXEA      | TMS320C6416TBCLZ7  | TMS320DM8148SCYE1  | TMS32C6415EZLZ6E3  |
| AM5726BABCX        | TMS320C6416TBCLZA6 | TMS320DM8148SCYE2  | TMS32C6415EZLZ7E3  |
| AM5726BABCXA       | TMS320C6416TBCLZA7 | TMS320DM8148SCYEA0 | TMS32C6415EZLZA5E0 |
| AM5726BABCXEA      | TMS320C6416TBCLZD1 | TMS320EDGEGLZ      | TMS32C6415TBCLZW7F |
| AM5727BABCXEA      | TMS320C6416TBGLZ1  | TMS320EEDGE CUN    | TMS32C6416EGLZ5E0  |
| AM5728AABCXA       | TMS320C6416TBGLZ6  | TMS320EEDGE CUNA   | TMS32C6416EGLZ6E3  |
| AM5728BABCX        | TMS320C6416TBGLZ7  | TMS320TCI100BCLZ7  | TMS32C6416EGLZ7E3  |
| AM5728BABCXA       | TMS320C6416TBGLZA6 | TMS320TCI100BCLZA6 | TMS32C6416EGLZA5E0 |
| AM5728BABCXEA      | TMS320C6416TBGLZA8 | TMS320TCI100BCLZA7 | TMS32C6416EGLZA6E3 |
| AM5729BABCXEA      | TMS320C6457CCMH    | TMS320TCI100BGLZ7  | TMS32C6416EZLZ5E0  |
| DM8147SCIS0        | TMS320C6457CCMH2   | TMS320TCI100BQCLZ  | TMS32C6416EZLZ6E3  |
| DVITDM8148CCYE1    | TMS320C6457CCMH8   | TMS320TCI100BQCLZR | TMS32C6416EZLZA6E3 |
| HPSDM8148CCYE2     | TMS320C6457CCMHA   | TMS320TCI100BQGLZ  | TMS32TCI6484CCMHV5 |
| MTDM8148CCYE2      | TMS320C6457CCMHA2  | TMS320TCI100BQGLZA | TMS32TCI6487FCUNA2 |
| SM320C6457CGMHS    | TMS320C6457CGMHA   | TMS320TCI6484CCMH  | TMS32TCI6487FCUNAH |
| SM32C6415EGLZ50AEP | TMS320C6474FCUN    | TMS320TCI6484CCMH2 | TMS32TCI6487FZUNAH |
| SM32C6415EGLZ50SEP | TMS320C6474FCUN2   | TMS320TCI6484CCMHA | TMS32TCI6488FCUNA2 |
| SM32C6416TBGLZA8EP | TMS320C6474FCUN8   | TMS320TCI6484CGMH  | TMS32TCI6488FZUNA2 |
| SM32C6416TBGLZI1EP | TMS320C6474FCUNA   | TMS320TCI6484CMH   | V5042CCYE0ACL      |
| TDA1MDRCCYEA0      | TMS320C6474FCUNA2  | TMS320TCI6487FCUN  | V5042CCYE1ACL      |
| TMS320C6411AGLZ    | TMS320C6474FGUNA   | TMS320TCI6487FCUN2 | V62/04609-05XA     |
| TMS320C6411AZLZ    | TMS320C6474FZUNA2  | TMS320TCI6487FCUNA | V62/04609-08XA     |
| TMS320C6414TBCLZ1  | TMS320C6A8147BCYE0 | TMS320TCI6487FGUN  | V62/05607-05YA     |
| TMS320C6414TBCLZ6  | TMS320C6A8147BCYE1 | TMS320TCI6487FGUN2 | V62/05607-06YA     |
| TMS320C6414TBCLZ7  | TMS320C6A8147BCYE2 | TMS320TCI6487FGUNA | XAM5718AABCXEA     |
| TMS320C6414TBCLZ8  | TMS320C6A8148BCYE2 | TMS320TCI6488FCUN  | XAM5718AABCXTUEA   |
| TMS320C6414TBCLZA6 | TMS320DM8127BCYE3  | TMS320TCI6488FCUN2 | XAM5718ZBOXES      |
| TMS320C6414TBCLZA7 | TMS320DM8127BCYED3 | TMS320TCI6488FCUNA | XAM5728AABCXE      |
| TMS320C6414TBCLZA8 | TMS320DM8127SCYE0  | TMS320TCI6488FCUNH | XAM5728BABCXE      |
| TMS320C6414TBCLZW8 | TMS320DM8127SCYE1  | TMS32C6414EGLZ5E0  | XAM5728BABCXTUEA   |
| TMS320C6414TBGLZ1  | TMS320DM8127SCYE2  | TMS32C6414EGLZ6E3  | XAM5729BABCXEA     |
| TMS320C6414TBGLZ6  | TMS320DM8127SCYE3  | TMS32C6414EGLZ7E3  | XAM5729BABCXTUEA   |
| TMS320C6414TBGLZ7  | TMS320DM8127SCYE3H | TMS32C6414EGLZA5E0 |                    |

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