

| PCN Number: | 20140505002A | | | PCN Date: | 11/03/2014 | | | | | | | | | | | | |
|---|--|-------------------------------------|------------------------------|-------------------------------------|--------------------------|----------|---------|----------|------|----|----|----------------|------|------|---------------|------|------|
| Title: | Qualify New Assembly Material set for Selected Device(s) | | | | | | | | | | | | | | | | |
| Customer Contact: | PCN Manager | Phone: | +1(214)480-6037 | Dept: | Quality Services | | | | | | | | | | | | |
| Change Type: | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Assembly Site | <input checked="" type="checkbox"/> | Assembly Process | <input checked="" type="checkbox"/> | Assembly Materials | | | | | | | | | | | | |
| <input type="checkbox"/> | Design | <input type="checkbox"/> | Electrical Specification | <input type="checkbox"/> | Mechanical Specification | | | | | | | | | | | | |
| <input type="checkbox"/> | Test Site | <input type="checkbox"/> | Packing/Shipping/Labeling | <input type="checkbox"/> | Test Process | | | | | | | | | | | | |
| <input type="checkbox"/> | Wafer Bump Site | <input type="checkbox"/> | Wafer Bump Material | <input type="checkbox"/> | Wafer Bump Process | | | | | | | | | | | | |
| <input type="checkbox"/> | Wafer Fab Site | <input type="checkbox"/> | Wafer Fab Materials | <input type="checkbox"/> | Wafer Fab Process | | | | | | | | | | | | |
| PCN Details | | | | | | | | | | | | | | | | | |
| Description of Change: | | | | | | | | | | | | | | | | | |
| Revision A is to make correction on the following: | | | | | | | | | | | | | | | | | |
| (a) Remove select devices in the Product Affected Section (with strikethrough) and highlighted in yellow. These devices were inadvertently added and not affected by this change. | | | | | | | | | | | | | | | | | |
| Texas Instruments is pleased to announce the qualification of new assembly material set to add Cu as an additional bond wire option for devices listed in "Product affected" section below. Devices will remain in current assembly facility and piece part changes as follows: | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Material</th> <th>Current</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Wire</td> <td>Au</td> <td>Cu</td> </tr> <tr> <td>Mount compound</td> <td>A-03</td> <td>A-16</td> </tr> <tr> <td>Mold compound</td> <td>R-07</td> <td>R-21</td> </tr> </tbody> </table> | | | | | | Material | Current | Proposed | Wire | Au | Cu | Mount compound | A-03 | A-16 | Mold compound | R-07 | R-21 |
| Material | Current | Proposed | | | | | | | | | | | | | | | |
| Wire | Au | Cu | | | | | | | | | | | | | | | |
| Mount compound | A-03 | A-16 | | | | | | | | | | | | | | | |
| Mold compound | R-07 | R-21 | | | | | | | | | | | | | | | |
| 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 Fit, Form, Function, Quality or Reliability (positive / negative): | | | | | | | | | | | | | | | | | |
| None. | | | | | | | | | | | | | | | | | |
| Changes to product identification resulting from this PCN: | | | | | | | | | | | | | | | | | |
| None. | | | | | | | | | | | | | | | | | |
| Product Affected: | | | | | | | | | | | | | | | | | |
| 74AHC1G125DCKRE4 | SN74AHC1G04DCKTE4 | SN74AUC2G34DCKRG4 | SN74LVC1G240DCK6 | | | | | | | | | | | | | | |
| 74AHC1G125DCKRG4 | SN74AHC1G04DCKTG4 | SN74AUP1G04DCKR | SN74LVC1G240DCKR | | | | | | | | | | | | | | |
| 74AHC1G125DCKTE4 | SN74AHC1G08DCK6 | SN74AUP1G04DCKRE4 | SN74LVC1G240DCKT | | | | | | | | | | | | | | |
| 74AHC1G125DCKTG4 | SN74AHC1G08DCKR | SN74AUP1G04DCKRG4 | SN74LVC1G3157DCKR | | | | | | | | | | | | | | |
| 74AHC1G126DCKRE4 | SN74AHC1G08DCKRE4 | SN74AUP1G04DCKT | SN74LVC1G32DCK6 | | | | | | | | | | | | | | |
| 74AHC1G126DCKRG4 | SN74AHC1G08DCKRG4 | SN74AUP1G04DCKTE4 | SN74LVC1G32DCKR | | | | | | | | | | | | | | |
| 74AHC1G126DCKTE4 | SN74AHC1G08DCKT | SN74AUP1G04DCKTG4 | SN74LVC1G32DCKRE4 | | | | | | | | | | | | | | |
| 74AHC1G126DCKTG4 | SN74AHC1G08DCKTE4 | SN74AUP1G17DCKR | SN74LVC1G32DCKRG4 | | | | | | | | | | | | | | |
| 74AHC1GU04DCKRE4 | SN74AHC1G08DCKTG4 | SN74AUP1G17DCKRE4 | SN74LVC1G32DCKT | | | | | | | | | | | | | | |
| 74AHC1GU04DCKRG4 | SN74AHC1G09DCKR | SN74AUP1G17DCKRG4 | SN74LVC1G32DCKTE4 | | | | | | | | | | | | | | |

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|-------------------|--------------------|-------------------|--------------------|
| 74AHC1GU04DCKTE4 | SN74AHC1G125DCKR | SN74AUP1G17DCKT | SN74LVC1G32DCKTG4 |
| 74AHC1GU04DCKTG4 | SN74AHC1G125DCKT | SN74AUP1G17DCKTE4 | SN74LVC1G332DCKR |
| 74AHCT1G00DCKRE4 | SN74AHC1G126DCK6 | SN74AUP1G17DCKTG4 | SN74LVC1G332DCKRG4 |
| 74AHCT1G00DCKRG4 | SN74AHC1G126DCKR | SN74AUP1G97DCKR | SN74LVC1G57DCKR |
| 74AHCT1G00DCKTE4 | SN74AHC1G126DCKT | SN74AUP1G97DCKRE4 | SN74LVC1G57DCKRE4 |
| 74AHCT1G00DCKTG4 | SN74AHC1G14DCK6 | SN74AUP1G97DCKRG4 | SN74LVC1G57DCKRG4 |
| 74AHCT1G02DCKRE4 | SN74AHC1G14DCKR | SN74AUP1T00DCKR | SN74LVC1G58DCKR |
| 74AHCT1G02DCKRG4 | SN74AHC1G14DCKRE4 | SN74AUP1T02DCKR | SN74LVC1G58DCKRE4 |
| 74AHCT1G02DCKTE4 | SN74AHC1G14DCKRG4 | SN74AUP1T04DCKR | SN74LVC1G58DCKRG4 |
| 74AHCT1G02DCKTG4 | SN74AHC1G14DCKT | SN74AUP1T08DCKR | SN74LVC1G66DCKR |
| 74AHCT1G04DCKRE4 | SN74AHC1G14DCKTE4 | SN74AUP1T14DCKR | SN74LVC1G66DCKRE4 |
| 74AHCT1G04DCKRG4 | SN74AHC1G14DCKTG4 | SN74AUP1T157DCKR | SN74LVC1G66DCKRG4 |
| 74AHCT1G04DCKTE4 | SN74AHC1G32DCK6 | SN74AUP1T158DCKR | SN74LVC1G79DCK6 |
| 74AHCT1G04DCKTG4 | SN74AHC1G32DCKR | SN74AUP1T17DCKR | SN74LVC1G79DCKR |
| 74AHCT1G08DCKRE4 | SN74AHC1G32DCKRE4 | SN74AUP1T32DCKR | SN74LVC1G79DCKRE4 |
| 74AHCT1G08DCKRG4 | SN74AHC1G32DCKRG4 | SN74AUP1T86DCKR | SN74LVC1G79DCKRG4 |
| 74AHCT1G08DCKTE4 | SN74AHC1G32DCKT | SN74AUP1T87DCKR | SN74LVC1G79DCKT |
| 74AHCT1G08DCKTG4 | SN74AHC1G32DCKTE4 | SN74AUP2G04DCKR | SN74LVC1G79DCKTE4 |
| 74AHCT1G125DCKRE4 | SN74AHC1G32DCKTG4 | SN74AUP2G06DCKR | SN74LVC1G79DCKTG4 |
| 74AHCT1G125DCKRG4 | SN74AHC1G86DCK6 | SN74AUP2G07DCKR | SN74LVC1G80DCKR |
| 74AHCT1G125DCKTE4 | SN74AHC1G86DCKR | SN74AUP2G14DCKR | SN74LVC1G80DCKRE4 |
| 74AHCT1G125DCKTG4 | SN74AHC1G86DCKRE4 | SN74AUP2G17DCKR | SN74LVC1G80DCKRG4 |
| 74AHCT1G126DCKRE4 | SN74AHC1G86DCKRG4 | SN74AUP2G34DCKR | SN74LVC1G86DCKR |
| 74AHCT1G126DCKRG4 | SN74AHC1G86DCKT | SN74CB3T1G125DCKR | SN74LVC1G86DCKRE4 |
| 74AHCT1G126DCKTE4 | SN74AHC1G86DCKTE4 | SN74CBT1G384DCKR | SN74LVC1G86DCKRG4 |
| 74AHCT1G126DCKTG4 | SN74AHC1G86DCKTG4 | SN74LVC1G00DCKR | SN74LVC1G86DCKT |
| 74AHCT1G14DCKRE4 | SN74AHC1GU04DCK6 | SN74LVC1G00DCKRE4 | SN74LVC1G86DCKTE4 |
| 74AHCT1G14DCKTE4 | SN74AHC1GU04DCKR | SN74LVC1G00DCKRG4 | SN74LVC1G86DCKTG4 |
| 74AHCT1G14DCKTG4 | SN74AHC1GU04DCKT | SN74LVC1G00DCKT | SN74LVC1G97DCK6 |
| 74AHCT1G32DCKRE4 | SN74AHCT1G00DCK6 | SN74LVC1G00DCKTE4 | SN74LVC1G97DCKR |
| 74AHCT1G32DCKRG4 | SN74AHCT1G00DCKR | SN74LVC1G00DCKTG4 | SN74LVC1G97DCKRE4 |
| 74AHCT1G32DCKTE4 | SN74AHCT1G00DCKT | SN74LVC1G02DCKR | SN74LVC1G97DCKRG4 |
| 74AHCT1G32DCKTG4 | SN74AHCT1G02DCKR | SN74LVC1G02DCKRE4 | SN74LVC1G97DCKT |
| 74AHCT1G86DCKRE4 | SN74AHCT1G02DCKT | SN74LVC1G02DCKRG4 | SN74LVC1G97DCKTE4 |
| 74AHCT1G86DCKRG4 | SN74AHCT1G04DCK6 | SN74LVC1G02DCKT | SN74LVC1G97DCKTG4 |
| 74AHCT1G86DCKTE4 | SN74AHCT1G04DCKR | SN74LVC1G02DCKTE4 | SN74LVC1GU04DCKR |
| 74AHCT1G86DCKTG4 | SN74AHCT1G04DCKT | SN74LVC1G02DCKTG4 | SN74LVC1GU04DCKT |
| 74AUC1G125DCKRE4 | SN74AHCT1G08DCK6 | SN74LVC1G04DCKR | SN74LVC2G04DCKR |
| 74AUC1G125DCKRG4 | SN74AHCT1G08DCKR | SN74LVC1G04DCKRE4 | SN74LVC2G04DCKRE4 |
| 74CB3T1G125DCKRE4 | SN74AHCT1G08DCKT | SN74LVC1G04DCKRG4 | SN74LVC2G04DCKRG4 |
| 74CB3T1G125DCKRG4 | SN74AHCT1G125DCK6 | SN74LVC1G04DCKT | SN74LVC2G04DCKT |
| 74CBT1G384DCKRE4 | SN74AHCT1G125DCKR | SN74LVC1G04DCKTE4 | SN74LVC2G04DCKTE4 |
| 74CBT1G384DCKRG4 | SN74AHCT1G125DCKT | SN74LVC1G04DCKTG4 | SN74LVC2G04DCKTG4 |
| 74LVC1G125DCKRE4 | SN74AHCT1G126DCKR | SN74LVC1G06DCK6 | SN74LVC2G07DCKR |
| 74LVC1G125DCKRG4 | SN74AHCT1G126DCKT | SN74LVC1G06DCKR | SN74LVC2G07DCKRE4 |
| 74LVC1G125DCKTE4 | SN74AHCT1G14DCKR | SN74LVC1G06DCKRE4 | SN74LVC2G07DCKRG4 |
| 74LVC1G125DCKTG4 | SN74AHCT1G14DCKRG4 | SN74LVC1G06DCKRG4 | SN74LVC2G07DCKT |
| 74LVC1G126DCKRE4 | SN74AHCT1G14DCKT | SN74LVC1G06DCKT | SN74LVC2G07DCKTE4 |
| 74LVC1G126DCKRG4 | SN74AHCT1G32DCK6 | SN74LVC1G06DCKTE4 | SN74LVC2G07DCKTG4 |
| 74LVC1G126DCKTE4 | SN74AHCT1G32DCKR | SN74LVC1G06DCKTG4 | SN74LVC2G14DCKR |
| 74LVC1G126DCKTG4 | SN74AHCT1G32DCKT | SN74LVC1G07DCKR | SN74LVC2G14DCKRE4 |

| | | | |
|-------------------|-------------------|--------------------|-------------------|
| 74LVC1G240DCKRE4 | SN74AHCT1G86DCKR | SN74LVC1G07DCKRE4 | SN74LVC2G14DCKRG4 |
| 74LVC1G240DCKRG4 | SN74AHCT1G86DCKT | SN74LVC1G07DCKRG4 | SN74LVC2G14DCKT |
| 74LVC1G240DCKTE4 | SN74AUC1G00DCKR | SN74LVC1G07DCKT | SN74LVC2G14DCKTE4 |
| 74LVC1G240DCKTG4 | SN74AUC1G00DCKRE4 | SN74LVC1G07DCKTE4 | SN74LVC2G14DCKTG4 |
| 74LVC1G3157DCKRE4 | SN74AUC1G00DCKRG4 | SN74LVC1G07DCKTG4 | SN74LVC2G17DCKR |
| 74LVC1G3157DCKRG4 | SN74AUC1G04DCKR | SN74LVC1G08DCK6 | SN74LVC2G17DCKRE4 |
| 74LVC1G332DCKRE4 | SN74AUC1G04DCKRE4 | SN74LVC1G08DCKR | SN74LVC2G17DCKRG4 |
| 74LVC1GU04DCKRE4 | SN74AUC1G04DCKRG4 | SN74LVC1G08DCKR-LI | SN74LVC2G17DCKT |
| 74LVC1GU04DCKRG4 | SN74AUC1G07DCKR | SN74LVC1G08DCKRE4 | SN74LVC2G17DCKTE4 |
| 74LVC1GU04DCKTE4 | SN74AUC1G07DCKRG4 | SN74LVC1G08DCKRG4 | SN74LVC2G17DCKTG4 |
| 74LVC1GU04DCKTG4 | SN74AUC1G07DCKT | SN74LVC1G08DCKT | SN74LVC2G34DCK6 |
| 74LVC2GU04DCKRE4 | SN74AUC1G07DCKTE4 | SN74LVC1G08DCKTE4 | SN74LVC2G34DCKR |
| 74LVC2GU04DCKRG4 | SN74AUC1G07DCKTG4 | SN74LVC1G08DCKTG4 | SN74LVC2G34DCKRE4 |
| 74LVC2GU04DCKTE4 | SN74AUC1G08DCK6 | SN74LVC1G10DCKR | SN74LVC2G34DCKRG4 |
| 74LVC2GU04DCKTG4 | SN74AUC1G08DCKR | SN74LVC1G10DCKRE4 | SN74LVC2GU04DCK6 |
| HPA01001DCKR | SN74AUC1G08DCKRE4 | SN74LVC1G10DCKRG4 | SN74LVC2GU04DCKR |
| HPA01002DCKR | SN74AUC1G08DCKRG4 | SN74LVC1G11DCKR | SN74LVC2GU04DCKT |
| HPA01003DCKR | SN74AUC1G125DCKR | SN74LVC1G11DCKRE4 | TS5A1066DCKR |
| HPA01004DCKR | SN74AUC1G14DCKR | SN74LVC1G11DCKRG4 | TS5A1066DCKRE4 |
| HVAL02232DCKR | SN74AUC1G14DCKRE4 | SN74LVC1G125DCK6 | TS5A1066DCKRG4 |
| LMV721IDCKR | SN74AUC1G14DCKRG4 | SN74LVC1G125DCKR | TS5A3157DCKR |
| LMV721IDCKRG4 | SN74AUC1G17DCKR | SN74LVC1G125DCKT | TS5A3157DCKRE4 |
| LMV721IDCKT | SN74AUC1G17DCKRE4 | SN74LVC1G126DCKR | TS5A3157DCKRG4 |
| LMV721IDCKTG4 | SN74AUC1G17DCKRG4 | SN74LVC1G126DCKT | TS5A3166DCKR |
| SN0710022DCKR | SN74AUC1G32DCKR | SN74LVC1G14DCKR | TS5A3166DCKRE4 |
| SN74AHC1G00DCK6 | SN74AUC1G32DCKRE4 | SN74LVC1G14DCKRE4 | TS5A3166DCKRG4 |
| SN74AHC1G00DCKR | SN74AUC1G32DCKRG4 | SN74LVC1G14DCKRG4 | TS5A3167DCKR |
| SN74AHC1G00DCKRE4 | SN74AUC1G66DCKR | SN74LVC1G14DCKT | TS5A3167DCKRE4 |
| SN74AHC1G00DCKRG4 | SN74AUC1G66DCKRE4 | SN74LVC1G14DCKTE4 | TS5A3167DCKRG4 |
| SN74AHC1G00DCKT | SN74AUC1G66DCKRG4 | SN74LVC1G14DCKTG4 | TS5A4594DCKR |
| SN74AHC1G00DCKTE4 | SN74AUC1G79DCKR | SN74LVC1G17DCK6 | TS5A4594DCKRE4 |
| SN74AHC1G00DCKTG4 | SN74AUC1G79DCKRE4 | SN74LVC1G17DCKR | TS5A4594DCKRG4 |
| SN74AHC1G02DCK6 | SN74AUC1G79DCKRG4 | SN74LVC1G17DCKRE4 | TS5A4595DCKR |
| SN74AHC1G02DCKR | SN74AUC1G80DCKR | SN74LVC1G17DCKRG4 | TS5A4595DCKRE4 |
| SN74AHC1G02DCKRE4 | SN74AUC1G80DCKRE4 | SN74LVC1G17DCKT | TS5A4595DCKRG4 |
| SN74AHC1G02DCKRG4 | SN74AUC1G80DCKRG4 | SN74LVC1G17DCKTE4 | TS5A4624DCKR |
| SN74AHC1G02DCKT | SN74AUC2G04DCKR | SN74LVC1G17DCKTG4 | TS5A4624DCKRE4 |
| SN74AHC1G02DCKTE4 | SN74AUC2G04DCKRE4 | SN74LVC1G18DCKR | TS5A4624DCKRG4 |
| SN74AHC1G02DCKTG4 | SN74AUC2G04DCKRG4 | SN74LVC1G18DCKRE4 | TS5A63157DCKR |
| SN74AHC1G04DCK6 | SN74AUC2G07DCKR | SN74LVC1G18DCKRG4 | TS5A63157DCKRE4 |
| SN74AHC1G04DCKR | SN74AUC2G07DCKRE4 | SN74LVC1G19DCK6 | TS5A63157DCKRG4 |
| SN74AHC1G04DCKRE4 | SN74AUC2G07DCKRG4 | SN74LVC1G19DCKR | |
| SN74AHC1G04DCKRG4 | SN74AUC2G34DCKR | SN74LVC1G19DCKRE4 | |
| SN74AHC1G04DCKT | SN74AUC2G34DCKRE4 | SN74LVC1G19DCKRG4 | |

Qualification Report

Approved on 04/02/2014

Product Attributes

| Attributes | Qual Device: SN74AHC1G00DCKR | Qual Device: SN74AUP1G07DCKR | Qual Device: SN74CB3T1G125DCKR |
|----------------------------|---------------------------------|---------------------------------|-----------------------------------|
| Assembly Site | NFME | NFME | NFME |
| Package Family | SOT | SOT | SOT |
| Flammability Rating | UL 94 V-0 | UL 94 V-0 | UL 94 V-0 |
| Wafer Fab Supplier | SFAB | FFAB | FFAB |
| Wafer Fab Process | EPIC1S2 | ASLC10-BOPO | ASL3C |

- QBS: Qual By Similarity
- Qual Devices qualified at LEVEL1-260C: SN74AHC1G00DCKR, SN74AUP1G07DCKR, SN74CB3T1G125DCKR

Qualification Results

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

| Type | Test Name / Condition | Duration | Qual Device: SN74AHC1G00DCKR | Qual Device: SN74AUP1G07DCKR | Qual Device: SN74CB3T1G125DCKR |
|------|-------------------------------|------------|---------------------------------|---------------------------------|-----------------------------------|
| HAST | Biased HAST, 130C/85%RH | 96 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| HAST | Biased HAST, 130C/85%RH | 192 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| AC | Autoclave, 121C | 96 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| TC | Temperature Cycle, -65C/150C | 500 Cycles | 3/231/0 | 3/231/0 | 3/231/0 |
| HTSL | High Temp. Storage Bake, 170C | 420 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| HTSL | High Temp. Storage Bake, 170C | 600 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| HTOL | Life Test, 150C | 300 Hours | 3/231/0 | 3/231/0 | 3/231/0 |
| WBS | Ball Bond Shear | Wires | 3/228/0 | 3/228/0 | 3/228/0 |
| WBP | Bond Pull | Wires | 3/228/0 | 3/228/0 | 3/228/0 |
| PD | Physical Dimensions | -- | 3/15/0 | 3/15/0 | 3/15/0 |
| LI | Lead Fatigue | Leads | 3/66/0 | 3/66/0 | 3/66/0 |
| LI | Lead Pull to Destruction | Leads | 3/66/0 | 3/66/0 | 3/66/0 |

| | | | | | |
|------|----------------------------|----|---|---|--------|
| FLAM | Flammability (IEC 695-2-2) | -- | - | - | 3/15/0 |
| FLAM | Flammability (UL 94V-0) | -- | - | - | 3/15/0 |
| FLAM | Flammability (UL-1694) | -- | - | - | 3/15/0 |

- 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

TI Qualification ID: 20130722-90262

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 |