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**PRODUCT BULLETIN**  
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**11 Jul 2008**

**SUBJECT: ON Semiconductor Product Bulletin #16134**

**TITLE: SOT-23 Possible Adhesion Issue using Glue Mount Process**

**PROPOSED FIRST SHIP DATE: 11 Jul 2008**

**AFFECTED PRODUCT DIVISION: SOT-23 Products**

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor sales office or Mark Wasilewski <[m.wasilewski@onsemi.com](mailto:m.wasilewski@onsemi.com)>

**NOTIFICATION TYPE:**

Product Alert

**DESCRIPTION AND PURPOSE:**

ON Semiconductor wishes to notify you of a potential manufacturability concern with SOT-23 devices. This problem is very customer board mounting specific and you may not experience any issue with these parts. ON Semiconductor believes in proactively notifying our customers of any potential issue.

**Background of potential manufacturing concern:**

**This issue is very process specific and is not a reliability concern as it only affects the initial board mount process for those customers using double-sided boards with wave solder.** A few of ON Semiconductor's customers have reported an issue with SOT-23 devices under these conditions only. The reported issue may occur during board mounting using wave solder after gluing the devices to the bottom side of the board resulting in components falling off of the board.

**Date codes affected:**

SOT-23 devices from date code 0814

**ON Semiconductor actions:**

ON Semiconductor has identified the issue to be related to:

1. Customer mounting process

Again, this issue only affects customers using SOT-23 components for bottom side board placement that are glued into place prior to wave solder. Any components used for top side placement or normal IR Furnace pass will not be affected by this issue. Glue types used also have an impact.

2. Mold compound variability from date code 0814

ON Semiconductor has performed adhesion testing and has verified transient variability in adhesion strength since the original qualification of the mold compound. ON Semiconductor is working with our mold compound supplier to understand this variability and correct it.

**Product Bulletin #16134**

## 3. Surface finish of parts

Parts with a smooth bottom surface finish have been attributed with higher failure rates as compared to failure rates of parts with a matte finish. A matte finish has more surface area for the glue to adhere to as compared to a part with a smooth surface. As a containment action, ON Semiconductor has placed shipment holds on any inventories of smooth parts and has notified some customers who have received smooth parts.

We also suspended manufacturing on mold systems that produce smooth parts to have those mold systems enhanced to produce parts with a matte surface finish. These containment actions have temporarily affected our capacity but have been resolved and we have returned to full capacity.

The enhanced matte surface is designed to overcome any variability of the mold compound and aids in a containment action until we can eliminate that variability.

**What to do next?**

If you have consumed product starting from date code 0814 and have not experienced any component placement issues on your boards, you should not be affected. Product reliability is not a concern as parts either solder normally or they don't.

If you have a manufacturing process that consists of gluing these components to the bottom side of a board in a wave solder process and have experienced components falling off boards with a greater than normal frequency, please contact your ON Semiconductor Customer Service Representative or Salesperson to facilitate product replacement or contact a technical representative to further discuss the issue for containment or other actions.

For technical assistance, please contact:

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**Product Bulletin #16134**

**AFFECTED DEVICE LIST**

**PART**  
2N7002ET1G  
2N7002LT1  
2N7002LT1G  
BAS116LT1G  
BAS16LT1  
BAS16LT1G  
BAS19LT1G  
BAS20LT1G  
BAS21LT1  
BAS21LT1G  
BAS21LT1H  
BAS21LT3  
BAS21LT3G  
BAS40-04LT1  
BAS40-04LT1G  
BAS40-06LT1G  
BAS40LT1  
BAS40LT1G  
BAS70-04LT1  
BAS70-04LT1G  
BAS70LT1G  
BAT54ALT1  
BAT54ALT1G  
BAT54CLT1G  
BAT54LT1  
BAT54SLT1  
BAT54SLT1G  
BAV199LT1  
BAV199LT1G  
BAV70LT1  
BAV70LT1G  
BAV70LT3G  
BAV74LT1G  
BAV99LT1G  
BAV99LT3G  
BAW56LT1  
BAW56LT1G  
BAW56LT3G  
BC807-16LT1  
BC807-16LT1G  
BC807-16LT3G  
BC807-25LT1  
BC807-25LT1G  
BC807-25LT3G  
BC807-40LT1  
BC807-40LT1G  
BC807-40LT3G  
BC817-16LT1  
BC817-16LT1G  
BC817-16LT3G  
BC817-25LT1  
BC817-25LT1G  
BC817-25LT1H



**Product Bulletin #16134**

BC817-25LT3G  
BC817-40LT1G  
BC817-40LT3G  
BC818-40LT1G  
BC846ALT1G  
BC846ALT3G  
BC846BLT1  
BC846BLT1G  
BC846BLT3G  
BC847ALT1G  
BC847BLT1  
BC847BLT1G  
BC847BLT3G  
BC847CLT1G  
BC847CLT3G  
BC848ALT1G  
BC848BLT1G  
BC848BLT3G  
BC848CLT1G  
BC849CLT1G  
BC850BLT1G  
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BC856BLT1G  
BC856BLT3G  
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BC857BLT1G  
BC857BLT3G  
BC857CLT1G  
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BCW33LT3G  
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BCW66GLT3G  
BCW68GLT1G  
BCW70LT1G  
BCW72LT1G  
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BCX19LT1G  
BSS138LT1G  
BSS63LT1G  
BSS64LT1G  
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BZX84B15LT1G  
BZX84B16LT1G  
BZX84B18LT1G  
BZX84B5V1LT1G  
BZX84B5V6LT1



**Product Bulletin #16134**

- BZX84B5V6LT1G
- BZX84B6V2LT1G
- BZX84B6V8LT1G
- BZX84B8V2LT1G
- BZX84B9V1LT1G
- BZX84C10LT1
- BZX84C10LT1G
- BZX84C11LT1G
- BZX84C12LT1G
- BZX84C13LT1G
- BZX84C15LT1
- BZX84C15LT1G
- BZX84C15LT3G
- BZX84C16LT1G
- BZX84C18LT1
- BZX84C18LT1G
- BZX84C18LT3G
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- BZX84C5V1LT3G
- BZX84C5V6ET3G
- BZX84C5V6LT1
- BZX84C5V6LT1G
- BZX84C5V6LT3G
- BZX84C68LT1G
- BZX84C6V2ET1G



**Product Bulletin #16134**

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MMBD2838LT1G  
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MMBD352LT1G  
MMBD354LT1G  
MMBD355LT1G  
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MMBD6050LT3  
MMBD6100LT1  
MMBD6100LT1G  
MMBD7000LT1  
MMBD7000LT1G  
MMBD701LT1G  
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MMBD914LT1G  
MMBD914LT1H  
MMBD914LT3G  
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MMBFJ310LT1G  
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MMBT2222ALT3G  
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MMBT2907ALT1  
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MMBT2907ALT3G  
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MMBT3904LT3G  
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MMBT4401LT1  
MMBT4401LT1G  
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MMBT4401LT3G  
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MMBT4403LT1H



**Product Bulletin #16134**

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MMBT5088LT1G  
MMBT5089LT1G  
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MMBT5401LT1G  
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MMBZ27VALT1G



**Product Bulletin #16134**

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MMBZ5227BLT1G  
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MMBZ5250BLT1G  
MMBZ5251BLT1G  
MMBZ5252BLT1G  
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**Product Bulletin #16134**

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MMBZ5V6ALT1G  
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MMUN2111LT3G  
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MMUN2114LT1G  
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**Product Bulletin #16134**

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SBAS21LT1  
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SBAV99LT1  
SBAV99LT1G  
SBAV99LT3  
SBAV99LT3G  
SBAW56LT3  
SBAW56LT3G  
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SBC807-25LT1G  
SBC807-25LT3G  
SBC807-40LT3G  
SBC817-25LT1  
SBC817-25LT1G  
SBC817-40LT1G  
SBC817-40LT3G  
SBC846BLT1G  
SM05T1G  
SM12T1G  
SMBD1007LT1G  
SMBD1022LT1G  
SMBD1058T  
SMBD1122LT1  
SMBD1466LT3  
SMBD1472LT1  
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SMBD56LT1  
SMBD70LT1  
SMBD99LT1  
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SMBT1229LT3G  
SMBT1230LT1  
SMBT1230LT1G  
SMBT1230LT3  
SMBT1230LT3G



**Product Bulletin #16134**

SMBT1231LT1  
SMBT1231LT1G  
SMBT1231LT3G  
SMBT1232LT1  
SMBT1232LT1G  
SMBT1294LT3  
SMBT1294LT3G  
SMBT1296LT3  
SMBT1296LT3G  
SMBT1353LT3  
SMBT1360LT3  
SMBT1388LT1  
SMBT1469LT3  
SMBT1493LT3  
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SMBT1516LT3  
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SMBT1568LT1  
SMBT1568LT1G  
SMBT1569LT1G  
SMBT1576LT1G  
SMBT1578LT1G  
SMBT1580LT1G  
SMBZ1036LT1  
SMBZ1036LT3G  
SMBZ1102LT3DS  
SMBZ1443LT3  
SMBZ1443LT3DSG  
SMBZ1449-10LT3G  
SMBZ1449-20LT3  
SMBZ1449-33LT3  
SMBZ1458LT1  
SMBZ1458LT3G  
SMBZ1460LT1G  
SMBZ1461LT1  
SMBZ1461LT1G  
SMBZ1461LT3G  
SMBZ1466LT3DS  
SMBZ1475LT3G  
SMBZ1477-1LT1  
SMBZ1477LT1G  
SMBZ1480LT1  
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SMBZ1481LT1G  
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**Product Bulletin #16134**

SMBZ1611BT1  
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SMBZ1652LT3  
SMBZ1660LT1G  
SMBZ2606-15LT1G  
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SMBZ2606-7LT3  
SMBZ2606-8LT3  
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SMMBD914LT1G  
SMMBD914LT3G  
SMMBT2222ALT1G  
SMMBT3904LT1G  
SMMBT3906LT1G  
SMMBT5551LT1G  
SMMBTA06LT1  
SMMBTA06LT1G  
SMMBTA06LT3  
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SMMBTA92LT3G  
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SMMUN2216LT1  
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SSV1BAW56LT1G  
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SZBZX84C11LT1G  
SZBZX84C12LT1  
SZBZX84C12LT1G  
SZBZX84C12LT3  
SZBZX84C12LT3G



**Product Bulletin #16134**

- SZBZX84C13LT1
- SZBZX84C13LT1G
- SZBZX84C15LT1
- SZBZX84C15LT1G
- SZBZX84C15LT3G
- SZBZX84C16LT1
- SZBZX84C16LT1G
- SZBZX84C16LT3G
- SZBZX84C18LT1G
- SZBZX84C22LT1
- SZBZX84C22LT1G
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- SZBZX84C27LT1G
- SZBZX84C27LT3
- SZBZX84C27LT3G
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- SZBZX84C2V7LT1
- SZBZX84C30LT1
- SZBZX84C33LT1G
- SZBZX84C33LT3
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- SZBZX84C9V1LT1
- SZBZX84C9V1LT1G
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- SZMMBZ15VALT1G
- SZMMBZ18VALT1
- SZMMBZ18VALT1G
- SZMMBZ18VALT3G
- SZMMBZ20VALT1
- SZMMBZ20VALT1G
- SZMMBZ20VALT3G
- SZMMBZ27VALT1
- SZMMBZ27VALT1G



**Product Bulletin #16134**

SZMMBZ27VCLT1  
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SZMMBZ6V2ALT1