



---

**PRODUCT/PROCESS CHANGE NOTIFICATION**  
Generic Copy

---

**01-OCT-2001**

**SUBJECT: ON Semiconductor Product/Process Change Notification #11836**

**TITLE: Initial Notification - Subcontractor Assembly/Test Site Transfer from Taiwan to China**

**EFFECTIVE DATE: 29-Jan-2002**

**AFFECTED CHANGE CATEGORY: Subcontractor Assembly Site**

**AFFECTED PRODUCT DIVISION: Bipolar Discretes Products Div**

**ADDITIONAL RELIABILITY DATA: None**

**SAMPLES: No**

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact Sales Office or Paul Lem <FFBFBM@onsemi.com>

**DISCLAIMER:**

Initial Product/Process Change Notification (IPCN) -First Notification distributed to customers. Distributed at least 120 days from the effective date of the change.

Final Product/Process Change Notification (FPCN) -Final Notification completing the notification process. Distributed at least 60 days from the effective date of the change. ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

**DESCRIPTION AND PURPOSE:**

ON Semiconductor is currently subcontracting assembly of SMA, SMB and SMC packaged devices in Taiwan. The Taiwan assembly site will be transferring manufacturing equipment and assembly to China. ON Semiconductor is currently qualifying this change for Ultrafast/Schottky Rectifiers and Zeners. Device performance and reliability will be equal or better compared to the standard device. In our efforts to maintain and improve quality, the China assembly site is QS9000 Certified. This change will allow ON Semiconductor to better service our customers with increased productivity and response without sacrificing quality in our service and products.

**QUALIFICATION PLAN:**

Qualification Vehicles:

SMA Package:

MURA260T3 - Ultrafast: highest voltage.

MBRA140T3 - Schottky: largest die, highest voltage.

1SMA75AT3 - Zener: largest die, highest voltage.

SMB Package:

MBRS1100T3 - Schottky: largest die, highest voltage.

1SMA170AT3 - Zener: largest die, highest voltage.

1SMB5920BT3 - Zener: low voltage.

**Process Change Notification #11836**

## SMC Package:

- MBRS360T3 - Schottky: largest die.
- MURS360T3 - Ultrafast: highest voltage.
- 1.5SMC91AT3 - Ultrafast: largest die, highest voltage.

## Qualification Plan:

- External Visual
- Parametric Verification: Characterization, ESD, and Surge Testing.
- HTRB: T=150C, t=500/1000 hours.
- H3TRB: T=85C, RH=85%, t=500/1000 hours.
- Temp.Cycle: T=-65C(15min), T=150C(15min), t=500/1000 cycles.
- Autoclave: T=121C, P=15psig, t=96 hours.
- IOL: TON=2min/TOFF=2min, t=7500/15000 Cycles.
- DPA, Physical Dimensions, Assembly Die Shear or Equivalent
- Resistance to Solder Heat.
- Solderability.
- Thermal Resistance.
- DVF Testing: IFi=10mA, IFm=3xIF, IFf=10mA.

Qualification sample size in compliance with AEC-Q101 requirements.

**RELIABILITY DATA SUMMARY:**

SMA, SMB, and SMC packaged Ultrafast, Schottky and Zener Devices:  
Data expected to be available WW43, 2001.

**ELECTRICAL CHARACTERISTIC SUMMARY:**

SMA, SMB, and SMC packaged Ultrafast, Schottky and Zener Devices:  
Data expected to be available WW43, 2001.

**CHANGED PART IDENTIFICATION:**

Customers may receive effected SMA/SMB/SMC product per change, starting WW01, 2002 or later. China assembled products will include "PK" marking.

**AFFECTED DEVICE LIST (WITHOUT SPECIALS):****PART**

1.5SMC10AT3, 1.5SMC11AT3, 1.5SMC12AT3, 1.5SMC13AT3, 1.5SMC15AT3, 1.5SMC16AT3,  
1.5SMC18AT3, 1.5SMC20AT3, 1.5SMC22AT3, 1.5SMC24AT3, 1.5SMC27AT3, 1.5SMC30AT3,  
1.5SMC33AT3, 1.5SMC36AT3, 1.5SMC39AT3, 1.5SMC43AT3, 1.5SMC47AT3, 1.5SMC51AT3,  
1.5SMC56AT3, 1.5SMC6.8AT3, 1.5SMC62AT3, 1.5SMC68AT3, 1.5SMC7.5AT3, 1.5SMC75AT3,  
1.5SMC8.2AT3, 1.5SMC82AT3, 1.5SMC9.1AT3, 1.5SMC91AT3, 1SMA10AT3, 1SMA11AT3,  
1SMA12AT3, 1SMA13AT3, 1SMA15AT3, 1SMA16AT3, 1SMA17AT3, 1SMA18AT3,  
1SMA20AT3, 1SMA22AT3, 1SMA24AT3, 1SMA26AT3, 1SMA28AT3, 1SMA30AT3,  
1SMA33AT3, 1SMA36AT3, 1SMA40AT3, 1SMA43AT3, 1SMA45AT3, 1SMA48AT3,  
1SMA5.0AT3, 1SMA51AT3, 1SMA54AT3, 1SMA58AT3, 1SMA5913BT3, 1SMA5914BT3,  
1SMA5915BT3, 1SMA5916BT3, 1SMA5917BT3, 1SMA5918BT3, 1SMA5919BT3, 1SMA5920BT3,  
1SMA5921BT3, 1SMA5922BT3, 1SMA5923BT3, 1SMA5924BT3, 1SMA5925BT3, 1SMA5926BT3,  
1SMA5927BT3, 1SMA5928BT3, 1SMA5929BT3, 1SMA5930BT3, 1SMA5931BT3, 1SMA5932BT3,  
1SMA5933BT3, 1SMA5934BT3, 1SMA5935BT3, 1SMA5936BT3, 1SMA5937BT3, 1SMA5938BT3,  
1SMA5939BT3, 1SMA5940BT3, 1SMA5941BT3, 1SMA5942BT3, 1SMA5943BT3, 1SMA5944BT3,  
1SMA5945BT3, 1SMA6.0AT3, 1SMA6.5AT3, 1SMA60AT3, 1SMA64AT3, 1SMA7.0AT3,  
1SMA7.5AT3, 1SMA70AT3, 1SMA75AT3, 1SMA8.0AT3, 1SMA8.5AT3, 1SMA9.0AT3,  
1SMB100AT3, 1SMB10AT3, 1SMB110AT3, 1SMB11AT3, 1SMB120AT3, 1SMB12AT3,  
1SMB130AT3, 1SMB13AT3, 1SMB14AT3, 1SMB150AT3, 1SMB15AT3, 1SMB160AT3,  
1SMB16AT3, 1SMB170AT3, 1SMB17AT3, 1SMB18AT3, 1SMB20AT3, 1SMB22AT3,

**Process Change Notification #11836**

1SMB24AT3, 1SMB26AT3, 1SMB28AT3, 1SMB30AT3, 1SMB33AT3, 1SMB36AT3, 1SMB40AT3, 1SMB43AT3, 1SMB45AT3, 1SMB48AT3, 1SMB5.0AT3, 1SMB51AT3, 1SMB54AT3, 1SMB58AT3, 1SMB5913BT3, 1SMB5914BT3, 1SMB5915BT3, 1SMB5916BT3, 1SMB5917BT3, 1SMB5918BT3, 1SMB5919AT3, 1SMB5919BT3, 1SMB5920BT3, 1SMB5921BT3, 1SMB5922BT3, 1SMB5923BT3, 1SMB5924BT3, 1SMB5925BT3, 1SMB5926BT3, 1SMB5927BT3, 1SMB5928BT3, 1SMB5929BT3, 1SMB5930BT3, 1SMB5931BT3, 1SMB5932BT3, 1SMB5933BT3, 1SMB5934BT3, 1SMB5935BT3, 1SMB5936BT3, 1SMB5937BT3, 1SMB5938BT3, 1SMB5939BT3, 1SMB5940BT3, 1SMB5941BT3, 1SMB5942BT3, 1SMB5943BT3, 1SMB5944BT3, 1SMB5945BT3, 1SMB5946BT3, 1SMB5947BT3, 1SMB5948BT3, 1SMB5949BT3, 1SMB5950BT3, 1SMB5951BT3, 1SMB5952BT3, 1SMB5953BT3, 1SMB5954BT3, 1SMB5955BT3, 1SMB5956BT3, 1SMB6.0AT3, 1SMB6.5AT3, 1SMB60AT3, 1SMB64AT3, 1SMB7.0AT3, 1SMB7.5AT3, 1SMB70AT3, 1SMB75AT3, 1SMB8.0AT3, 1SMB8.5AT3, 1SMB85AT3, 1SMB9.0AT3, 1SMB90AT3, 1SMC10AT3, 1SMC12AT3, 1SMC13AT3, 1SMC14AT3, 1SMC15AT3, 1SMC16AT3, 1SMC17AT3, 1SMC18AT3, 1SMC20AT3, 1SMC22AT3, 1SMC24AT3, 1SMC26AT3, 1SMC28AT3, 1SMC30AT3, 1SMC33AT3, 1SMC36AT3, 1SMC40AT3, 1SMC43AT3, 1SMC45AT3, 1SMC48AT3, 1SMC5.0AT3, 1SMC51AT3, 1SMC54AT3, 1SMC58AT3, 1SMC6.0AT3, 1SMC6.5AT3, 1SMC60AT3, 1SMC64AT3, 1SMC7.0AT3, 1SMC7.5AT3, 1SMC70AT3, 1SMC75AT3, 1SMC78AT3, 1SMC8.0AT3, 1SMC8.5AT3, 1SMC9.0AT3, MBRA120ET3, MBRA120LT3, MBRA130LT3, MBRA140T3, MBRA160T3, MBRA210ET3, MBRA210LT3, MBRS1100T3, MBRS120T3, MBRS130LT3, MBRS130T3, MBRS140T3, MBRS190T3, MBRS2040LT3, MBRS230LT3, MBRS240LT3, MBRS260T3, MBRS3100T3, MBRS320T3, MBRS330T3, MBRS340T3, MBRS360T3, MBRS410LT3, MRBS3100T3, MURA105T3, MURA110T3, MURA115T3, MURA120T3, MURA130T3, MURA140T3, MURA160T3, MURA205T3, MURA210T3, MURA215T3, MURA220T3, MURA230T3, MURA240T3, MURA260T3, MURS105T3, MURS110T3, MURS115T3, MURS120T3, MURS140T3, MURS160T3, MURS205T3, MURS210T3, MURS220T3, MURS230T3, MURS240T3, MURS260T3, MURS320T3, MURS340T3, MURS360T3, P6SMB100AT3, P6SMB10AT3, P6SMB110AT3, P6SMB11AT3, P6SMB120AT3, P6SMB12AT3, P6SMB130AT3, P6SMB13AT3, P6SMB150AT3, P6SMB15AT3, P6SMB160AT3, P6SMB16AT3, P6SMB180AT3, P6SMB18AT3, P6SMB200AT3, P6SMB20AT3, P6SMB22AT3, P6SMB24AT3, P6SMB27AT3, P6SMB30AT3, P6SMB33AT3, P6SMB36AT3, P6SMB39AT3, P6SMB43AT3, P6SMB47AT3, P6SMB51AT3, P6SMB56AT3, P6SMB6.8AT3, P6SMB62AT3, P6SMB68AT3, P6SMB7.5AT3, P6SMB75AT3, P6SMB8.2AT3, P6SMB82AT3, P6SMB9.1AT3, P6SMB91AT3, SBRS5652T3, SBRS81100T3, SBRS8120T3, SBRS8130LT3, SBRS8130T3, SBRS8140T3, SBRS8330T3, SBRS8340T3, SS16, SS26, SURS8110T3, SURS8120T3, SURS8140T3, SURS8160T3, SZ1SMB18AT3, SZ1SMB24AT3, SZ1SMB26AT3, SZ1SMB28AT3, SZ1SMB30AT3, SZ1SMB36AT3, SZ1SMB40AT3, SZ1SMB5.0AT3, SZ1SMB5927BT3, SZ1SMB5928BT3, SZ1SMB5929BT3, SZ1SMB5930BT3, SZ1SMB5931BT3, SZ1SMB5933BT3, SZ1SMB5934BT3, SZ1SMB5935BT3, SZ1SMB5936BT3, SZ1SMB5937BT3, SZ1SMB5938BT3, SZ1SMB5939BT3, SZ1SMB5941BT3, SZ1SMB5947BT3, SZ1SMB5952BT3, SZ1SMB60AT3, SZ1SMB70AT3, SZP6SMB15AT3, SZP6SMB18AT3, SZP6SMB200AT3, SZP6SMB20AT3, SZP6SMB27AT3, SZP6SMB33AT3, SZP6SMB36AT3, SZP6SMB39AT3, SZP6SMB56AT3, SZP6SMB68AT3