



---

**PRODUCT/PROCESS CHANGE NOTIFICATION**  
Generic Copy

---

**04-SEP-2001**

**SUBJECT: ON Semiconductor Product/Process Change Notification #11733**

**TITLE: Initial Notification - Die Shrink for Zener SOT23, SOD123, and SOD323 Voltage Regulators**

**EFFECTIVE DATE: 02-Jan-2002**

**AFFECTED CHANGE CATEGORY: Die Shrink**

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

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Laura Rivers <S20636@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office or Paul Lem <FFBFBM@onsemi.com>

**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 notifying customers that we will be implementing an active area die shrink for zener voltage regulators in SOT23, SOD123, and SOD323 packages. Device performance and reliability will be equal or better, compared to the current die. There will be no changes to package dimensions or functionality. ON Semiconductor continually strides for quality assurance and improvement, providing high quality product. The recent efforts to implement a die shrink on small package voltage regulators will improve FAB and Assembly productivity and service.

**Product/Process Change Notification #11733****QUALIFICATION PLAN:**

Qualification Vehicles:

SOT23 Package:

BZX84C9V1LT1 - 9.1V low voltage, zener voltage regulator.

MMBZ5270BLT1 - 91V high voltage, zener voltage regulator.

SOD123 Package:

MMSZ4678T1 - 1.8V (low current) low voltage, zener voltage regulator.

MMSZ5264BT1 - 60V Medium voltage, zener voltage regulator.

SOD323 Package:

MM3Z2V4T1 - 2.4V low voltage, zener voltage regulator.

MM3Z75VT1 - 75V high voltage, zener voltage regulator.

The following reliability testing will occur:

HTRB: T<sub>Jmax</sub>=150C, T=150C, 1000 HoursH3TRB: T<sub>Jmax</sub>=150C, T=150C, RH=85%, 1000 Hours

Temp Cycle: -65C to 150C, 1000 Cycles.

IOL: TA=25C, Delta T<sub>J</sub>=100 Deg., 15K Cycles.

Resistance to Solder Heat:

DPA TC:

DPA H3TRB:

**RELIABILITY DATA SUMMARY:**

Reliability Data per package will be available on the following:

SOD323 zener voltage regulators - WW44 '01.

SOT23 zener voltage regulators - WW47 '01.

SOD123 zener voltage regulators - WW47 '01.

**ELECTRICAL CHARACTERISTIC SUMMARY:**

Electrical Distribution and Characterization to be completed by WW43 '01.

**CHANGED PART IDENTIFICATION:**

There will be no changes to device marking, case outline, and package functionality.

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

BZX84C10LT1, BZX84C10LT3, BZX84C11LT1, BZX84C11LT3, BZX84C12LT1, BZX84C12LT3,  
BZX84C13LT1, BZX84C13LT3, BZX84C15LT1, BZX84C15LT3, BZX84C16LT1, BZX84C18LT1,  
BZX84C18LT3, BZX84C20LT1, BZX84C20LT3, BZX84C22LT1, BZX84C24LT1, BZX84C24LT3,  
BZX84C27LT1, BZX84C27LT3, BZX84C2V4LT1, BZX84C2V4LT3, BZX84C2V7LT1,  
BZX84C30LT1, BZX84C30LT3, BZX84C33LT1, BZX84C33LT3, BZX84C36LT1, BZX84C36LT3,  
BZX84C39LT1, BZX84C39LT3, BZX84C3V0LT1, BZX84C3V3LT1, BZX84C3V3LT3,  
BZX84C3V6LT1, BZX84C3V9LT1, BZX84C43LT1, BZX84C47LT1, BZX84C47LT3,  
BZX84C4V3LT1, BZX84C4V3LT3, BZX84C4V7LT1, BZX84C4V7LT3, BZX84C51LT1,  
BZX84C56LT1, BZX84C5V1LT1, BZX84C5V1LT3, BZX84C5V6LT1, BZX84C5V6LT3,  
BZX84C62LT1, BZX84C62LT3, BZX84C68LT1, BZX84C68LT3, BZX84C6V2LT1,  
BZX84C6V2LT3, BZX84C6V8LT1, BZX84C6V8LT3, BZX84C75LT1, BZX84C75LT3,  
BZX84C7V5LT1, BZX84C7V5LT3, BZX84C8V2LT1, BZX84C8V2LT3, BZX84C9V1LT1,  
BZX84C9V1LT3, MM3Z10VT1, MM3Z11VT1, MM3Z12VST1, MM3Z12VT1, MM3Z13VT1,  
MM3Z15VT1, MM3Z16VST1, MM3Z16VT1, MM3Z18VST1, MM3Z18VT1, MM3Z20VT1,  
MM3Z22VT1, MM3Z24VT1, MM3Z27VT1, MM3Z2V4T1, MM3Z2V7T1, MM3Z30VT1,  
MM3Z33VT1, MM3Z36VT1, MM3Z39VT1, MM3Z3V0T1, MM3Z3V3T1, MM3Z3V6T1,  
MM3Z3V9ST1, MM3Z3V9T1, MM3Z43VT1, MM3Z47VT1, MM3Z4V3ST1, MM3Z4V3T1,  
MM3Z4V7ST1, MM3Z4V7T1, MM3Z51VT1, MM3Z56VT1, MM3Z5V1ST1, MM3Z5V1T1,  
MM3Z5V6ST1, MM3Z5V6T1, MM3Z62VT1, MM3Z68VT1, MM3Z6V2ST1, MM3Z6V2T1,  
MM3Z6V8ST1, MM3Z6V8T1, MM3Z75VT1, MM3Z7V5ST1, MM3Z7V5T1, MM3Z8V2ST1,

**Product/Process Change Notification #11733**

MM3Z8V2T1, MM3Z9V1ST1, MM3Z9V1T1, MMBZ5221BLT1, MMBZ5221BLT3,  
MMBZ5222BLT1, MMBZ5223BLT1, MMBZ5224BLT1, MMBZ5225BLT1, MMBZ5226BLT1,  
MMBZ5226BLT3, MMBZ5227BLT1, MMBZ5228BLT1, MMBZ5228BLT3, MMBZ5229BLT1,  
MMBZ5229BLT3, MMBZ5230BLT1, MMBZ5230BLT3, MMBZ5231BLT1, MMBZ5231BLT3,  
MMBZ5232BLT1, MMBZ5232BLT3, MMBZ5233BLT1, MMBZ5233BLT3, MMBZ5234BLT1,  
MMBZ5234BLT3, MMBZ5235BLT1, MMBZ5235BLT3, MMBZ5236BLT1, MMBZ5237BLT1,  
MMBZ5237BLT3, MMBZ5238BLT1, MMBZ5239BLT1, MMBZ5239BLT3, MMBZ5240BLT1,  
MMBZ5240BLT3, MMBZ5241BLT1, MMBZ5242BLT1, MMBZ5242BLT3, MMBZ5243BLT1,  
MMBZ5244BLT1, MMBZ5244BLT3, MMBZ5245BLT1, MMBZ5245BLT3, MMBZ5246BLT1,  
MMBZ5246BLT3, MMBZ5247BLT1, MMBZ5247BLT3, MMBZ5248BLT1, MMBZ5248BLT3,  
MMBZ5249BLT1, MMBZ5250BLT1, MMBZ5250BLT3, MMBZ5251BLT1, MMBZ5251BLT3,  
MMBZ5252BLT1, MMBZ5252BLT3, MMBZ5253BLT1, MMBZ5254BLT1, MMBZ5255BLT1,  
MMBZ5256BLT1, MMBZ5257BLT1, MMBZ5257BLT3, MMBZ5258BLT1, MMBZ5259BLT1,  
MMBZ5259BLT3, MMBZ5260BLT1, MMBZ5261BLT1, MMBZ5261BLT3, MMBZ5262BLT1,  
MMBZ5263BLT1, MMBZ5264BLT1, MMBZ5265BLT1, MMBZ5266BLT1, MMBZ5267BLT1,  
MMBZ5268BLT1, MMBZ5270BLT1, MMSZ10T1, MMSZ10T3, MMSZ11T1, MMSZ12T1,  
MMSZ13T1, MMSZ15T1, MMSZ16T1, MMSZ18T1, MMSZ20T1, MMSZ22T1, MMSZ24T1,  
MMSZ27T1, MMSZ27T3, MMSZ2V4T1, MMSZ2V7T1, MMSZ30T1, MMSZ33T1, MMSZ36T1,  
MMSZ39T1, MMSZ3V0T1, MMSZ3V0T3, MMSZ3V3T1, MMSZ3V3T3, MMSZ3V6T1,  
MMSZ3V9T1, MMSZ43T1, MMSZ4678T1, MMSZ4679T1, MMSZ4680T1, MMSZ4681T1,  
MMSZ4681T3, MMSZ4682T1, MMSZ4683T1, MMSZ4684T1, MMSZ4684T3, MMSZ4685T1,  
MMSZ4686T1, MMSZ4687T1, MMSZ4688T1, MMSZ4688T3, MMSZ4689T1, MMSZ4689T3,  
MMSZ4690T1, MMSZ4690T3, MMSZ4691T1, MMSZ4692T1, MMSZ4693T1, MMSZ4694T1,  
MMSZ4695T1, MMSZ4696T1, MMSZ4697T1, MMSZ4698T1, MMSZ4699T1, MMSZ4700T1,  
MMSZ4701T1, MMSZ4702T1, MMSZ4703T1, MMSZ4703T3, MMSZ4704T1, MMSZ4705T1,  
MMSZ4706T1, MMSZ4707T1, MMSZ4708T1, MMSZ4709T1, MMSZ4710T1, MMSZ4711T1,  
MMSZ4711T3, MMSZ4712T1, MMSZ4713T1, MMSZ4714T1, MMSZ4715T1, MMSZ4716T1,  
MMSZ4717T1, MMSZ4V3T1, MMSZ4V7T1, MMSZ4V7T3, MMSZ51T1, MMSZ5221BT1,  
MMSZ5222BT1, MMSZ5223BT1, MMSZ5224BT1, MMSZ5225BT1, MMSZ5226BT1,  
MMSZ5227BT1, MMSZ5228BT1, MMSZ5228BT3, MMSZ5229BT1, MMSZ5229BT3,  
MMSZ5230BT1, MMSZ5230BT3, MMSZ5231BT1, MMSZ5231BT3, MMSZ5232BT1,  
MMSZ5233BT1, MMSZ5233BT3, MMSZ5234BT1, MMSZ5234BT3, MMSZ5235BT1,  
MMSZ5235BT3, MMSZ5236BT1, MMSZ5236BT3, MMSZ5237BT1, MMSZ5238BT1,  
MMSZ5239BT1, MMSZ5239BT3, MMSZ5240BT1, MMSZ5240BT3, MMSZ5241BT1,  
MMSZ5242BT1, MMSZ5242BT3, MMSZ5243BT1, MMSZ5243BT3, MMSZ5244BT1,  
MMSZ5245BT1, MMSZ5245BT3, MMSZ5246BT1, MMSZ5246BT3, MMSZ5247BT1,  
MMSZ5248BT1, MMSZ5249BT1, MMSZ5249BT3, MMSZ5250BT1, MMSZ5251BT1,  
MMSZ5252BT1, MMSZ5252BT3, MMSZ5253BT1, MMSZ5254BT1, MMSZ5255BT1,  
MMSZ5255BT3, MMSZ5256BT1, MMSZ5256BT3, MMSZ5257BT1, MMSZ5257BT3,  
MMSZ5258BT1, MMSZ5258BT3, MMSZ5259BT1, MMSZ5260BT1, MMSZ5261BT1,  
MMSZ5261BT3, MMSZ5262BT1, MMSZ5263BT1, MMSZ5264BT1, MMSZ5264BT3,  
MMSZ5265BT1, MMSZ5266BT1, MMSZ5266BT3, MMSZ5267BT1, MMSZ5267BT3,  
MMSZ5268BT1, MMSZ5269BT1, MMSZ5270BT1, MMSZ5272BT3, MMSZ56T1, MMSZ56T3,  
MMSZ5V1T1, MMSZ5V1T3, MMSZ5V6T1, MMSZ5V6T3, MMSZ6026T1, MMSZ6026T3,  
MMSZ6V2T1, MMSZ6V2T3, MMSZ6V8T1, MMSZ7V5T1, MMSZ8V2T1, MMSZ9V1T1,  
MMSZ9V1T3, SZBZX84C10LT1, SZBZX84C10LT3, SZBZX84C11LT1, SZBZX84C12LT1,  
SZBZX84C12LT3, SZBZX84C13LT1, SZBZX84C13LT3, SZBZX84C15LT1, SZBZX84C16LT1,  
SZBZX84C18LT1, SZBZX84C18LT3, SZBZX84C20LT1, SZBZX84C20LT3, SZBZX84C22LT1,  
SZBZX84C24LT1, SZBZX84C24LT3, SZBZX84C27LT1, SZBZX84C27LT3, SZBZX84C2V4LT1,  
SZBZX84C2V4LT3, SZBZX84C2V7LT1, SZBZX84C30LT1, SZBZX84C30LT3, SZBZX84C33LT1,  
SZBZX84C33LT3, SZBZX84C36LT1, SZBZX84C36LT3, SZBZX84C39LT1, SZBZX84C3V0LT1,  
SZBZX84C3V0LT3, SZBZX84C3V3LT1, SZBZX84C3V3LT3, SZBZX84C3V6LT1,  
SZBZX84C3V6LT3, SZBZX84C3V9LT1, SZBZX84C3V9LT3, SZBZX84C43LT1,  
SZBZX84C47LT1, SZBZX84C47LT3, SZBZX84C4V3LT1, SZBZX84C4V3LT3,  
SZBZX84C4V7LT1, SZBZX84C4V7LT3, SZBZX84C51LT1, SZBZX84C56LT1,



**Product/Process Change Notification #11733**

SZBZX84C5V1LT1, SZBZX84C5V1LT3, SZBZX84C5V6LT1, SZBZX84C5V6LT3,  
SZBZX84C62LT1, SZBZX84C62LT3, SZBZX84C68LT1, SZBZX84C68LT3, SZBZX84C6V2LT1,  
SZBZX84C6V2LT3, SZBZX84C6V8LT1, SZBZX84C6V8LT3, SZBZX84C75LT1,  
SZBZX84C75LT3, SZBZX84C7V5LT1, SZBZX84C7V5LT3, SZBZX84C8V2LT1,  
SZBZX84C8V2LT3, SZBZX84C9V1LT1, SZBZX84C9V1LT3, SZMMBZ5221BLT1,  
SZMMBZ5221BLT3, SZMMBZ5222BLT1, SZMMBZ5223BLT1, SZMMBZ5224BLT1,  
SZMMBZ5225BLT1, SZMMBZ5226BLT1, SZMMBZ5226BLT3, SZMMBZ5227BLT1,  
SZMMBZ5228BLT1, SZMMBZ5228BLT3, SZMMBZ5229BLT1, SZMMBZ5229BLT3,  
SZMMBZ5230BLT1, SZMMBZ5230BLT3, SZMMBZ5231BLT1, SZMMBZ5231BLT3,  
SZMMBZ5232BLT1, SZMMBZ5232BLT3, SZMMBZ5233BLT1, SZMMBZ5233BLT3,  
SZMMBZ5234BLT1, SZMMBZ5234BLT3, SZMMBZ5235BLT1, SZMMBZ5235BLT3,  
SZMMBZ5236BLT1, SZMMBZ5237BLT1, SZMMBZ5237BLT3, SZMMBZ5238BLT1,  
SZMMBZ5239BLT1, SZMMBZ5239BLT3, SZMMBZ5240BLT1, SZMMBZ5240BLT3,  
SZMMBZ5241BLT1, SZMMBZ5242BLT1, SZMMBZ5242BLT3, SZMMBZ5243BLT1,  
SZMMBZ5244BLT1, SZMMBZ5244BLT3, SZMMBZ5245BLT1, SZMMBZ5245BLT3,  
SZMMBZ5246BLT1, SZMMBZ5246BLT3, SZMMBZ5247BLT1, SZMMBZ5247BLT3,  
SZMMBZ5248BLT1, SZMMBZ5248BLT3, SZMMBZ5249BLT1, SZMMBZ5250BLT1,  
SZMMBZ5250BLT3, SZMMBZ5251BLT1, SZMMBZ5251BLT3, SZMMBZ5252BLT1,  
SZMMBZ5252BLT3, SZMMBZ5253BLT1, SZMMBZ5254BLT1, SZMMBZ5255BLT1,  
SZMMBZ5256BLT1, SZMMBZ5257BLT1, SZMMBZ5257BLT3, SZMMBZ5258BLT1,  
SZMMBZ5259BLT1, SZMMBZ5259BLT3, SZMMBZ5260BLT1, SZMMBZ5261BLT1,  
SZMMBZ5261BLT3, SZMMBZ5262BLT1, SZMMBZ5263BLT1, SZMMBZ5264BLT1,  
SZMMBZ5265BLT1, SZMMBZ5266BLT1, SZMMBZ5267BLT1, SZMMBZ5268BLT1,  
SZMMBZ5270BLT1,