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# MMSZ4703

## Zener Diode

July 2009



### General Description

Half watt, General purpose, Medium Current Surface Mount Zener in the SOD-123 package. The SOD-123 package has the same footprint as the glass mini-melf (LL-34) package & provides a convenient alternative to the leadless package.

### Features

- Compact surface mount with same footprint as mini-melf
- 500mW rating on FR-4 or FR-5 board.
- Class 3 ESD rating (>16kV) per Human Body Model

### Ordering

- 7 inch reel (178mm); 8mm Tape; 3,000 units per reel.

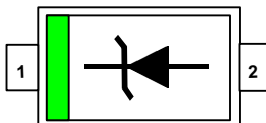
### Absolute Maximum Ratings (note 1) $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$T_{STG}$	Storage Temperature	-55 to +150	$^\circ\text{C}$
$T_J$	Maximum Junction Temperature	-55 to +150	$^\circ\text{C}$
$P_D$	Total Power Dissipation at $25^\circ\text{C}$ Derate above $25^\circ\text{C}$	500 6.7	mW mW/ $^\circ\text{C}$
$R_{QJA}$	Thermal Resistance Junction to Ambient	340	$^\circ\text{C}/\text{W}$
$R_{QJL}$	Thermal Resistance Junction to Lead	150	$^\circ\text{C}/\text{W}$
$\Delta V_Z$	Maximum Voltage Change (Note 2)	160	mV
Lead Solder Temperature (Max 10 second duration)		260	$^\circ\text{C}$
Nominal Zener Voltage ( $V_Z$ ) at $50\mu\text{A}$		16.0	V

Note 1: These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Note 2: Voltage change is equal to the difference between  $V_Z$  at  $100\mu\text{A}$  and  $V_Z$  at  $10\mu\text{A}$ .

Top Mark: DN  
1: Cathode  
2: Anode

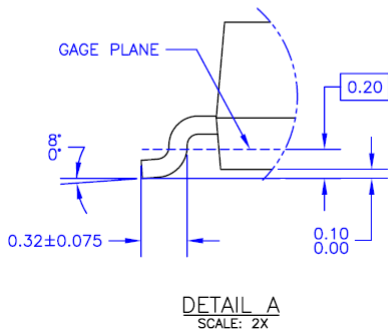
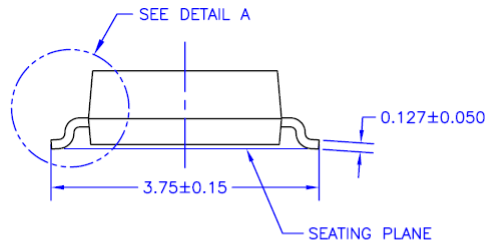
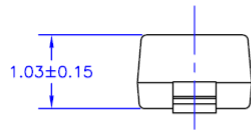
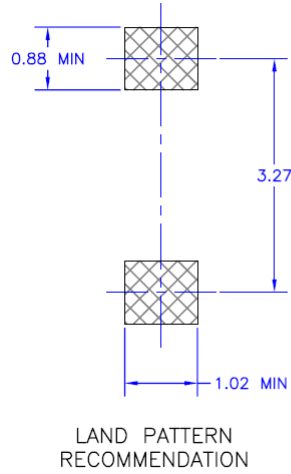
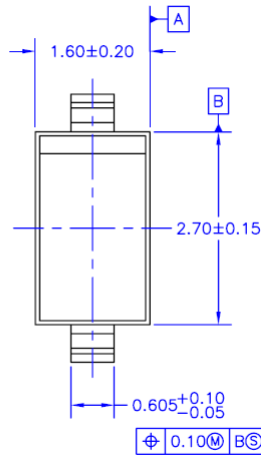


### Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Characteristics	Test Conditions	Min.	Max.	Units
$V_Z$	Zener Voltage	$I_{ZT} = 50\mu\text{A}$ D.C	15.20	16.80	V
$I_R$	Reverse Leakage	$V_R = 12.1\text{V}$		50	nA
$V_F$	Forward Voltage	$I_F = 10\text{mA}$		900	mV
$\Delta V_Z$	Delta Zener Voltage (Note 2)	$I_{ZT} = 100\mu\text{A}$ to $10\mu\text{A}$		160	mV

Physical Dimension

SOD-123









- NOTES: UNLESS OTHERWISE SPECIFIED
- A) PACKAGE REFERENCE: JEDEC, DO-215 ISSUE D, VARIATION AD.
  - B) ALL DIMENSIONS ARE IN MILLIMETERS.
  - C) DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
  - E) DRAWING FILE NAME: MA02AREV3



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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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