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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD SEMICONDUCTOR®

July 2009

MMSZ4703
Zener Diode

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

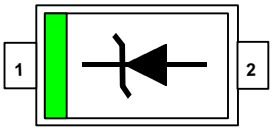
- 7 inch reel (178mm); 8mm Tape; 3,000 units per reel.

Absolute Maximum Ratings (note 1) T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units
T_{STG}	Storage Temperature	-55 to +150	°C
T_J	Maximum Junction Temperature	-55 to +150	°C
P_D	Total Power Dissipation at 25°C Derate above 25°C	500 6.7	mW mW/°C
R_{QJA}	Thermal Resistance Junction to Ambient	340	°C/W
R_{QJL}	Thermal Resistance Junction to Lead	150	°C/W
ΔV_Z	Maximum Voltage Change (Note 2)	160	mV
Lead Solder Temperature (Max 10 second duration)		260	°C
Nominal Zener Voltage (V_Z) at 50μA		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 100μA and V_Z at 10μA.

Top Mark: DN
1: Cathode
2: Anode

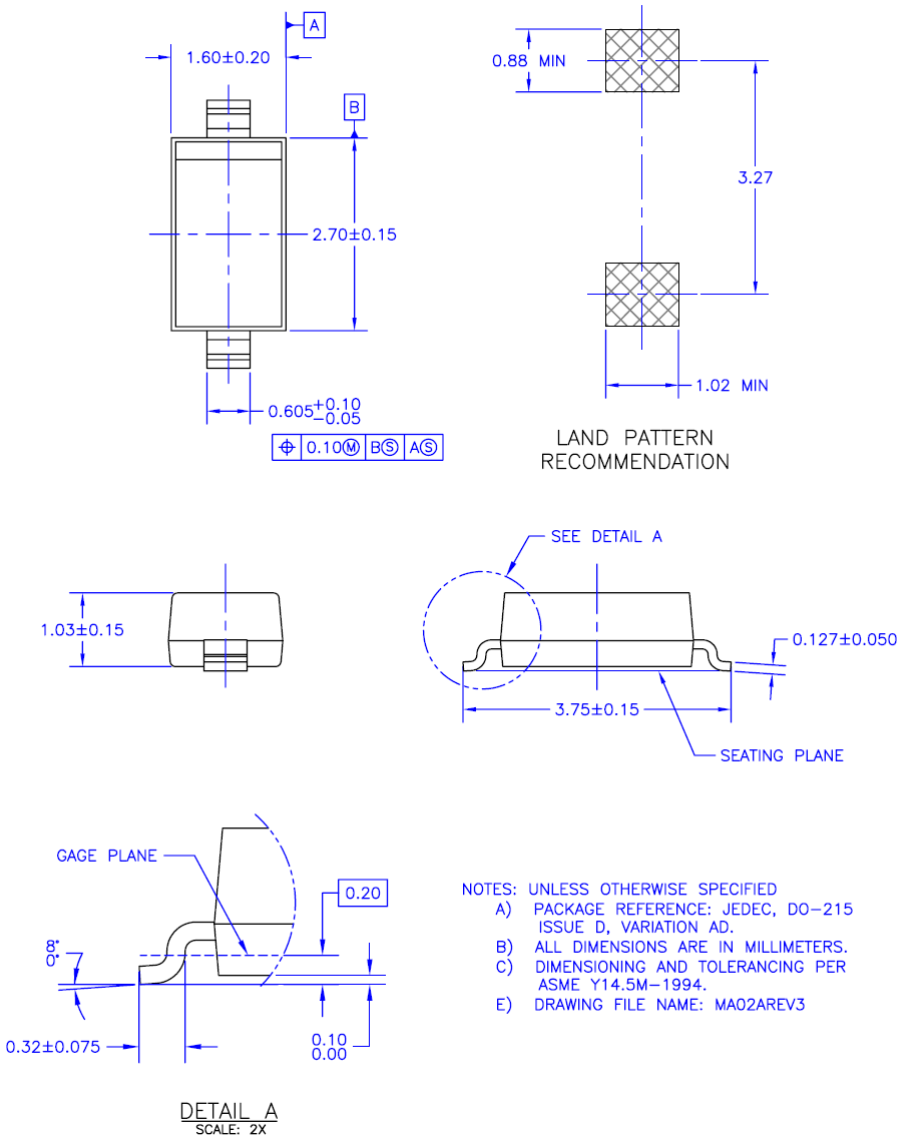


Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Characteristics	Test Conditions	Min.	Max.	Units
V_Z	Zener Voltage	I_{ZT} = 50μA D.C	15.20	16.80	V
I_R	Reverse Leakage	V_R = 12.1V		50	nA
V_F	Forward Voltage	I_F = 10mA		900	mV
ΔV_Z	Delta Zener Voltage (Note 2)	I_{ZT} = 100μA to 10μA		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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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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