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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

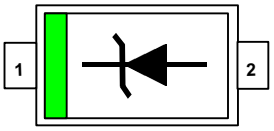
- 7 inch reel (178mm); 8mm Tape; 3,000 units per reel.

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

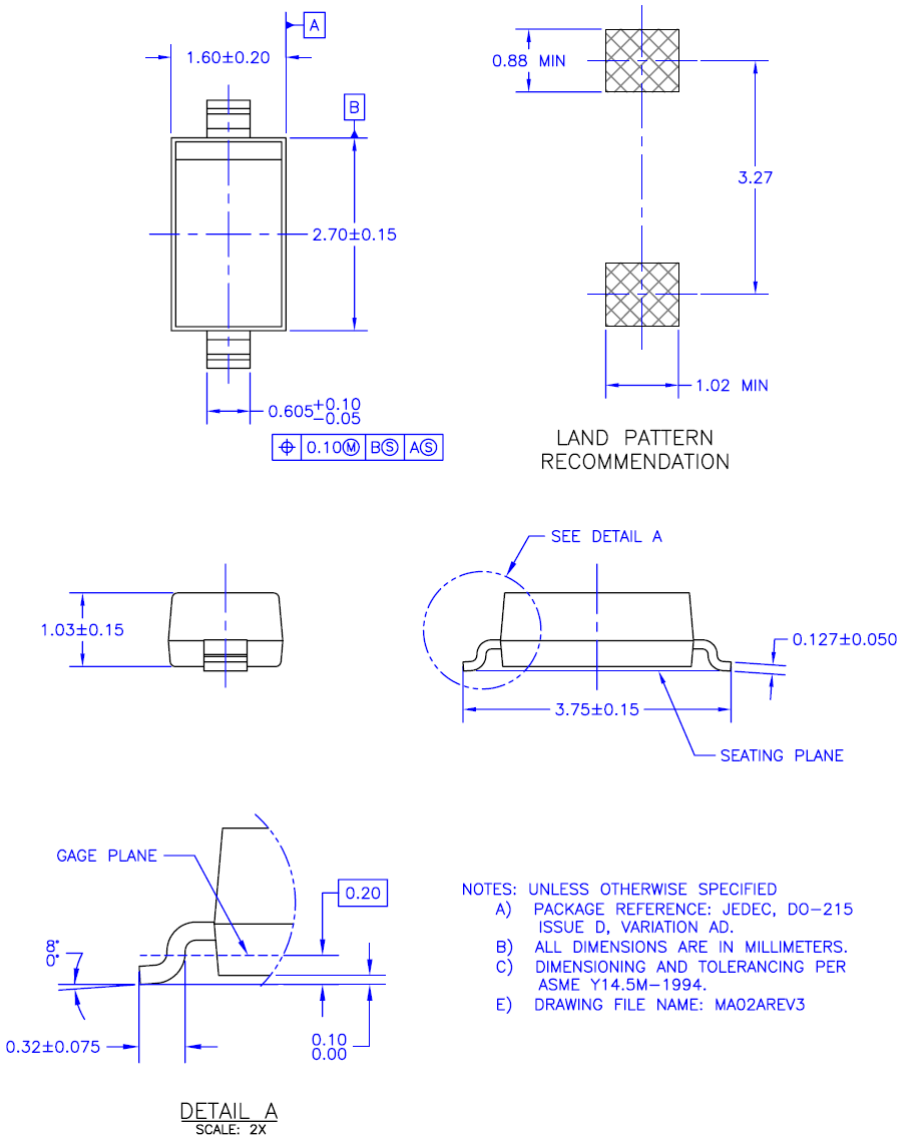


Electrical Characteristics T_A=25°C unless otherwise noted

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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