

500 mW SOD-523, Standard Tolerance Series



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This series of Zener diodes is packaged in a SOD-523 surface mount package. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

Specification Features:

- Standard Zener Breakdown Voltage Range – 2.4 V to 75 V
- Standard Tolerance Series
- Steady State Power Rating of 500 mW
- Small Body Outline Dimensions:
0.047" x 0.032" (1.20 mm x 0.80 mm)
Low Body Height: 0.028" (0.7 mm)
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- SZ Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb-Free and are RoHS Compliant*

Mechanical Characteristics:

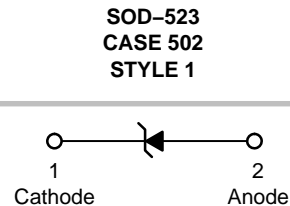
CASE: Void-free, transfer-molded, thermosetting plastic
Epoxy Meets UL 94 V-0

LEAD FINISH: 100% Matte Sn (Tin)

MOUNTING POSITION: Any

QUALIFIED MAX REFLOW TEMPERATURE: 260°C

Device Meets MSL 1 Requirements



MARKING DIAGRAM



- XX = Specific Device Code
- M = Date Code*
- = Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending upon manufacturing location.

MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Total Device Dissipation FR-4 Board, (Note 1) @ T _A = 25°C Derate above 25°C	P _D	500 4.0	mW mW/°C
Thermal Resistance, Junction-to-Ambient (Note 1)	R _{θJA}	250	°C/W

Junction and Storage Temperature Range J_a9nge

1. FR-4 printed circuit board, single-sided copper, mounting pad 1 cm

2.

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

DEVICE MARKING INFORMATION

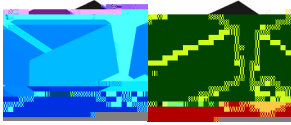
See specific marking information in the device marking column of the Electrical Characteristics tables starting on page 3 of this data sheet.

MM5ZxxxT1G Series, SZMM5ZxxxT1G Series

ELECTRICAL CHARACTERISTICS

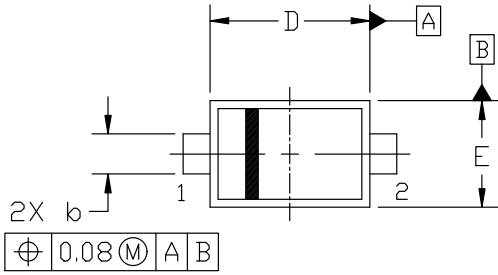
($T_A = 25^\circ\text{C}$ unless otherwise noted,
 $V_F = 0.9\text{ V Max. @ } I_F = 10\text{ mA}$ for all types)

Symbol	Parameter
V_Z	Reverse Zener Voltage @ I_{ZT}
I_{ZT}	



CASE 502
ISSUE F

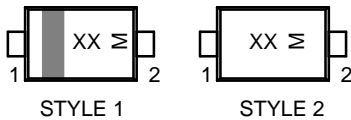
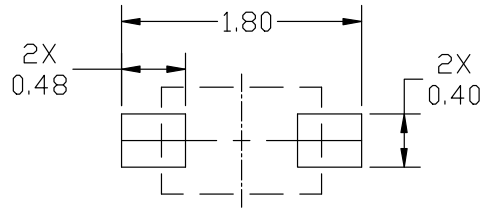
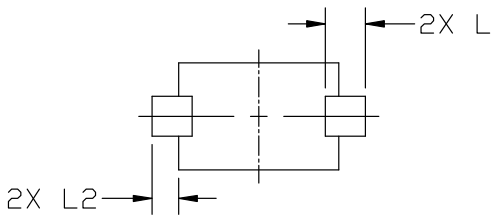
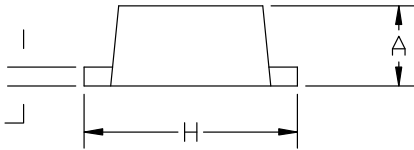
DATE 08 FEB 2024



2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH, MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

MILLIMETERS		
DIM	MIN.	NOM.
0.50	0.45	0.50

AND TOLERANCING PER ASME Y14.5M, 2



XX = Specific Device Code
M Date Code

*For additional information

ing and Mounting Techniques
Reference manual, SOLDERM/D.

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

STYLE 1: PIN 1. CATHODE (POLARITY BAND)
2. ANODE

STYLE 2: NO POLARITY



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