

MMSZxxxET1G Series, SZMMSZxxxET1G Series

Zener Voltage Regulators

500 mW SOD-123 Surface Mount

Three complete series of Zener diodes are offered in the convenient, surface mount plastic SOD-123 package. These devices provide a convenient alternative to the leadless 34-package style.

Specification Features

- € 500 mW Rating on FR-4 or FR-5 Board
- € Wide Zener Reverse Voltage Range – 2.4 V to 56 V
- € Package Designed for Optimal Automated Board Assembly
- € Small Package Size for High Density Applications
- € ESD Rating of Class 3 (> 16 kV) per Human Body Model
- € Peak Power – 225 W (8 X 20 μ s)
- € AEC-Q101 Qualified and PPAP Capable
- € SZ Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements
- € Pb-Free Packages are Available*

Mechanical Characteristics

CASE: Void-free, transfer-molded, thermosetting plastic case

FINISH: Corrosion resistant finish, easily solderable

MAXIMUM CASE TEMPERATURE FOR SOLDERING PURPOSES:

260 ν C for 10 Seconds

POLARITY: Cathode indicated by polarity band

FLAMMABILITY RATING: UL 94 V-0

MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Peak Power Dissipation @ 20 μ s (Note 1) @ T _L Ω 25 ν C	P _{pk}	225	W
Total Power Dissipation on FR-5 Board, (Note 2) @ T _L = 75 ν C Derated above 75 ν C	P _D	500	mW
Thermal Resistance, Junction-to-Ambient (Note 3)		6.7	mW/ ν C
Thermal Resistance, Junction-to-Lead (Note 3)	R _{θJL}	150	ν C/W
Junction and Storage Temperature Range	T _J , T _{stg}	-55 to +150	ν C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. Nonrepetitive current pulse per Figure 11
2. FR-

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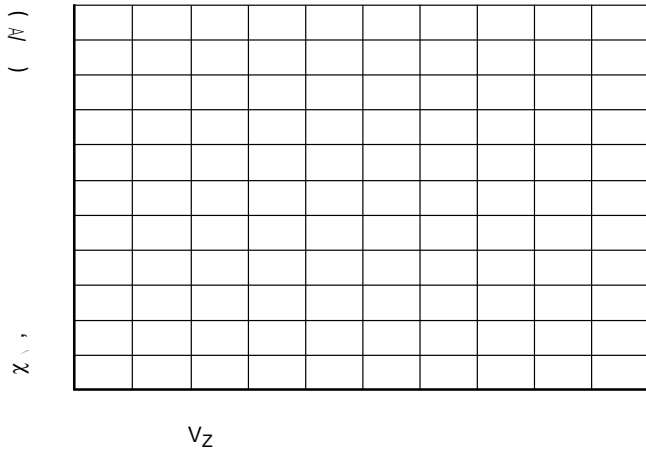
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ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted, $V_F = 0.9\text{ V Max.}$ @ $I_F = 10\text{ mA}$)

Device*	Device Marking	V_{Z1} (V) (Notes 7 and 8)	Z_{ZT1} (Note 9)	V_{Z2} (V) (Notes 7 and 8)	Z_{ZT2} (Note 9)	Max Reverse Leakage Current
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TYPICAL CHARACTERISTICS



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TYPICAL CHARACTERISTICS

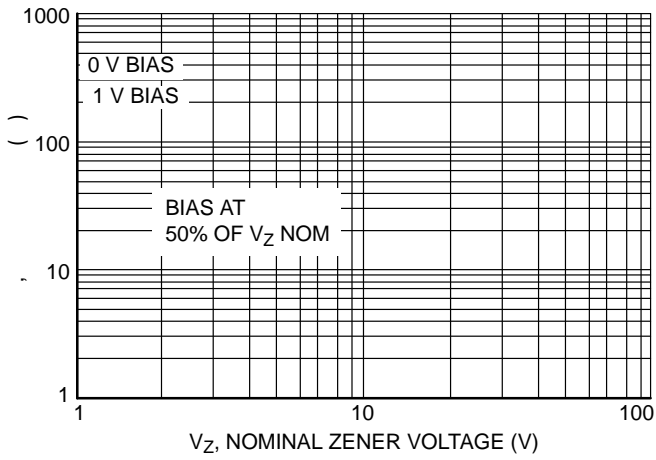
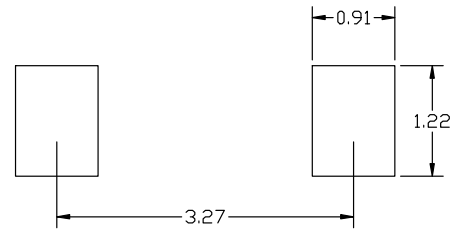
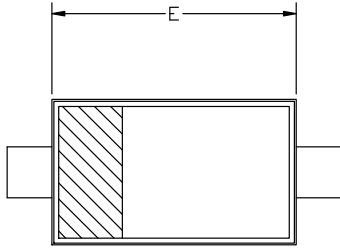


Figure 7. Typical Capacitance



SOD-123 2-LEAD, 1.60x2.69x1.16
CASE 425
ISSUE H

DATE 29 FEB 2024



**GENERIC
MARKING DIAGRAM***



- XXX = Specific Device Code
- M = Date Code
- = Pb-Free Package

(Note: Microdot may be in either location)

*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
2. ANODE

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