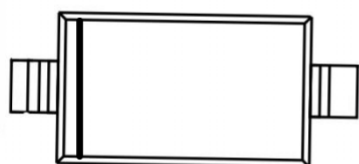


## Features

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOD123 surface mount package



**SOD123**

## Applications

- General voltage regulation
- Mobile & handheld systems



**Pin Configuration**

## Maximum Ratings& Thermal Characteristics

(Tamb=25°C unless otherwise specified)

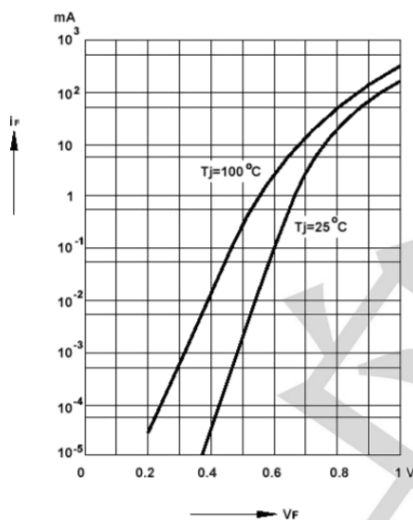
| Parameter                                | Symbol | Value      | Unit |
|------------------------------------------|--------|------------|------|
| Forward Voltage @ IF=10mA                | VF     | 0.9        | V    |
| Power Dissipation                        | PD     | 500        | mW   |
| Thermal Resistance (Junction-to-Ambient) | RθJA   | 250        | °C/W |
| Thermal Resistance (Junction-to-Case)    | RθJC   | 140        | °C/W |
| Junction Temperature Range               | TJ     | -55 ~ +150 | °C   |
| Storage Temperature Range                | TSTG   | -65 ~ +150 | °C   |

## Electrical Characteristics (TA=25°C unless otherwise specified)

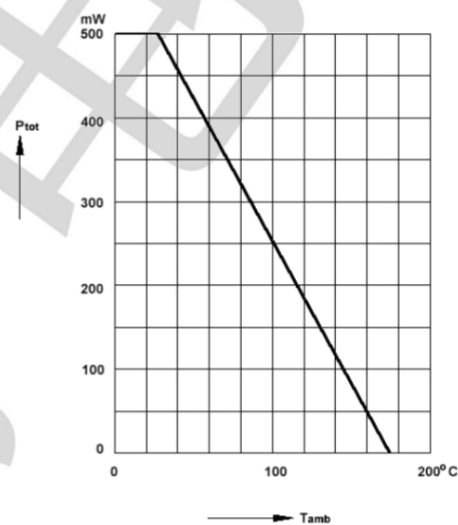
| Device    | Zener Voltage Range |        |        |     | Maximum Zener Impedance |          |     | Maximum Reverse Current |     | Typical Temperature coefficient @ IZTC=mV/°C |     | Test Current IZTC |
|-----------|---------------------|--------|--------|-----|-------------------------|----------|-----|-------------------------|-----|----------------------------------------------|-----|-------------------|
|           | Vz@Izt              |        |        | Izt | Zzt @Izt                | Zzk @Izk | Izk | IR                      | VR  |                                              |     |                   |
|           | Nom(V)              | Min(V) | Max(V) | mA  | Ω                       |          | mA  | uA                      | V   | Min                                          | Max | mA                |
| BZT52C3V0 | 3.0                 | 2.8    | 3.2    | 5   | 95                      | 600      | 1.0 | 10                      | 1.0 | -3.5                                         | 0   | 5                 |

## Typical Characteristics Curves

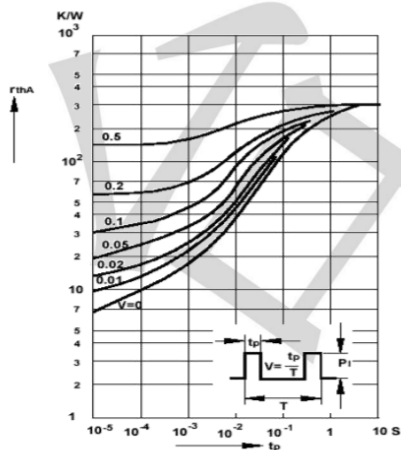
Forward characteristics



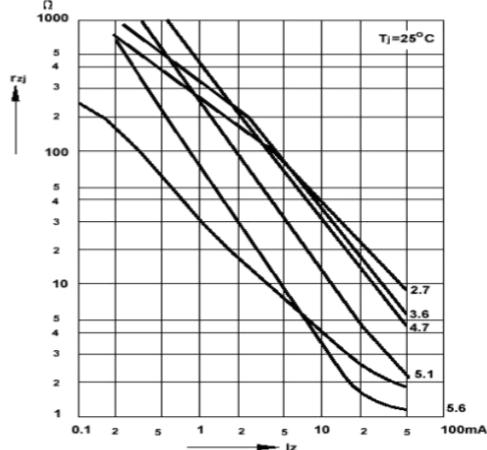
Admissible power dissipation versus ambient temperature



Pulse thermal resistance versus pulse duration

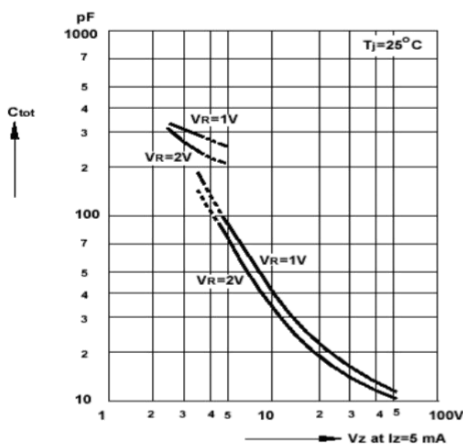


Dynamic resistance versus Zener current

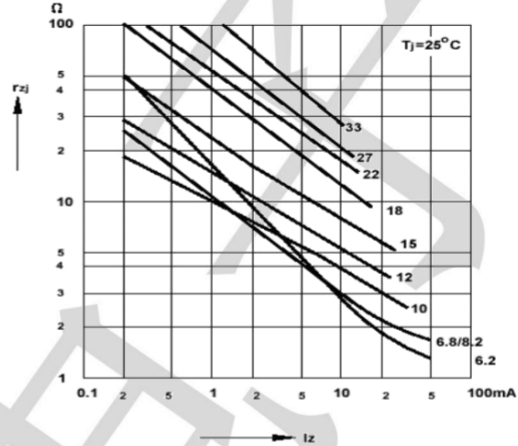


## Typical Characteristics Curves

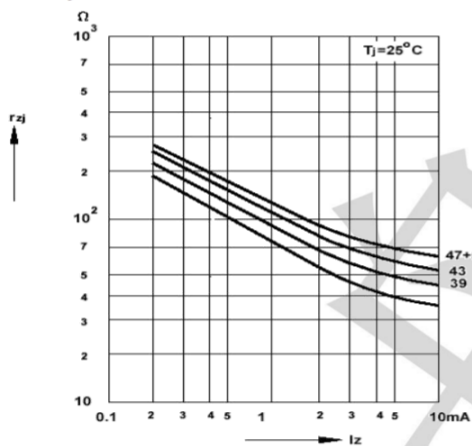
Capacitance versus Zener voltage



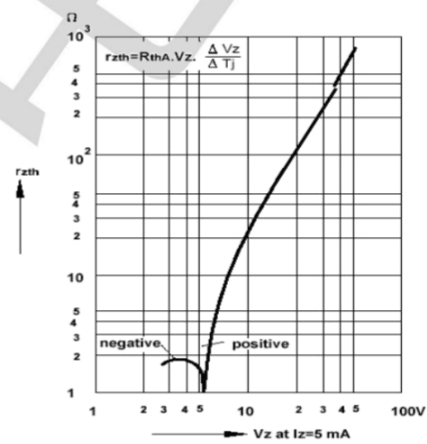
Dynamic resistance versus Zener current



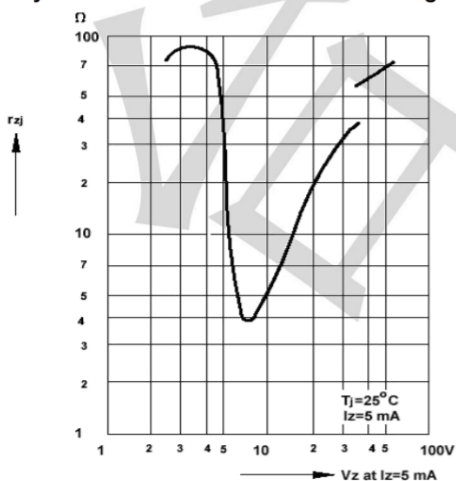
Dynamic resistance versus Zener current



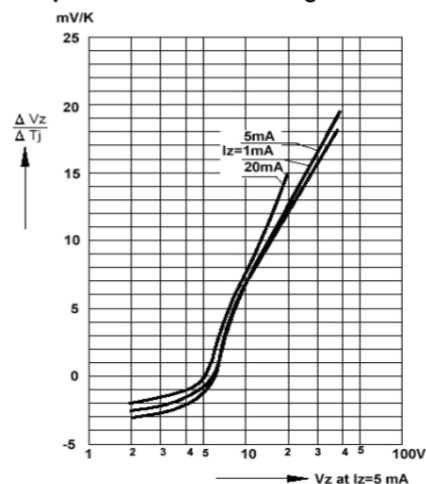
Thermal differential resistance versus Zener voltage



Dynamic resistance versus Zener voltage

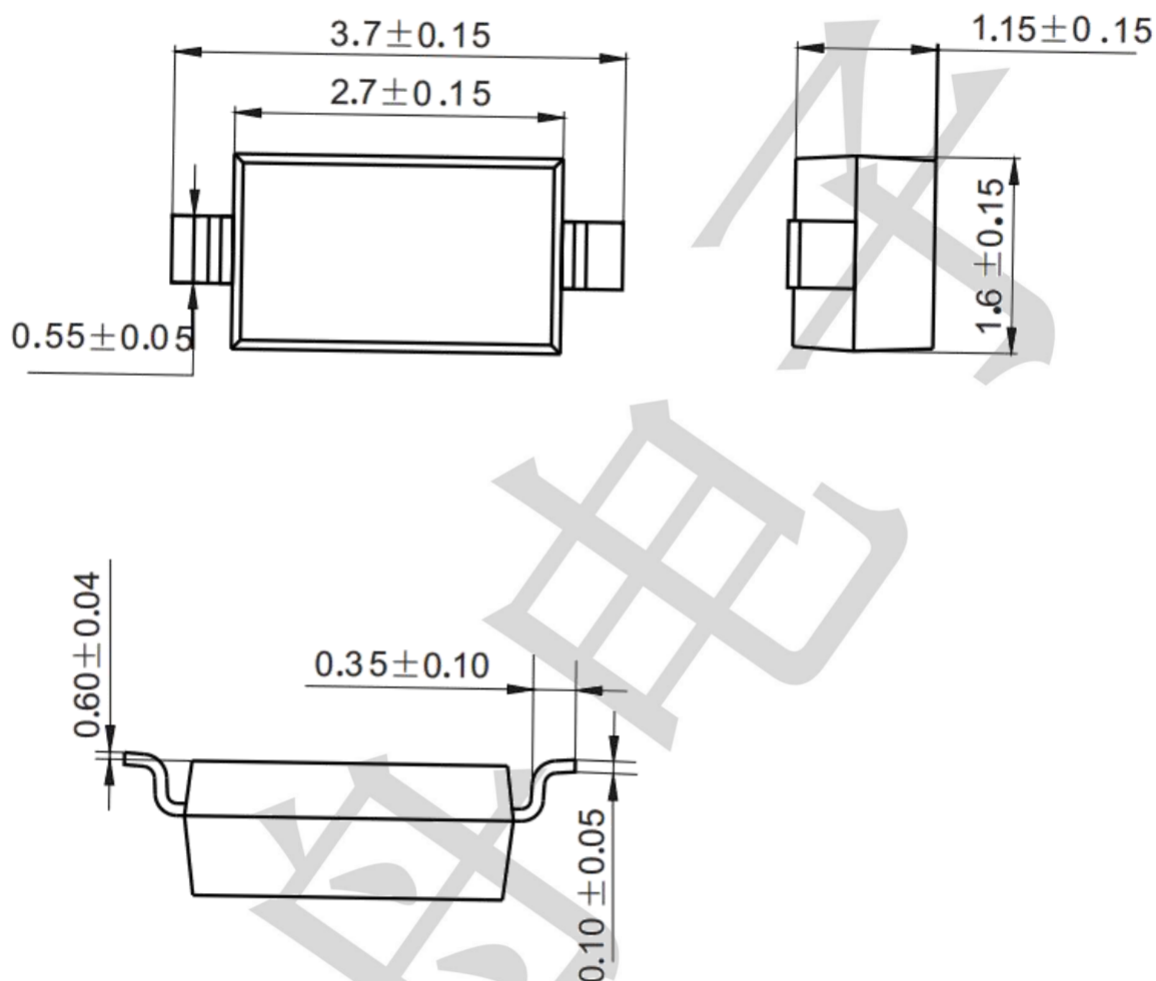


Temperature dependence of Zener voltage versus Zener voltage



**Package Outline Dimensions (unit: mm)**

**SOD123**



**Mounting Pad Layout (unit: mm)**

