

Surface Mount Zener Diode

multicomp **PRO**



SOD-123

Features:

- Planar Die Construction
- 500mW Power Dissipation On Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited For Automated Assembly Processes

Applications:

- Zener diode
- Ultra-small surface mount package

Maximum Rating @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|---|------------------|-------------|------|
| Forward voltage @ I _F =10mA | V _F | 0.9 | V |
| Power dissipation | P _D | 500 | mW |
| Thermal resistance, junction to ambient air | R _{θJA} | 305 | °C/W |
| Junction temperature | T _j | 150 | °C |
| Storage temperature range | T _{stg} | -65 to +150 | °C |

Note : Device mounted on ceramic PCB; 7.6mm × 9.4mm × 0.87mm with pad areas 25mm²

Short duration test pulse used to minimize self-heating effect.

When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.

f = 1kHz

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Type Number | Marking Code | Zener Voltage Range | | | | Maximum Zener Impedance | | | Maximum Reverse Current | | Typical Temperature Coefficient@ I _{ZTC} mV/°C | | Test Current I _{ZTC} mA |
|-------------|--------------|---------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|-----------------|-------------------------|-----------------|---|-----|----------------------------------|
| | | V _Z @I _{ZT} | | | I _{ZT} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} | I _{ZK} | I _R | @V _R | Min | Max | |
| | | Nom(V) | Min(V) | Max(V) | mA | Ω | | mA | μA | V | | | mA |
| BZT52C43 | WU | 43 | 40 | 46 | 5 | 100 | 700 | 1 | 0.1 | 32 | 10 | 12 | 5 |

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Typical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

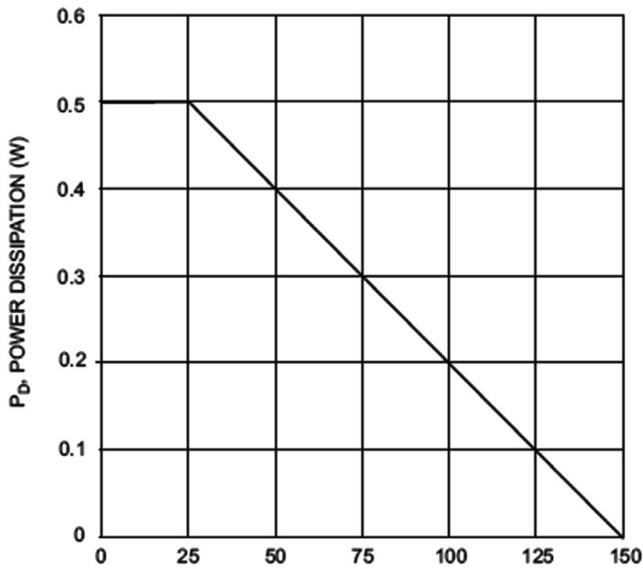


Fig. 1 Power Dissipation vs Ambient Temperature

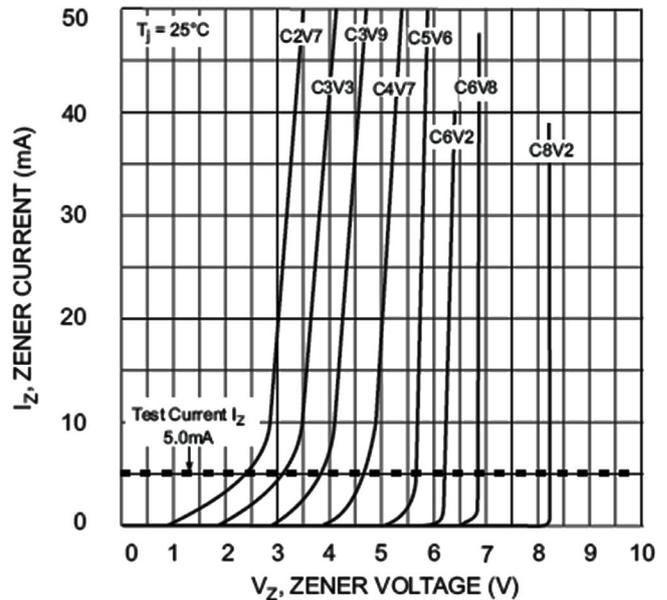


Fig. 2 Zener Breakdown Characteristics

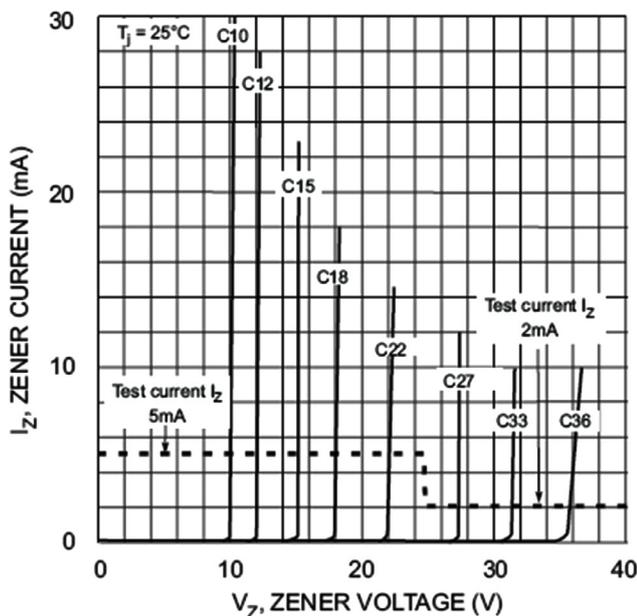


Fig. 3 Zener Breakdown Characteristics

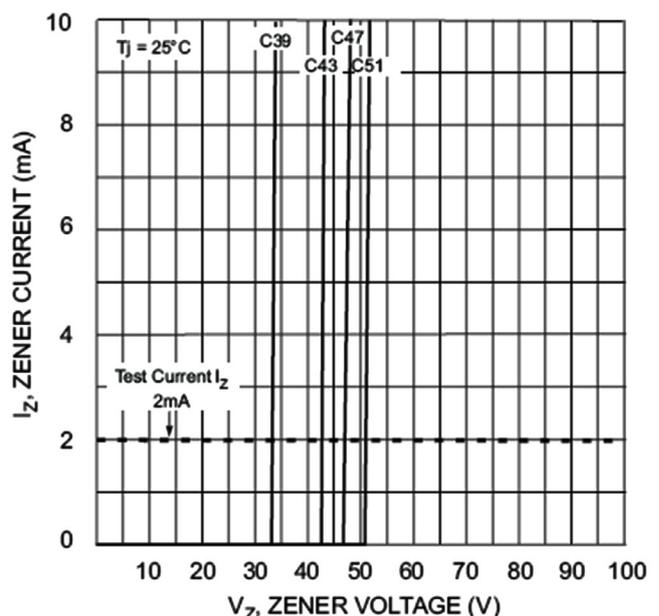


Fig. 4 Zener Breakdown Characteristics

Surface Mount Zener Diode

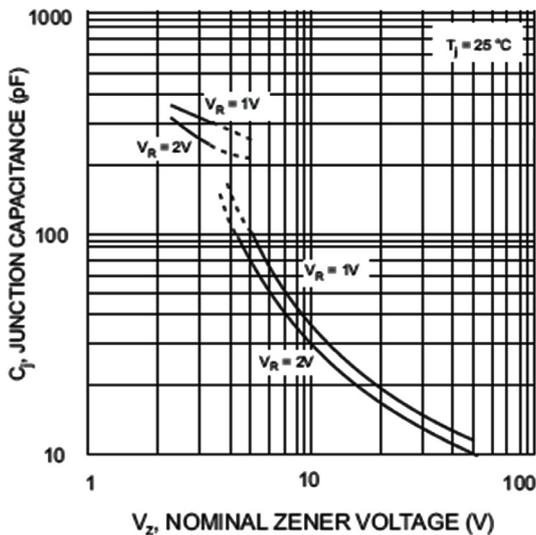
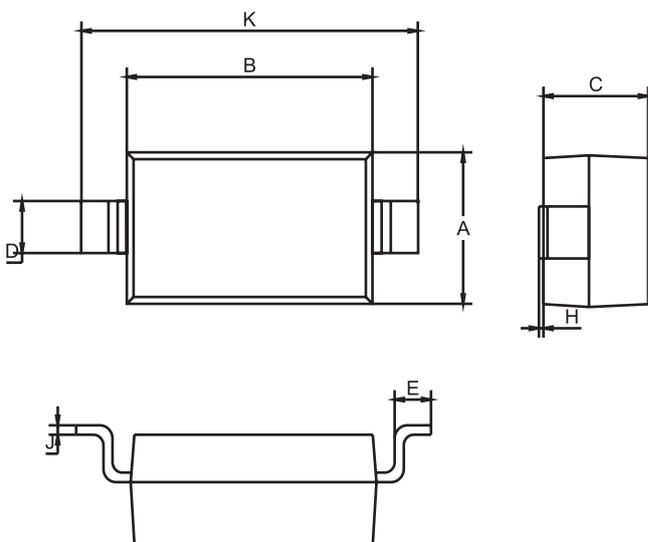


Fig. 5 Junction Capacitance vs Nominal Zener Voltage

Package Outline

Plastic surface mounted package

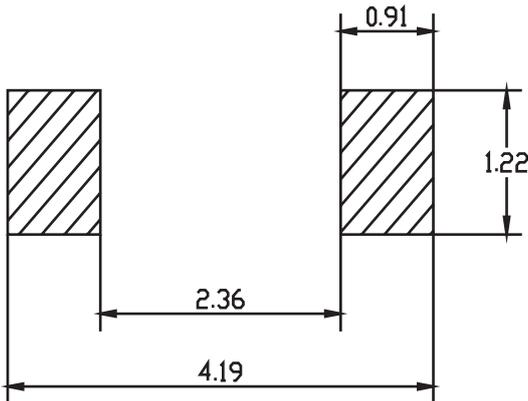


| SOD-123 | | |
|----------------------|--------------|------|
| Dim | Min | Max |
| A | 1.4 | 1.8 |
| B | 2.55 | 2.85 |
| C | 1.15 Typical | |
| D | 0.5 | 0.6 |
| E | 0.3 | 0.4 |
| H | 0.02 | 0.10 |
| J | 0.1 Typical | |
| K | 3.55 | 3.85 |
| All Dimensions in mm | | |

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Soldering Footprint



Dimensions : Millimetres

Package Information

| Device | Package | Shipping |
|--------------|---------|-------------------|
| BZT52C43-7-F | SOD-123 | 3,000/Tape & Reel |

Part Number Table

| Description | Part Number |
|---------------------------|--------------|
| Surface Mount Zener Diode | BZT52C43-7-F |

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