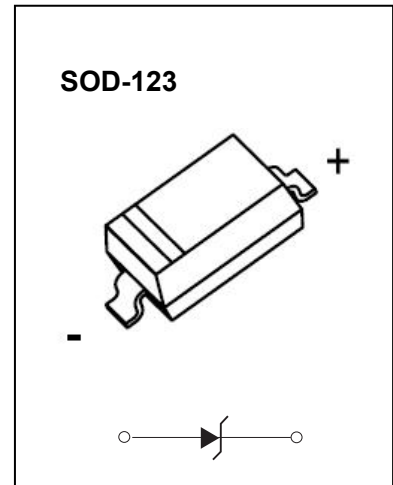




BZT52C2V4-BZT52C43 ZENER DIODE

FEATURES:

- Planar Die Construction
- 350mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version



Maximum Ratings(T_a=25°C unless otherwise specified)

| Characteristic | Symbol | Value | Unit |
|--|------------------|----------|------|
| Forward Voltage (Note 2) @ I _F = 10mA | V _F | 0.9 | V |
| Power Dissipation(Note 1) | P _D | 350 | mW |
| Thermal Resistance from Junction to Ambient | R _{θJA} | 357 | °C/W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature | T _{STG} | -55~+150 | °C |

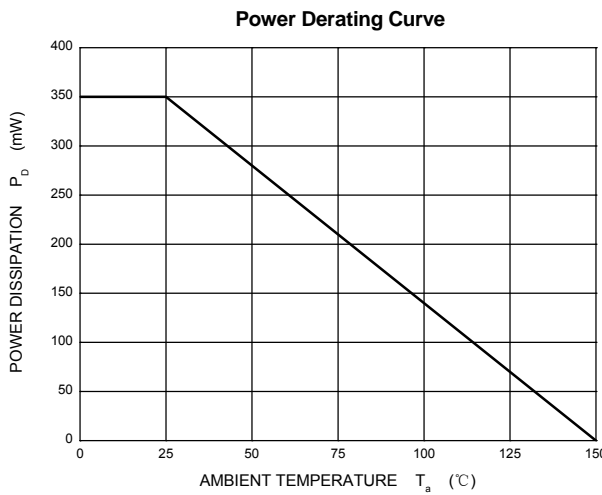
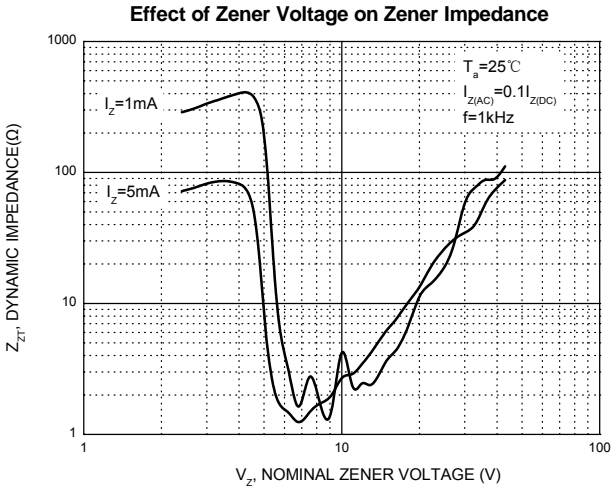
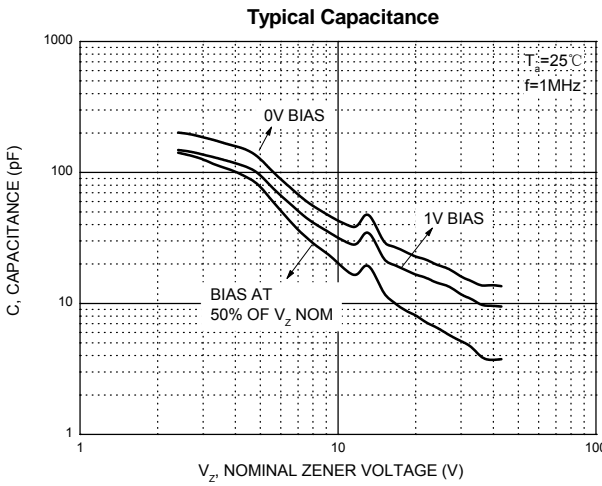
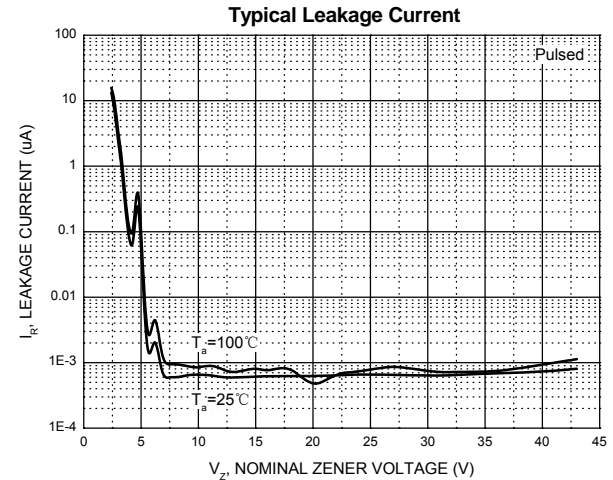
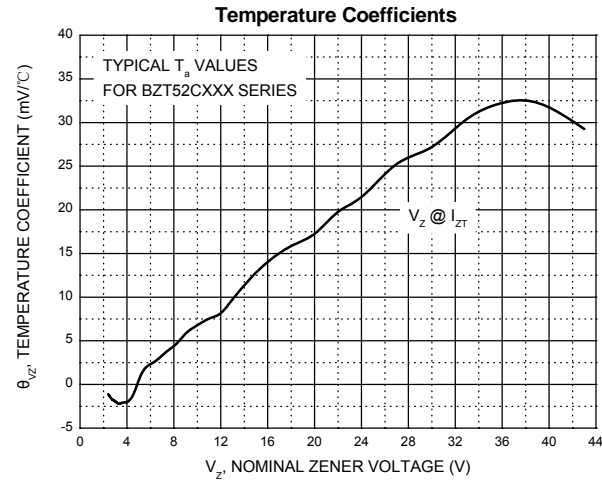
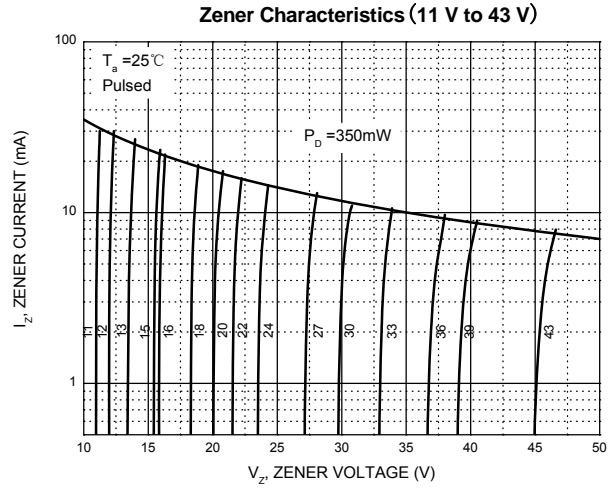
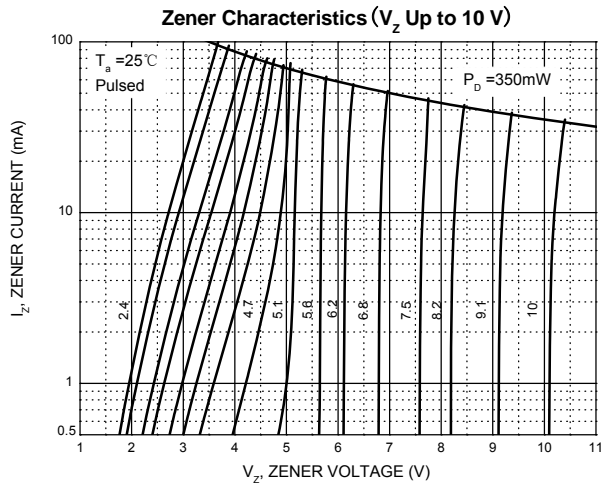
ELECTRICAL CHARACTERISTICS

BZT52C2V4-BZT52C43

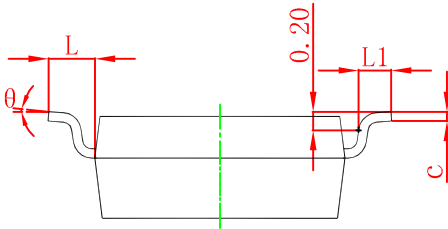
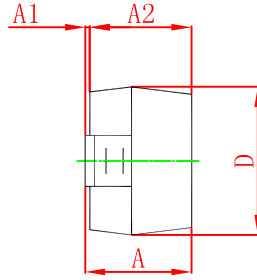
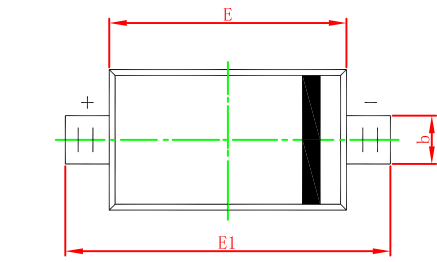
T_a=25°C unless otherwise specified

| Type Number | Type Code | Zener Voltage Range (Note 2) | | | | Maximum Zener Impedance (Note 3) | | | Maximum Reverse Current (Note 2) | | Typical Temperature Coefficient @I _{ZTC} | | Test Current I _{ZTC} |
|-------------|-----------|---------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|-----------------|----------------------------------|----------------|---|------|-------------------------------|
| | | V _Z @I _{ZT} | | | I _{ZT} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} | I _{ZK} | I _R | V _R | mV/°C | | |
| | | Nom(V) | Min(V) | Max(V) | mA | Ω | | mA | uA | V | Min | Max | |
| BZT52C2V4 | WX | 2.4 | 2.20 | 2.60 | 5 | 100 | 600 | 1.0 | 50 | 1.0 | -3.5 | 0 | 5 |
| BZT52C2V7 | W1 | 2.7 | 2.5 | 2.9 | 5 | 100 | 600 | 1.0 | 20 | 1.0 | -3.5 | 0 | 5 |
| BZT52C3V0 | W2 | 3.0 | 2.8 | 3.2 | 5 | 95 | 600 | 1.0 | 10 | 1.0 | -3.5 | 0 | 5 |
| BZT52C3V3 | W3 | 3.3 | 3.1 | 3.5 | 5 | 95 | 600 | 1.0 | 5 | 1.0 | -3.5 | 0 | 5 |
| BZT52C3V6 | W4 | 3.6 | 3.4 | 3.8 | 5 | 90 | 600 | 1.0 | 5 | 1.0 | -3.5 | 0 | 5 |
| BZT52C3V9 | W5 | 3.9 | 3.7 | 4.1 | 5 | 90 | 600 | 1.0 | 3 | 1.0 | -3.5 | 0 | 5 |
| BZT52C4V3 | W6 | 4.3 | 4.0 | 4.6 | 5 | 90 | 600 | 1.0 | 3 | 1.0 | -3.5 | 0 | 5 |
| BZT52C4V7 | W7 | 4.7 | 4.4 | 5.0 | 5 | 80 | 500 | 1.0 | 3 | 2.0 | -3.5 | 0.2 | 5 |
| BZT52C5V1 | W8 | 5.1 | 4.8 | 5.4 | 5 | 60 | 480 | 1.0 | 2 | 2.0 | -2.7 | 1.2 | 5 |
| BZT52C5V6 | W9 | 5.6 | 5.2 | 6.0 | 5 | 40 | 400 | 1.0 | 1 | 2.0 | -2.0 | 2.5 | 5 |
| BZT52C6V2 | WA | 6.2 | 5.8 | 6.6 | 5 | 10 | 150 | 1.0 | 3 | 4.0 | 0.4 | 3.7 | 5 |
| BZT52C6V8 | WB | 6.8 | 6.4 | 7.2 | 5 | 15 | 80 | 1.0 | 2 | 4.0 | 1.2 | 4.5 | 5 |
| BZT52C7V5 | WC | 7.5 | 7.0 | 7.9 | 5 | 15 | 80 | 1.0 | 1 | 5.0 | 2.5 | 5.3 | 5 |
| BZT52C8V2 | WD | 8.2 | 7.7 | 8.7 | 5 | 15 | 80 | 1.0 | 0.7 | 5.0 | 3.2 | 6.2 | 5 |
| BZT52C9V1 | WE | 9.1 | 8.5 | 9.6 | 5 | 15 | 100 | 1.0 | 0.5 | 6.0 | 3.8 | 7.0 | 5 |
| BZT52C10 | WF | 10 | 9.4 | 10.6 | 5 | 20 | 150 | 1.0 | 0.2 | 7.0 | 4.5 | 8.0 | 5 |
| BZT52C11 | WG | 11 | 10.4 | 11.6 | 5 | 20 | 150 | 1.0 | 0.1 | 8.0 | 5.4 | 9.0 | 5 |
| BZT52C12 | WH | 12 | 11.4 | 12.7 | 5 | 25 | 150 | 1.0 | 0.1 | 8.0 | 6.0 | 10.0 | 5 |
| BZT52C13 | WI | 13 | 12.4 | 14.1 | 5 | 30 | 170 | 1.0 | 0.1 | 8.0 | 7.0 | 11.0 | 5 |
| BZT52C15 | WJ | 15 | 13.8 | 15.6 | 5 | 30 | 200 | 1.0 | 0.1 | 10.5 | 9.2 | 13.0 | 5 |
| BZT52C16 | WK | 16 | 15.3 | 17.1 | 5 | 40 | 200 | 1.0 | 0.1 | 11.2 | 10.4 | 14.0 | 5 |
| BZT52C18 | WL | 18 | 16.8 | 19.1 | 5 | 45 | 225 | 1.0 | 0.1 | 12.6 | 12.4 | 16.0 | 5 |
| BZT52C20 | WM | 20 | 18.8 | 21.2 | 5 | 55 | 225 | 1.0 | 0.1 | 14.0 | 14.4 | 18.0 | 5 |
| BZT52C22 | WN | 22 | 20.8 | 23.3 | 5 | 55 | 250 | 1.0 | 0.1 | 15.4 | 16.4 | 20.0 | 5 |
| BZT52C24 | WO | 24 | 22.8 | 25.6 | 5 | 70 | 250 | 1.0 | 0.1 | 16.8 | 18.4 | 22.0 | 5 |
| BZT52C27 | WP | 27 | 25.1 | 28.9 | 2 | 80 | 300 | 0.5 | 0.1 | 18.9 | 21.4 | 25.3 | 2 |
| BZT52C30 | WQ | 30 | 28.0 | 32.0 | 2 | 80 | 300 | 0.5 | 0.1 | 21.0 | 24.4 | 29.4 | 2 |
| BZT52C33 | WR | 33 | 31.0 | 35.0 | 2 | 80 | 325 | 0.5 | 0.1 | 23.1 | 27.4 | 33.4 | 2 |
| BZT52C36 | WS | 36 | 34.0 | 38.0 | 2 | 90 | 350 | 0.5 | 0.1 | 25.2 | 30.4 | 37.4 | 2 |
| BZT52C39 | WT | 39 | 37.0 | 41.0 | 2 | 130 | 350 | 0.5 | 0.1 | 27.3 | 33.4 | 41.2 | 2 |
| BZT52C43 | WU | 43 | 40.0 | 46.0 | 5 | 100 | 700 | 1.0 | 0.1 | 32 | 10.0 | 12.0 | 5 |

- Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
 2. Short duration test pulse used to minimize self-heating effect
 3. f=1kHz

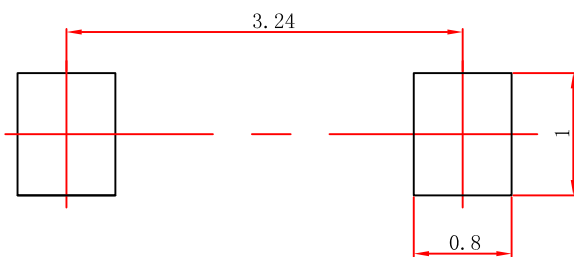


SOD-123 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.600 | 2.800 | 0.102 | 0.110 |
| E1 | 3.550 | 3.850 | 0.140 | 0.152 |
| L | 0.500 REF | | 0.020 REF | |
| L1 | 0.250 | 0.450 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

SOD-123 Suggested Pad Layout

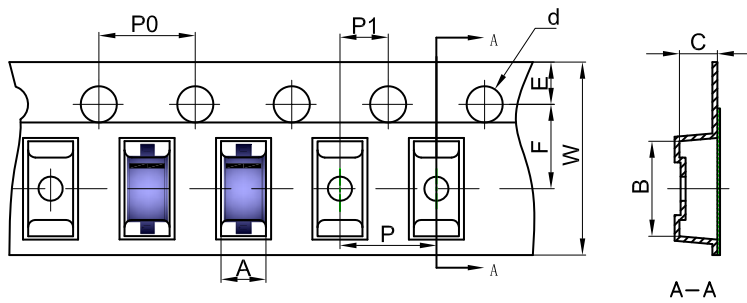


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape



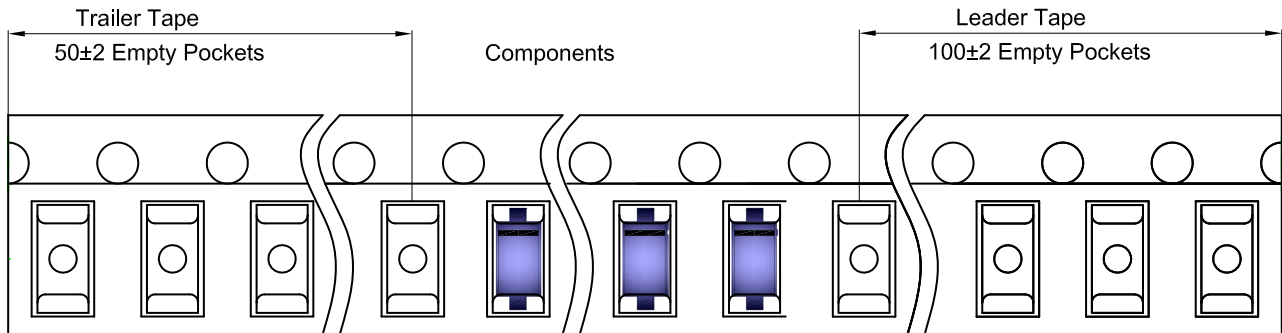
Packaging Description:

SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

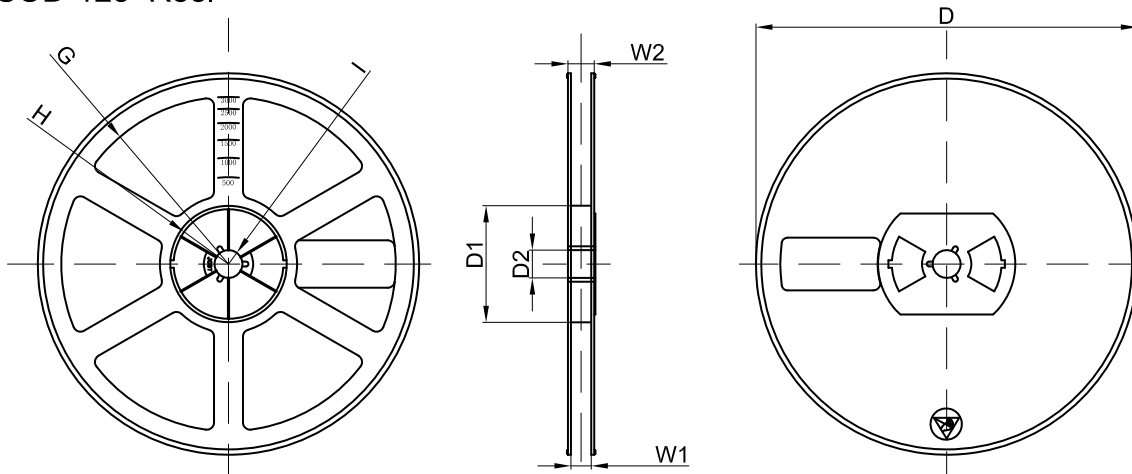
Dimensions are in millimeter

| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
|----------|------|------|------|-------|------|------|------|------|------|------|
| SOD-123 | 1.85 | 3.95 | 1.57 | Ø1.55 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter

| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
|-------------|---------|-------|-------|--------|--------|-------|------|-------|
| 7" Dia | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch | 45,000 pcs | 203×203×195 | 180,000 pcs | 438×438×220 | |

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[RD16UM-T1-A](#) [RD39S-T1-A](#) [RD9.1S-T1-A](#) [RD10S-T1-A](#) [RD20S-T1-A](#) [RD2.2S-T1-A](#) [RD2.7UM-T1-A](#)