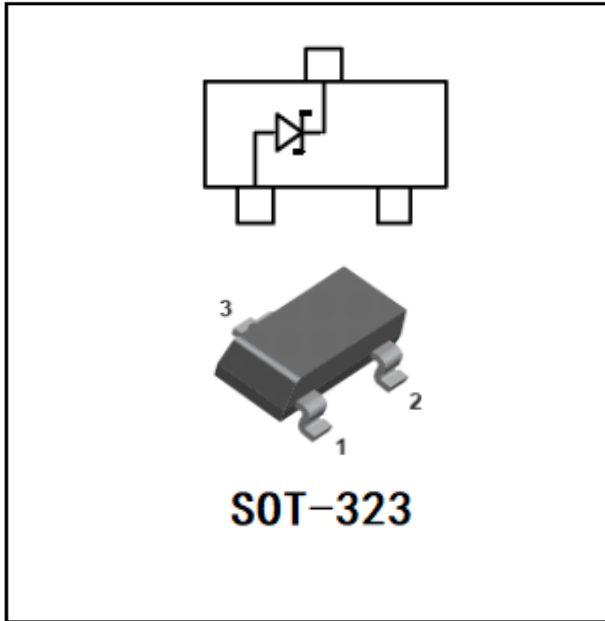


Zener Diode



Features

- 200mW power dissipation rating.
- Epoxy meets UL-94 V-0 flammability rating
- Zener Voltage from 2.4V to 39V.
- Moisture Sensitivity Level 1
- High Conductance
- Surface mount package ideally Suited for Automatic Insertion

Mechanical Data

- **Package:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Limiting Values (Absolute Maximum Rating, Ta=25°C Unless otherwise specified)

| Characteristic | Symbol | Value | Units |
|--|-------------------|----------|-------|
| Maximum Forward Voltage@I _F =10mA | V _F | 0.9 | V |
| Power Dissipation | PD | 200 | mW |
| Peak Forward Surge Current* | I _{FSM} | 2.0 | A |
| Thermal Resistance | R _{thJA} | 625 | °C /W |
| Operation Temperature | T _J | -55~+150 | °C |
| Storage Temperature Range | TSTG | -55~+150 | °C |

*Measured on 8.3ms, single half sine-wave

■ Ordering Information (Example)

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BZX84C2V4W THRU BZX84C39W | F2 | Approximate 0.005 | 3000 | 30000 | 120000 | 7" reel |



BZX84C2V4W THRU BZX84C39W

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

| Type Number | Marking Code | Nominal Zener Voltage | | | Maximum Zener Impedance | | | | Max Reverse Leakage Current | |
|-------------|--------------|-------------------------------------|------|------|----------------------------------|----------------------|----------------------------------|----------------------|-------------------------------------|--------------------|
| | | V _Z (V)@ I _{ZT} | | | Z _{ZT} @I _{ZT} | | Z _{Zk} @I _{Zk} | | I _R (μA)@ V _R | |
| | | Min. | Typ. | Max. | Z _{ZT} (Ω) | I _{ZT} (mA) | Z _{Zk} (Ω) | I _{Zk} (mA) | Max | V _R (V) |
| BZX84C2V4W | KRB | 2.28 | 2.4 | 2.52 | 100 | 5 | 600 | 1 | 50 | 1 |
| BZX84C2V7W | KRC | 2.5 | 2.7 | 2.9 | 100 | 5 | 600 | 1 | 20 | 1 |
| BZX84C3V0W | KRD | 2.8 | 3.0 | 3.2 | 95 | 5 | 600 | 1 | 10 | 1 |
| BZX84C3V3W | KRE | 3.1 | 3.3 | 3.5 | 95 | 5 | 600 | 1 | 5 | 1 |
| BZX84C3V6W | KRF | 3.4 | 3.6 | 3.8 | 90 | 5 | 600 | 1 | 5 | 1 |
| BZX84C3V9W | KRG | 3.7 | 3.9 | 4.1 | 90 | 5 | 600 | 1 | 3 | 1 |
| BZX84C4V3W | KRH | 4.0 | 4.3 | 4.6 | 90 | 5 | 600 | 1 | 3 | 1 |
| BZX84C4V7W | KR1 | 4.4 | 4.7 | 5.0 | 80 | 5 | 500 | 1 | 3 | 2 |
| BZX84C5V1W | KR2 | 4.8 | 5.1 | 5.4 | 60 | 5 | 480 | 1 | 2 | 2 |
| BZX84C5V6W | KR3 | 5.2 | 5.6 | 6.0 | 40 | 5 | 400 | 1 | 1 | 2 |
| BZX84C6V2W | KR4 | 5.8 | 6.2 | 6.6 | 10 | 5 | 150 | 1 | 3 | 4 |
| BZX84C6V8W | KR5 | 6.4 | 6.8 | 7.2 | 15 | 5 | 80 | 1 | 2 | 4 |
| BZX84C7V5W | KR6 | 7.0 | 7.5 | 7.9 | 15 | 5 | 80 | 1 | 1 | 5 |
| BZX84C8V2W | KR7 | 7.7 | 8.2 | 8.7 | 15 | 5 | 80 | 1 | 0.7 | 5 |
| BZX84C9V1W | KR8 | 8.5 | 9.1 | 9.6 | 15 | 5 | 100 | 1 | 0.5 | 6 |
| BZX84C10W | KR9 | 9.4 | 10 | 10.6 | 20 | 5 | 150 | 1 | 0.2 | 7 |
| BZX84C11W | KP1 | 10.4 | 11 | 11.6 | 20 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C12W | KP2 | 11.4 | 12 | 12.7 | 25 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C13W | KP3 | 12.4 | 13 | 14.1 | 30 | 5 | 170 | 1 | 0.1 | 8 |
| BZX84C15W | KP4 | 13.8 | 15 | 15.6 | 30 | 5 | 200 | 1 | 0.1 | 10.5 |
| BZX84C16W | KP5 | 15.3 | 16 | 17.1 | 40 | 5 | 200 | 1 | 0.1 | 11.2 |
| BZX84C18W | KP6 | 16.8 | 18 | 19.1 | 45 | 5 | 225 | 1 | 0.1 | 12.6 |
| BZX84C20W | KP7 | 18.8 | 20 | 21.2 | 55 | 5 | 225 | 1 | 0.1 | 14 |
| BZX84C22W | KP8 | 20.8 | 22 | 23.3 | 55 | 5 | 250 | 1 | 0.1 | 15.4 |
| BZX84C24W | KP9 | 22.8 | 24 | 25.6 | 70 | 5 | 250 | 1 | 0.1 | 16.8 |
| BZX84C27W | KPA | 25.1 | 27 | 28.9 | 80 | 2 | 300 | 1 | 0.1 | 18.9 |
| BZX84C30W | KPB | 28 | 30 | 32 | 80 | 2 | 300 | 1 | 0.1 | 21.0 |
| BZX84C33W | KPC | 31 | 33 | 35 | 80 | 2 | 325 | 1 | 0.1 | 23.1 |
| BZX84C36W | KPD | 34 | 36 | 38 | 90 | 2 | 350 | 1 | 0.1 | 25.2 |
| BZX84C39W | KPE | 37 | 39 | 41 | 130 | 2 | 350 | 1 | 0.1 | 27.3 |



BZX84C2V4W THRU BZX84C39W

■ Characteristics(Typical)

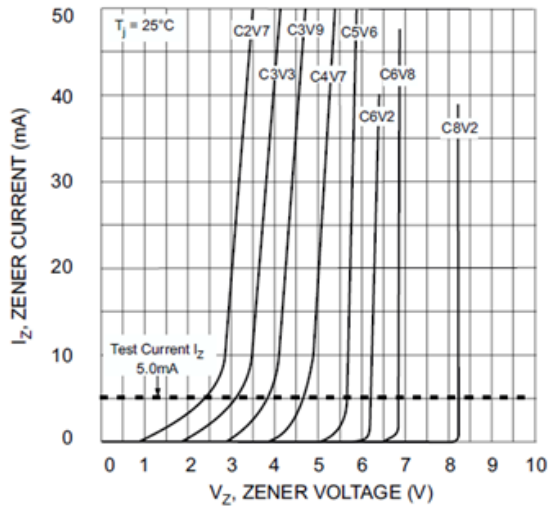
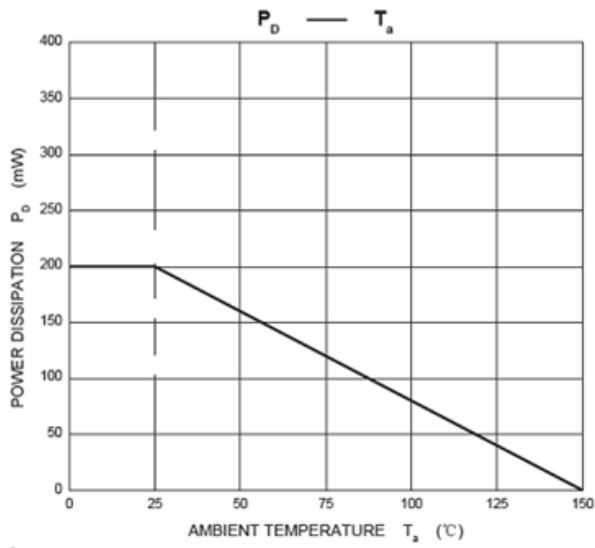


Fig. 3 Zener Breakdown Characteristics

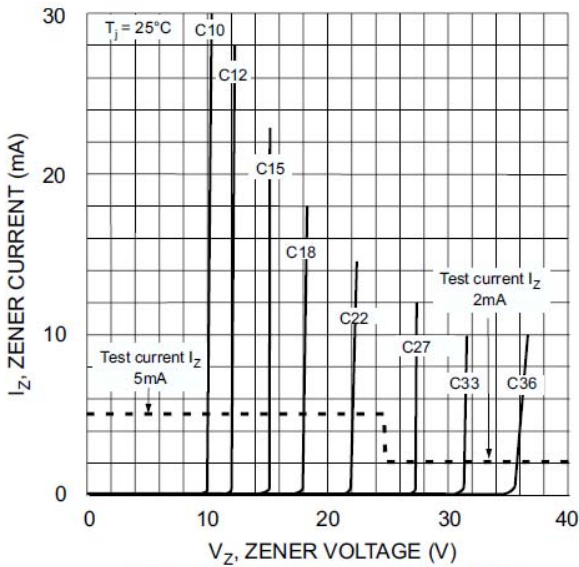


Fig. 4 Zener Breakdown Characteristics

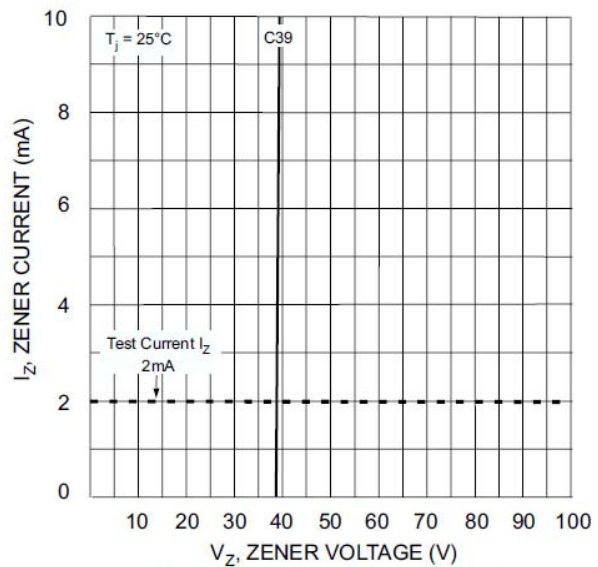


Fig. 5 Zener Breakdown Characteristics

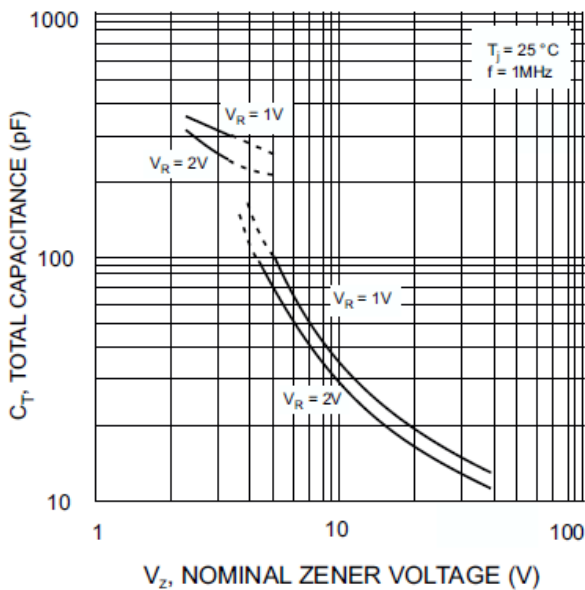
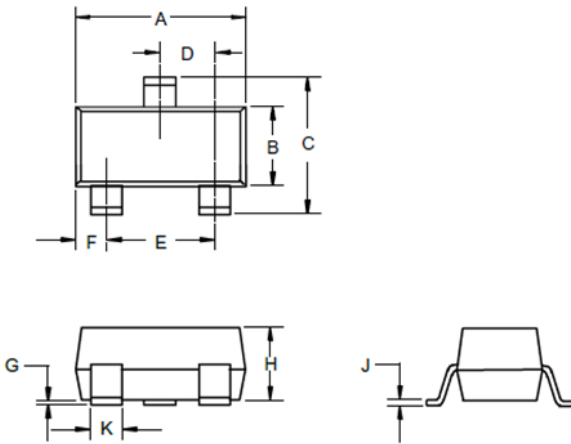


Fig. 1 Total Capacitance vs Nominal Zener Voltage



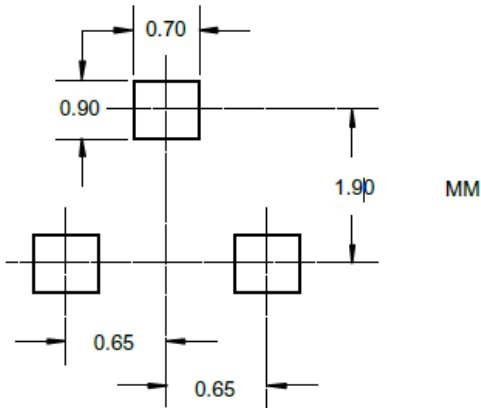
BZX84C2V4W THRU BZX84C39W

■ SOT-323 Package Outline Dimensions



| DIMENSIONS | | | | | |
|------------|--------------|------|-------------|------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .071 | .087 | 1.80 | 2.20 | |
| B | .045 | .053 | 1.15 | 1.35 | |
| C | .083 | .096 | 2.10 | 2.45 | |
| D | .026 Nominal | | 0.65Nominal | | |
| E | .047 | .055 | 1.20 | 1.40 | |
| F | .012 | .016 | .30 | .40 | |
| G | .000 | .004 | .000 | .100 | |
| H | .035 | .039 | .90 | 1.00 | |
| J | .004 | .010 | .100 | .250 | |
| K | .006 | .016 | .15 | .40 | |

■ SOT-323 Suggested Pad Layout





BZX84C2V4W THRU BZX84C39W

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