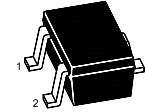
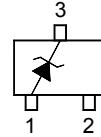


SILICON PLANAR ZENER DIODES



SOT-323 Plastic Package

1. Anode 3. Cathode

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|--|------------|---------------|------------------|
| Power Dissipation | P_D | 200 | mW |
| Operating Junction and Storage Temperature Range | T_j, T_s | - 55 to + 150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_a = 25\text{ }^\circ\text{C}$ unless otherwise noted, $V_F < 0.9\text{ V}$ at $I_F = 10\text{ mA}$)

| Type | Marking Code | Zener Voltage Range ¹⁾ | | | Dynamic Resistance | | | | Reverse Current | |
|------------|--------------|-----------------------------------|---------|-------------|--------------------|-------------|------------------|-------------|-----------------------|----------|
| | | V_Z | | at I_{ZT} | Z_{ZT} | at I_{ZT} | Z_{ZK} | at I_{ZK} | I_R | at V_R |
| | | Min.(V) | Max.(V) | mA | Max.(Ω) | mA | Max.(Ω) | mA | Max.(μA) | V |
| BZX84C2V4W | EA | 2.2 | 2.6 | 5 | 100 | 5 | 600 | 1 | 50 | 1 |
| BZX84C2V7W | EB | 2.5 | 2.9 | 5 | 100 | 5 | 600 | 1 | 20 | 1 |
| BZX84C3V0W | EC | 2.8 | 3.2 | 5 | 95 | 5 | 600 | 1 | 20 | 1 |
| BZX84C3V3W | ED | 3.1 | 3.5 | 5 | 95 | 5 | 600 | 1 | 5 | 1 |
| BZX84C3V6W | EE | 3.4 | 3.8 | 5 | 90 | 5 | 600 | 1 | 5 | 1 |
| BZX84C3V9W | EF | 3.7 | 4.1 | 5 | 90 | 5 | 600 | 1 | 3 | 1 |
| BZX84C4V3W | EH | 4 | 4.6 | 5 | 90 | 5 | 600 | 1 | 3 | 1 |
| BZX84C4V7W | EJ | 4.4 | 5 | 5 | 80 | 5 | 600 | 1 | 3 | 2 |
| BZX84C5V1W | EK | 4.8 | 5.4 | 5 | 60 | 5 | 500 | 1 | 2 | 2 |
| BZX84C5V6W | EM | 5.2 | 6 | 5 | 40 | 5 | 480 | 1 | 1 | 2 |
| BZX84C6V2W | EN | 5.8 | 6.6 | 5 | 10 | 5 | 400 | 1 | 3 | 4 |
| BZX84C6V8W | EP | 6.4 | 7.2 | 5 | 15 | 5 | 150 | 1 | 2 | 4 |
| BZX84C7V5W | ER | 7 | 7.9 | 5 | 15 | 5 | 80 | 1 | 1 | 5 |
| BZX84C8V2W | EX | 7.7 | 8.7 | 5 | 15 | 5 | 80 | 1 | 0.7 | 5 |
| BZX84C9V1W | EY | 8.5 | 9.6 | 5 | 15 | 5 | 80 | 1 | 0.5 | 6 |
| BZX84C10W | EZ | 9.4 | 10.6 | 5 | 20 | 5 | 100 | 1 | 0.2 | 7 |
| BZX84C11W | FA | 10.4 | 11.6 | 5 | 20 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C12W | FB | 11.4 | 12.7 | 5 | 25 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C13W | FC | 12.4 | 14.1 | 5 | 30 | 5 | 150 | 1 | 0.1 | 8 |
| BZX84C15W | FD | 13.8 | 15.6 | 5 | 30 | 5 | 170 | 1 | 0.1 | 10.5 |
| BZX84C16W | FE | 15.3 | 17.1 | 5 | 40 | 5 | 200 | 1 | 0.1 | 11.2 |
| BZX84C18W | FF | 16.8 | 19.1 | 5 | 45 | 5 | 200 | 1 | 0.1 | 12.6 |
| BZX84C20W | FH | 18.8 | 21.2 | 5 | 55 | 5 | 225 | 1 | 0.1 | 14 |
| BZX84C22W | FJ | 20.8 | 23.3 | 5 | 55 | 5 | 225 | 1 | 0.1 | 15.4 |
| BZX84C24W | FK | 22.8 | 25.6 | 5 | 70 | 5 | 250 | 1 | 0.1 | 16.8 |
| BZX84C27W | FM | 25.1 | 28.9 | 2 | 80 | 2 | 250 | 0.5 | 0.1 | 18.9 |
| BZX84C30W | FN | 28 | 32 | 2 | 80 | 2 | 300 | 0.5 | 0.1 | 21 |
| BZX84C33W | FP | 31 | 35 | 2 | 80 | 2 | 300 | 0.5 | 0.1 | 23.1 |
| BZX84C36W | FR | 34 | 38 | 2 | 90 | 2 | 325 | 0.5 | 0.1 | 25.2 |
| BZX84C39W | FX | 37 | 41 | 2 | 130 | 2 | 350 | 0.5 | 0.1 | 27.3 |

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

Electrical Characteristics ($T_a = 25\text{ }^\circ\text{C}$ unless otherwise noted, $V_F < 0.9\text{ V}$ at $I_F = 10\text{ mA}$)

| Type | Marking Code | Zener Voltage Range ¹⁾ | | | Dynamic Resistance | | | | Reverse Current | |
|-----------|--------------|-----------------------------------|---------|-------------|--------------------|-------------|------------------|-------------|-----------------------|----------|
| | | V_Z | | at I_{ZT} | Z_{ZT} | at I_{ZT} | Z_{ZK} | at I_{ZK} | I_R | at V_R |
| | | Min.(V) | Max.(V) | mA | Max.(Ω) | mA | Max.(Ω) | mA | Max.(μA) | V |
| BZX84C43W | FY | 40 | 46 | 2 | 150 | 2 | 375 | 0.5 | 0.1 | 30.1 |
| BZX84C47W | FZ | 44 | 50 | 2 | 170 | 2 | 375 | 0.5 | 0.1 | 32.9 |
| BZX84C51W | KA | 48 | 54 | 2 | 180 | 2 | 400 | 0.5 | 0.1 | 35.7 |
| BZX84C56W | KB | 52 | 60 | 2 | 200 | 2 | 425 | 0.5 | 0.1 | 39.2 |
| BZX84C62W | KC | 58 | 66 | 2 | 215 | 2 | 450 | 0.5 | 0.1 | 43.4 |
| BZX84C68W | KD | 64 | 72 | 2 | 240 | 2 | 475 | 0.5 | 0.1 | 47.6 |
| BZX84C75W | KE | 70 | 79 | 2 | 255 | 2 | 500 | 0.5 | 0.1 | 52.5 |

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

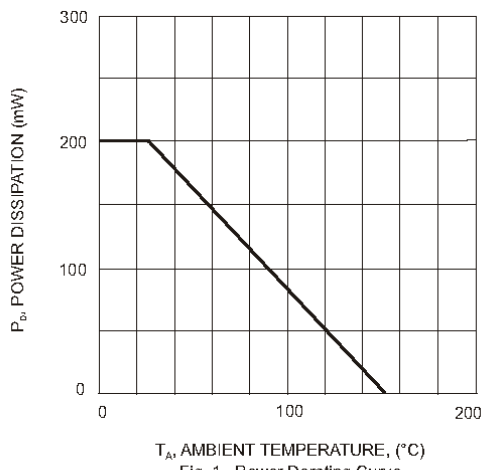


Fig. 1. Power Derating Curve

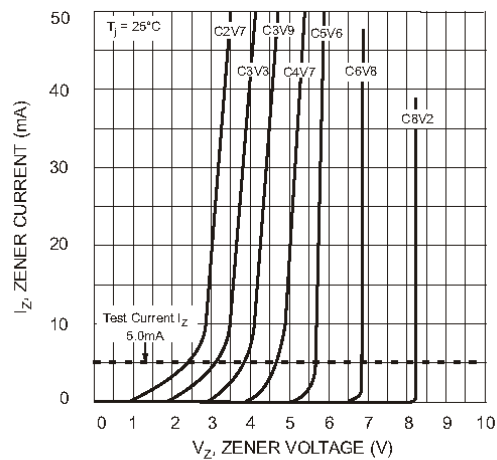


Fig. 2. Zener Breakdown Characteristics

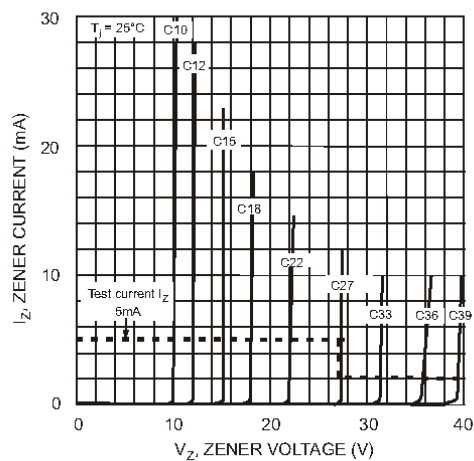


Fig. 3. Zener Breakdown Characteristics

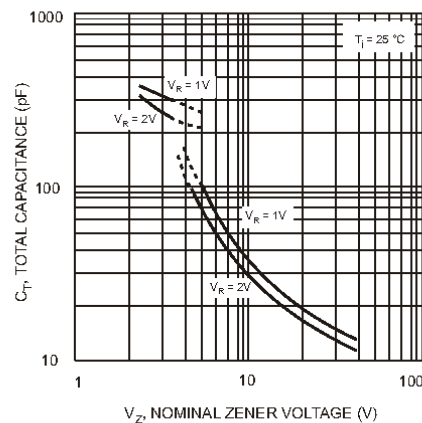


Fig. 4. Total Capacitance vs Nominal Zener Voltage