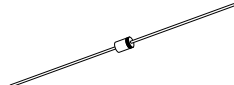


**BZX85C3V3
THRU
BZX85C33**

**SURFACE MOUNT
1.3W SILICON ZENER DIODE
3.3 VOLTS THRU 33 VOLTS**



DO-41 CASE

Central™ Semiconductor Corp.

Description:

The CENTRAL SEMICONDUCTOR BZX85C3V3 Series are silicon Zener diodes. These high quality voltage regulating diodes are designed for use in industrial, commercial, entertainment and computer applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Power Dissipation
Operating and Storage Temperature

SYMBOL

P_D 1.3
 T_J, T_{stg} -65 to +200

UNITS

W
°C

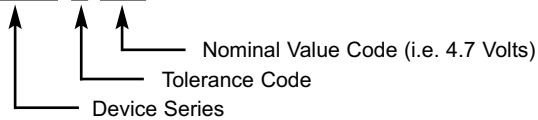
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$) $V_F=1.2\text{V MAX @ } I_F=200\text{mA}$ (for all types)

| Type | Zener Voltage $V_Z @ I_{ZT}$ | | | Test Current I_{ZT} (mA) | Maximum Zener Impedance | | | Maximum Reverse Current | | Maximum Reverse Surge Current I_{RSM} (mA) | Maximum Zener Current I_{ZM} (mA) |
|-----------|---------------------------------|---------|---------|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-------------------------|-----|--|---|
| | MIN (V) | NOM (V) | MAX (V) | | $Z_{ZT} @ I_{ZT}$ (Ω) | $Z_{ZK} @ I_{ZK}$ (Ω) | $I_R @ V_R$ (μA) | V_R (V) | | | |
| BZX85C3V3 | 3.1 | 3.3 | 3.5 | 80 | 20 | 400 | 1.0 | 60 | 1.0 | 1,380 | 276 |
| BZX85C3V6 | 3.4 | 3.6 | 3.8 | 60 | 15 | 500 | 1.0 | 30 | 1.0 | 1,260 | 252 |
| BZX85C3V9 | 3.7 | 3.9 | 4.1 | 60 | 15 | 500 | 1.0 | 5.0 | 1.0 | 1,190 | 234 |
| BZX85C4V3 | 4.1 | 4.3 | 4.5 | 50 | 13 | 500 | 1.0 | 3.0 | 1.0 | 1,070 | 217 |
| BZX85C4V7 | 4.5 | 4.7 | 4.9 | 45 | 13 | 600 | 1.0 | 3.0 | 1.5 | 970 | 193 |
| BZX85C5V1 | 4.8 | 5.1 | 5.4 | 45 | 10 | 500 | 1.0 | 1.0 | 2.0 | 890 | 178 |
| BZX85C5V6 | 5.3 | 5.6 | 5.9 | 45 | 7.0 | 400 | 1.0 | 1.0 | 2.0 | 810 | 162 |
| BZX85C6V2 | 5.9 | 6.2 | 6.5 | 35 | 4.0 | 300 | 1.0 | 1.0 | 3.0 | 730 | 146 |
| BZX85C6V8 | 6.5 | 6.8 | 7.1 | 35 | 3.5 | 300 | 1.0 | 1.0 | 4.0 | 660 | 133 |
| BZX85C7V5 | 7.1 | 7.5 | 7.9 | 35 | 3.0 | 200 | 1.0 | 1.0 | 4.5 | 605 | 121 |
| BZX85C8V2 | 7.8 | 8.2 | 8.6 | 25 | 5.0 | 200 | 0.5 | 1.0 | 5.0 | 550 | 110 |
| BZX85C9V1 | 8.6 | 9.1 | 9.6 | 25 | 5.0 | 200 | 0.5 | 1.0 | 6.5 | 500 | 100 |
| BZX85C10 | 9.5 | 10 | 10.5 | 25 | 7.0 | 200 | 0.5 | 0.5 | 7.0 | 454 | 91 |
| BZX85C11 | 10.5 | 11 | 11.6 | 20 | 8.0 | 300 | 0.5 | 0.5 | 7.7 | 414 | 83 |
| BZX85C12 | 11.4 | 12 | 12.6 | 20 | 9.0 | 350 | 0.5 | 0.5 | 8.4 | 380 | 76 |

| Tolerance Code | Tolerance |
|----------------|-----------|
| A | ±1% |
| B | ±2% |
| C | ±5% |

Part Number Identification

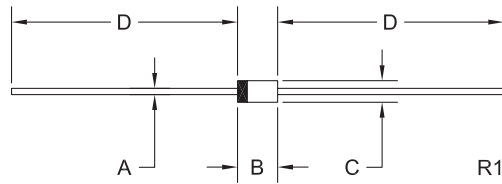
BZX85C4V7



ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$) $V_F=1.2\text{V MAX @ } I_F=200\text{mA}$ (for all types)

| Type | Zener Voltage $V_Z @ I_{ZT}$ | | | Test Current I_{ZT} (mA) | Maximum Zener Impedance | | | Maximum Reverse Current | | Maximum Reverse Surge Current I_{RSM} (mA) | Maximum Zener Current I_{ZM} (mA) |
|----------|---------------------------------|---------|---------|----------------------------------|---------------------------------|-----------------------------------|----------------------------------|-------------------------|------|--|---|
| | MIN (V) | NOM (V) | MAX (V) | | $Z_{ZT}@I_{ZT}$ (Ω) | $Z_{ZK} @ I_{ZK}$ (Ω) | $I_R @ V_R$ (μA) | V_R (V) | | | |
| BZX85C13 | 12.4 | 13 | 13.7 | 20 | 10 | 400 | 0.5 | 0.5 | 9.1 | 344 | 69 |
| BZX85C15 | 14.3 | 15 | 15.8 | 15 | 15 | 500 | 0.5 | 0.5 | 10.5 | 304 | 61 |
| BZX85C16 | 15.2 | 16 | 16.8 | 15 | 15 | 500 | 0.5 | 0.5 | 11.0 | 285 | 57 |
| BZX85C18 | 17.1 | 18 | 18.9 | 15 | 20 | 500 | 0.5 | 0.5 | 12.5 | 250 | 50 |
| BZX85C20 | 19.0 | 20 | 21.0 | 10 | 24 | 600 | 0.5 | 0.5 | 14.0 | 225 | 45 |
| BZX85C22 | 20.9 | 22 | 23.1 | 10 | 25 | 600 | 0.5 | 0.5 | 15.5 | 205 | 41 |
| BZX85C24 | 22.8 | 24 | 25.2 | 10 | 25 | 600 | 0.5 | 0.5 | 17.0 | 190 | 38 |
| BZX85C27 | 25.7 | 27 | 28.4 | 8.0 | 30 | 750 | 0.25 | 0.5 | 19.0 | 170 | 34 |
| BZX85C30 | 28.5 | 30 | 31.5 | 8.0 | 30 | 1,000 | 0.25 | 0.5 | 21.0 | 150 | 30 |
| BZX85C33 | 31.4 | 33 | 34.7 | 8.0 | 35 | 1,200 | 0.25 | 0.5 | 23.0 | 135 | 27 |

DO-41 CASE - MECHANICAL OUTLINE



| DIMENSIONS | | | | |
|------------|--------|-------|-------------|------|
| SYMBOL | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.028 | 0.034 | 0.71 | 0.86 |
| B | 0.160 | 0.205 | 4.06 | 5.21 |
| C | 0.080 | 0.107 | 2.03 | 2.72 |
| D | 1.000 | - | 25.40 | - |

DO-41 (REV: R1)

R0 (12-May 2009)