

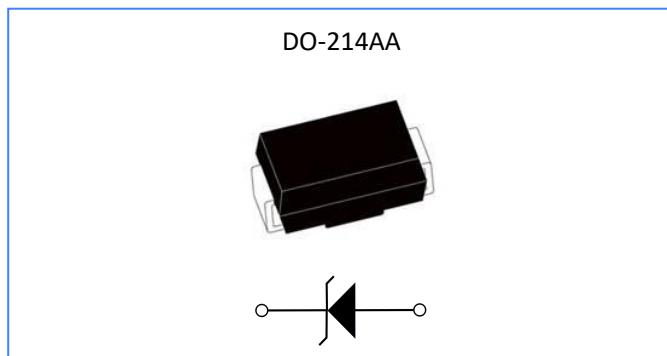
YBZ3D3V3J THRU YBZ3D200J

FEATURES

- Total power dissipation: Max. 3W.
- Wide zener reverse voltage range 3.3V to 200V.
- Small plastic package suitable for surface mounted design.

Mechanical Data

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Standard voltage tolerance is 5 %, Suffix J $\pm 5\%$



Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

| Parameter | Symbol | Value | Unit |
|---|-----------------------------|-----------|----------------------------|
| Power Dissipation | $P_d(T_L=75^\circ\text{C})$ | 3 | W |
| Zener current | I_z | P_v/V_z | mA |
| Forward voltage | $V_F(I_F=200\text{mA})$ | 1.5 | V |
| Thermal Resistance From Junction to Ambient | RJA | 226 | $^\circ\text{C}/\text{WC}$ |
| Junction Temperature Range | T_j | -65~+150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -65~+150 | $^\circ\text{C}$ |

Electrical Characteristics (TA = 25 °C)

| Part Number | Nominal Zener Voltage @ I_T | | | $I_{ZT}(\text{mA})$ | Maximum Zener Impedance | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|-------------|-------------------------------|---------|---------|---------------------|---|---------------------------------|-----------------|--------------------------|
| | Nom (V) | Min (V) | Max (V) | | $Z_{zt \text{ max.}@I_{zt}}$ (Ω) | $I_r(\mu\text{A})@V_R$ | $V_R(\text{V})$ | $I_{ZM}(\text{mA})$ |
| YBZ3D3V3J | 3.3 | 3.13 | 3.47 | 113.6 | 10 | 100 | 1.0 | 454 |
| YBZ3D3V6J | 3.6 | 3.42 | 3.78 | 104.2 | 9.0 | 75 | 1.0 | 416 |
| YBZ3D3V9J | 3.9 | 3.70 | 4.10 | 96.1 | 7.5 | 25 | 1.0 | 384 |
| YBZ3D4V3J | 4.3 | 4.08 | 4.52 | 87.2 | 6.0 | 5.0 | 1.0 | 348 |
| YBZ3D4V7J | 4.7 | 4.46 | 4.94 | 79.8 | 5.0 | 5.0 | 1.5 | 319 |
| YBZ3D5V1J | 5.1 | 4.84 | 5.36 | 73.5 | 4.0 | 5.0 | 2.0 | 294 |
| YBZ3D5V6J | 5.6 | 5.32 | 5.88 | 66.9 | 2.0 | 5.0 | 3.0 | 267 |
| YBZ3D6V2J | 6.2 | 5.89 | 6.51 | 60.5 | 2.0 | 5.0 | 4.0 | 241 |
| YBZ3D6V8J | 6.8 | 6.46 | 7.14 | 55.1 | 2.5 | 5.0 | 5.2 | 220 |
| YBZ3D7V5J | 7.5 | 7.12 | 7.88 | 50.0 | 3.0 | 5.0 | 6.0 | 200 |
| YBZ3D8V2J | 8.2 | 7.79 | 8.61 | 45.7 | 3.5 | 5.0 | 6.5 | 182 |
| YBZ3D9V1J | 9.1 | 8.64 | 9.56 | 41.2 | 4.0 | 5.0 | 7.0 | 164 |
| YBZ3D10J | 10 | 9.5 | 10.5 | 37.5 | 4.5 | 5.0 | 8.0 | 150 |
| YBZ3D11J | 11 | 10.45 | 11.55 | 34.1 | 5.5 | 1.0 | 8.4 | 136 |
| YBZ3D12J | 12 | 11.4 | 12.6 | 31.2 | 6.5 | 1.0 | 9.1 | 125 |
| YBZ3D13J | 13 | 12.35 | 13.65 | 28.8 | 7.0 | 1.0 | 9.9 | 115 |
| YBZ3D15J | 15 | 14.25 | 15.75 | 25.0 | 9.0 | 1.0 | 11.4 | 100 |



| | | | | | | | | |
|-----------|-----|-------|-------|------|------|-----|-------|-----|
| YBZ3D16J | 16 | 15.2 | 16.8 | 23.4 | 10 | 1.0 | 12.2 | 93 |
| YBZ3D18J | 18 | 17.1 | 18.9 | 20.8 | 12 | 1.0 | 13.7 | 83 |
| YBZ3D20J | 20 | 19 | 21 | 18.7 | 14 | 1.0 | 15.2 | 75 |
| YBZ3D22J | 22 | 20.9 | 23.1 | 17.0 | 17.5 | 1.0 | 16.7 | 68 |
| YBZ3D24J | 24 | 22.8 | 25.2 | 15.6 | 19 | 1.0 | 18.2 | 62 |
| YBZ3D27J | 27 | 25.65 | 28.35 | 13.9 | 23 | 1.0 | 20.6 | 55 |
| YBZ3D30J | 30 | 28.5 | 31.5 | 12.5 | 28 | 1.0 | 22.8 | 50 |
| YBZ3D33J | 33 | 31.35 | 34.65 | 11.4 | 33 | 1.0 | 25.1 | 45 |
| YBZ3D36J | 36 | 34.2 | 37.8 | 10.4 | 38 | 1.0 | 27.4 | 41 |
| YBZ3D39J | 39 | 37.05 | 40.95 | 9.6 | 45 | 1.0 | 29.7 | 38 |
| YBZ3D43J | 43 | 40.85 | 45.15 | 8.7 | 53 | 1.0 | 32.7 | 34 |
| YBZ3D47J | 47 | 44.65 | 49.35 | 8.0 | 67 | 1.0 | 35.8 | 31 |
| YBZ3D51J | 51 | 48.45 | 53.55 | 7.3 | 70 | 1.0 | 38.8 | 29 |
| YBZ3D56J | 56 | 53.2 | 58.8 | 6.7 | 86 | 1.0 | 42.6 | 26 |
| YBZ3D62J | 62 | 58.9 | 65.1 | 6.0 | 100 | 1.0 | 47.1 | 24 |
| YBZ3D68J | 68 | 64.6 | 71.4 | 5.5 | 120 | 1.0 | 51.7 | 22 |
| YBZ3D75J | 75 | 71.25 | 78.75 | 5.0 | 140 | 1.0 | 56.0 | 20 |
| YBZ3D82J | 82 | 77.9 | 86.1 | 4.6 | 160 | 1.0 | 62.2 | 18 |
| YBZ3D91J | 91 | 86.45 | 95.55 | 4.1 | 200 | 1.0 | 69.2 | 16 |
| YBZ3D100J | 100 | 95 | 105 | 3.7 | 250 | 1.0 | 76.0 | 15 |
| YBZ3D110J | 110 | 114 | 126 | 3.4 | 300 | 1.0 | 83.6 | 13 |
| YBZ3D120J | 120 | 123.5 | 136.5 | 3.1 | 380 | 1.0 | 91.2 | 12 |
| YBZ3D130J | 135 | 142.5 | 157.5 | 2.9 | 450 | 1.0 | 98.8 | 11 |
| YBZ3D150J | 150 | 152 | 168 | 2.5 | 600 | 1.0 | 114.0 | 10 |
| YBZ3D160J | 165 | 171 | 189 | 2.3 | 700 | 1.0 | 121.6 | 9.0 |
| YBZ3D180J | 180 | 190 | 210 | 2.1 | 900 | 1.0 | 136.8 | 8.0 |
| YBZ3D200J | 200 | 3.13 | 3.47 | 1.9 | 1200 | 1.0 | 152.0 | 7.0 |

(1) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per method.

Typical Characteristics

Figure 1. Steady State Power Derating

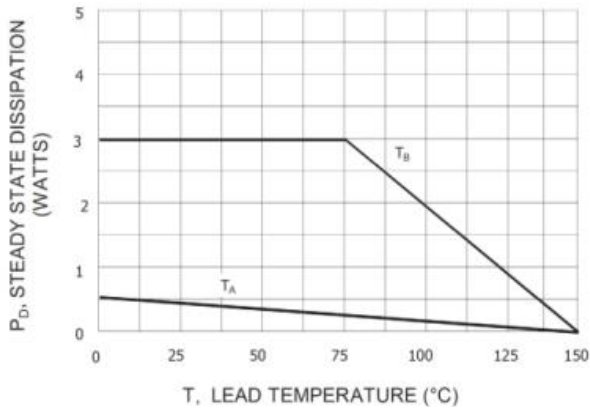


Figure 2. Maximum Surge Power

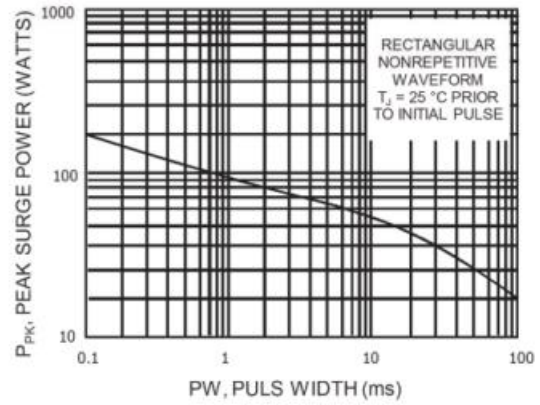


Figure 3. Zener Voltage - To 12 Volts

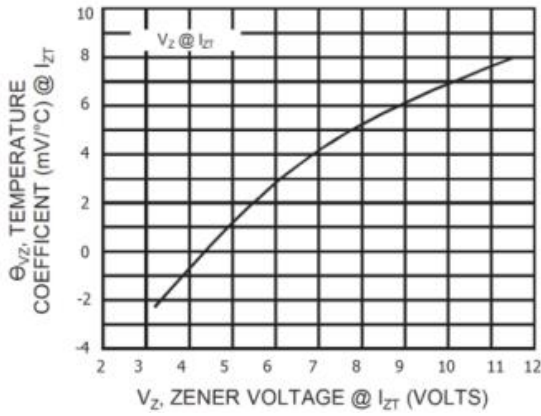


Figure 4. Zener Voltage - 14 To 200 Volts

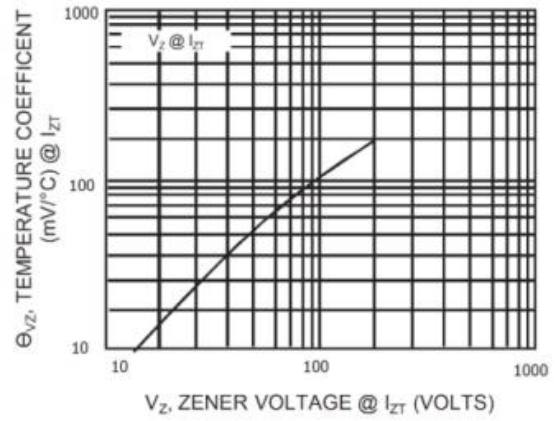


Figure 5. $V_Z = 3.3$ thru 10 Volts

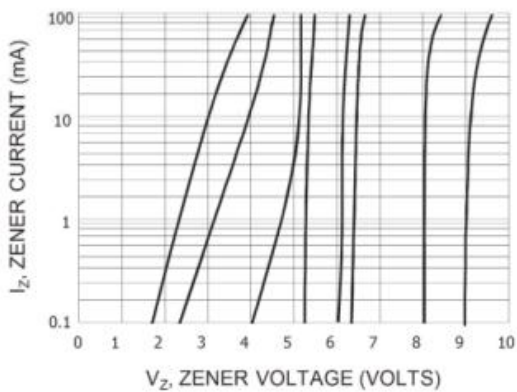
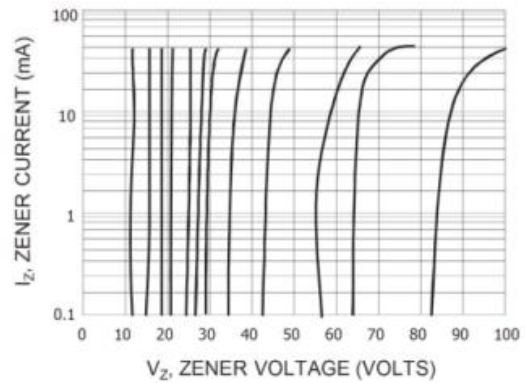


Figure 6. $V_Z = 12$ thru 82 Volts



Package Outline

