Elektronische Bauelemente

# BZV55C Series

**500 mW**

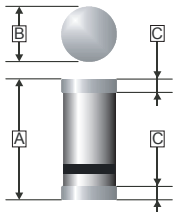
**Sealed Glass Zener Voltage Regulators**

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Zener Voltage Range 2.0 to 75 Volts
- Mini-MELF Package
- Surface Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Terminals Are Readily Solderable
- Matte Tin (Sn) Terminal Finish
- Color band Indicates Negative Polarity

**SOD-80 (Mini-MELF)**




| REF. | Millimeter | |
|---|---|---|
| | Min. | Max. |
| A | 3.30 | 3.70 |
| B | 1.40 | 1.60 |
| C | 0.28 | 0.50 |

## PACKAGING INFORMATION

Weight: 0.0307 grams (Approximate)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified)

| PARAMETER | SYMBOL | VALUE | UNITS |
|---|---|---|---|
| Power Dissipation | $P_D$ | 500 | mW |
| Operating Junction and Storage Temperature Range | $T_J$, $T_{STG}$ | +175, -65~175 | ℃ |

*These ratings are limiting values above which the serviceability of the diode may be impaired.

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**Sealed Glass Zener Voltage Regulators**

## ELECTRICAL RATINGS (Rating 25°C ambient temperature unless otherwise specified)

| DEVICE TYPE | $V_Z$ @ $I_{ZT}$ (Volts) | | $I_{ZT}$ (mA) | $Z_{ZT}$ @ $I_{ZT}$ (Ω) Max | $I_{ZK}$ (mA) | $Z_{ZK}$ @ $I_{ZK}$ (Ω) Max | $I_R$ @ $V_R$ (μA) Max | $V_R$ (Volts) |
|---|---|---|---|---|---|---|---|---|
| | $V_Z$ (Min) | $V_Z$ (Max) | | | | | | |
| BZV55C 2V0 | 1.88 | 2.11 | 5.0 | 100 | 1.0 | 600 | 50.0 | 1.0 |
| BZV55C 2V2 | 2.08 | 2.33 | 5.0 | 100 | 1.0 | 600 | 50.0 | 1.0 |
| BZV55C 2V4 | 2.28 | 2.56 | 5.0 | 85 | 1.0 | 600 | 50.0 | 1.0 |
| BZV55C 2V7 | 2.51 | 2.89 | 5.0 | 85 | 1.0 | 600 | 10.0 | 1.0 |
| BZV55C 3V0 | 2.80 | 3.20 | 5.0 | 85 | 1.0 | 600 | 4.0 | 1.0 |
| BZV55C 3V3 | 3.10 | 3.50 | 5.0 | 85 | 1.0 | 600 | 2.0 | 1.0 |
| BZV55C 3V6 | 3.40 | 3.80 | 5.0 | 85 | 1.0 | 600 | 2.0 | 1.0 |
| BZV55C 3V9 | 3.70 | 4.10 | 5.0 | 85 | 1.0 | 600 | 2.0 | 1.0 |
| BZV55C 4V3 | 4.00 | 4.60 | 5.0 | 75 | 1.0 | 600 | 1.0 | 1.0 |
| BZV55C 4V7 | 4.40 | 5.00 | 5.0 | 60 | 1.0 | 600 | 0.5 | 1.0 |
| BZV55C 5V1 | 4.80 | 5.40 | 5.0 | 35 | 1.0 | 550 | 0.1 | 1.0 |
| BZV55C 5V6 | 5.20 | 6.00 | 5.0 | 25 | 1.0 | 450 | 0.1 | 1.0 |
| BZV55C 6V2 | 5.80 | 6.60 | 5.0 | 10 | 1.0 | 200 | 0.1 | 2.0 |
| BZV55C 6V8 | 6.40 | 7.20 | 5.0 | 8 | 1.0 | 150 | 0.1 | 3.0 |
| BZV55C 7V5 | 7.00 | 7.90 | 5.0 | 7 | 1.0 | 50 | 0.1 | 5.0 |
| BZV55C 8V2 | 7.70 | 8.70 | 5.0 | 7 | 1.0 | 50 | 0.1 | 6.2 |
| BZV55C 9V1 | 8.50 | 9.60 | 5.0 | 10 | 1.0 | 50 | 0.1 | 6.8 |
| BZV55C 10 | 9.40 | 10.60 | 5.0 | 15 | 1.0 | 70 | 0.1 | 7.5 |
| BZV55C 11 | 10.40 | 11.60 | 5.0 | 20 | 1.0 | 70 | 0.1 | 8.2 |
| BZV55C 12 | 11.40 | 12.70 | 5.0 | 20 | 1.0 | 90 | 0.1 | 9.1 |
| BZV55C 15 | 13.80 | 15.60 | 5.0 | 30 | 1.0 | 110 | 0.1 | 11.0 |
| BZV55C 16 | 15.30 | 17.10 | 5.0 | 40 | 1.0 | 170 | 0.1 | 12.0 |
| BZV55C 18 | 16.80 | 19.10 | 5.0 | 50 | 1.0 | 170 | 0.1 | 13.0 |
| BZV55C 20 | 18.80 | 21.10 | 5.0 | 55 | 1.0 | 220 | 0.1 | 15.0 |
| BZV55C 22 | 20.80 | 23.30 | 5.0 | 55 | 1.0 | 220 | 0.1 | 16.0 |
| BZV55C 24 | 22.80 | 25.60 | 5.0 | 80 | 1.0 | 220 | 0.1 | 18.0 |
| BZV55C 27 | 25.10 | 28.90 | 5.0 | 80 | 1.0 | 220 | 0.1 | 20.0 |
| BZV55C 30 | 28.00 | 32.00 | 5.0 | 80 | 1.0 | 220 | 0.1 | 22.0 |
| BZV55C 33 | 31.00 | 35.00 | 5.0 | 80 | 1.0 | 220 | 0.1 | 24.0 |
| BZV55C 36 | 34.00 | 38.00 | 5.0 | 80 | 1.0 | 220 | 0.1 | 27.0 |
| BZV55C 39 | 37.00 | 41.00 | 2.5 | 90 | 0.5 | 500 | 0.1 | 28.0 |
| BZV55C 43 | 40.00 | 46.00 | 2.5 | 90 | 0.5 | 600 | 0.1 | 32.0 |
| BZV55C 47 | 44.00 | 50.00 | 2.5 | 110 | 0.5 | 700 | 0.1 | 35.0 |
| BZV55C 51 | 48.00 | 54.00 | 2.5 | 125 | 0.5 | 700 | 0.1 | 38.0 |
| BZV55C 56 | 52.00 | 60.00 | 2.5 | 135 | 0.5 | 1000 | 0.1 | 42.0 |
| BZV55C 62 | 58.00 | 66.00 | 2.5 | 150 | 0.5 | 1000 | 0.1 | 47.0 |
| BZV55C 68 | 64.00 | 72.00 | 2.5 | 160 | 0.5 | 1000 | 0.1 | 51.0 |
| BZV55C 75 | 70.00 | 80.00 | 2.5 | 170 | 0.5 | 1000 | 0.1 | 56.0 |

$V_F$ Forward Voltage = 1.0 V Maximum @ $I_F$ = 100 mA for all types

**Notes:**

1. The type numbers listed have zener voltage min/max limits as shown.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest SeCoS representative.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ($I_{ZT}$ or $I_{ZK}$) is superimposed to $I_{ZT}$ or $I_{ZK}$

## RATINGS AND CHARACTERISTIC CURVES

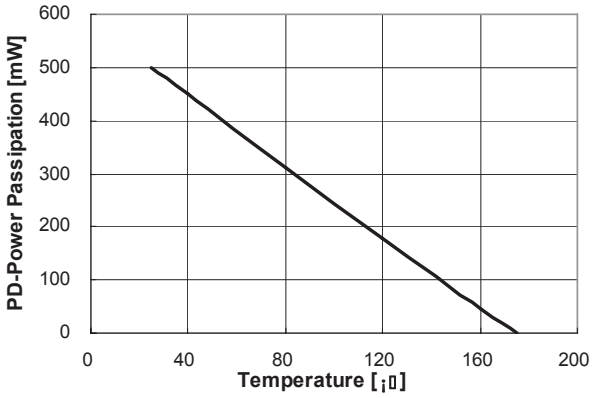


**Figure 1. Power Dissipation vs Ambient Temperature**
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

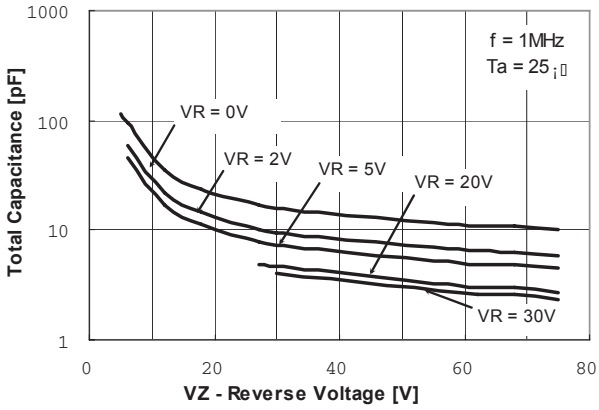


**Figure 2. Total Capacitance**

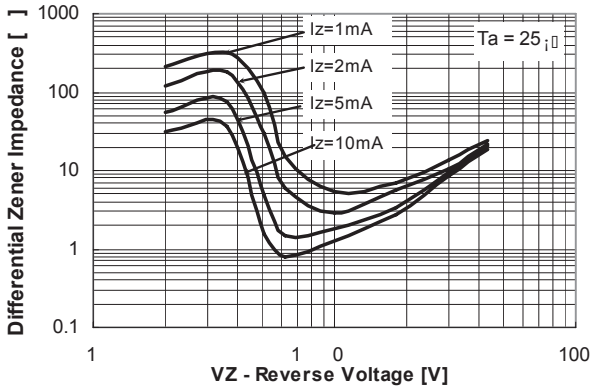


**Figure 3. Differential Impedance vs. Zener Voltage**

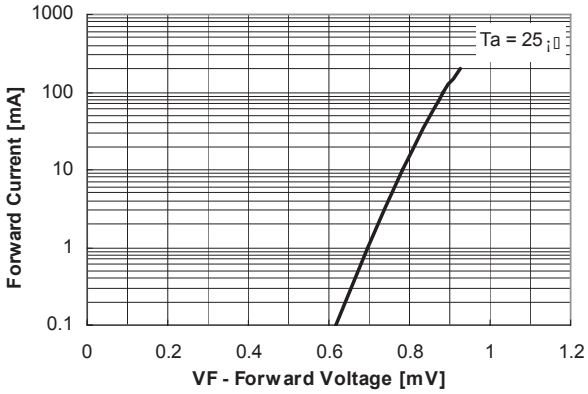


**Figure 4. Forward Current vs. Forward Voltage**

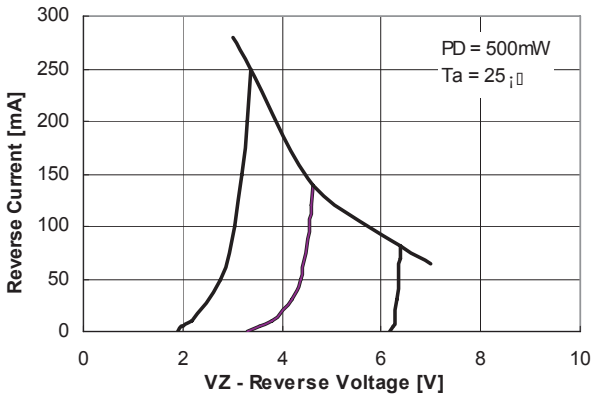


**Figure 5. Reverse Current vs. Reverse Voltage**

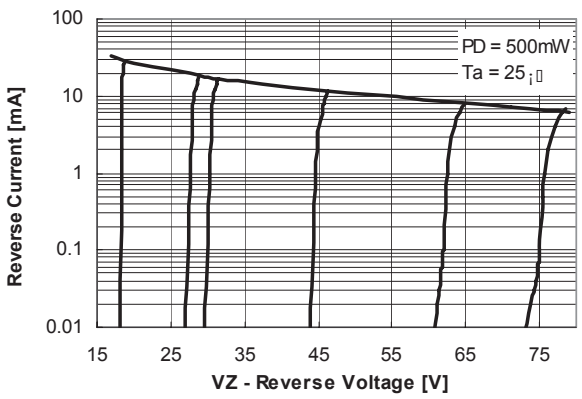


**Figure 6. Reverse Current vs. Reverse Voltage**