

Features

- Excellent Clamping Capability
- Glass Passivated Junction
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

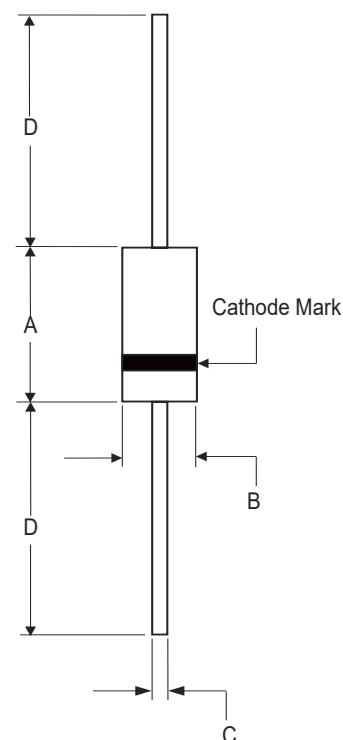
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

| Parameter | Symbol | Rating | Conditions |
|----------------------------|-----------|---------|-------------|
| Peak Forward Surge Current | I_{FSM} | 15A | Note 2 |
| Power Dissipation | P_D | 3.0W | Note 3 |
| Power Derating | | 24mW/°C | above 75°C |
| Maximum Forward Voltage | V_F | 1.2V | $I_F=200mA$ |

- Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
 2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
 3. Mounted on 5.0mm² (.013mm thick) land areas.

3.0 W Silicon Zener Diodes 5.1 to 75 Volts

DO-15



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.230 | 0.300 | 5.80 | 7.60 | |
| B | 0.104 | 0.140 | 2.60 | 3.60 | |
| C | 0.026 | 0.035 | 0.70 | 0.90 | |
| D | 1.000 | ---- | 25.40 | ---- | |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number (Note 4) | Nominal Zener Voltage (Note 5) | Test current | Maximum Zener Impedance (Note 6) | | | Leakage Current | | Maximum Zener Current | MARKING CODE |
|--------------------------|--------------------------------|--------------|----------------------------------|-------------------|-------------------|----------------------|-------|-----------------------|--------------|
| | $V_Z @ I_{ZT}$ | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | I_R | | |
| | V | mA | Ω | Ω | mA | $\mu A(\text{Max.})$ | V | mA | |
| 3EZ5.1D5 | 5.1 | 147 | 3.5 | 550 | 1.0 | 5 | 1.0 | 520 | 3EZ5.1D5 |
| 3EZ5.6D5 | 5.6 | 134 | 2.5 | 600 | 1.0 | 5 | 2.0 | 480 | 3EZ5.6D5 |
| 3EZ6.2D5 | 6.2 | 121 | 1.5 | 700 | 1.0 | 5 | 3.0 | 435 | 3EZ6.2D5 |
| 3EZ6.8D5 | 6.8 | 110 | 2.0 | 700 | 1.0 | 5 | 4.0 | 393 | 3EZ6.8D5 |
| 3EZ7.5D5 | 7.5 | 100 | 2.0 | 700 | 0.5 | 5 | 5.0 | 360 | 3EZ7.5D5 |
| 3EZ8.2D5 | 8.2 | 91 | 2.3 | 700 | 0.5 | 5 | 6.0 | 330 | 3EZ8.2D5 |
| 3EZ9.1D5 | 9.1 | 82 | 2.5 | 700 | 0.5 | 3 | 7.0 | 297 | 3EZ9.1D5 |
| 3EZ10D5 | 10 | 75 | 3.5 | 700 | 0.25 | 3 | 7.6 | 270 | 3EZ10D5 |
| 3EZ11D5 | 11 | 68 | 4 | 700 | 0.25 | 1 | 8.4 | 225 | 3EZ11D5 |
| 3EZ12D5 | 12 | 63 | 4.5 | 700 | 0.25 | 1 | 9.4 | 246 | 3EZ12D5 |
| 3EZ13D5 | 13 | 58 | 4.5 | 700 | 0.25 | 0.5 | 9.9 | 208 | 3EZ13D5 |
| 3EZ14D5 | 14 | 53 | 5 | 700 | 0.25 | 0.5 | 10.6 | 193 | 3EZ14D5 |
| 3EZ15D5 | 15 | 50 | 5.5 | 700 | 0.25 | 0.5 | 11.4 | 180 | 3EZ15D5 |
| 3EZ16D5 | 16 | 47 | 5.5 | 700 | 0.25 | 0.5 | 12.2 | 169 | 3EZ16D5 |
| 3EZ17D5 | 17 | 44 | 6 | 750 | 0.25 | 0.5 | 13 | 159 | 3EZ17D5 |
| 3EZ18D5 | 18 | 42 | 6 | 750 | 0.25 | 0.5 | 13.7 | 150 | 3EZ18D5 |
| 3EZ19D5 | 19 | 40 | 7 | 750 | 0.25 | 0.5 | 14.4 | 142 | 3EZ19D5 |
| 3EZ20D5 | 20 | 37 | 7 | 750 | 0.25 | 0.5 | 15.2 | 135 | 3EZ20D5 |
| 3EZ22D5 | 22 | 34 | 8 | 750 | 0.25 | 0.5 | 16.7 | 123 | 3EZ22D5 |
| 3EZ24D5 | 24 | 31 | 9 | 750 | 0.25 | 0.5 | 18.2 | 112 | 3EZ24D5 |
| 3EZ27D5 | 27 | 28 | 10 | 750 | 0.25 | 0.5 | 20.6 | 100 | 3EZ27D5 |
| 3EZ28D5 | 28 | 27 | 12 | 750 | 0.25 | 0.5 | 21 | 96 | 3EZ28D5 |
| 3EZ30D5 | 30 | 25 | 16 | 1000 | 0.25 | 0.5 | 22.5 | 90 | 3EZ30D5 |
| 3EZ33D5 | 33 | 23 | 20 | 1000 | 0.25 | 0.5 | 25.1 | 82 | 3EZ33D5 |
| 3EZ36D5 | 36 | 21 | 22 | 1000 | 0.25 | 0.5 | 27.4 | 75 | 3EZ36D5 |
| 3EZ39D5 | 39 | 19 | 28 | 1000 | 0.25 | 0.5 | 29.7 | 69 | 3EZ39D5 |
| 3EZ43D5 | 43 | 17 | 33 | 1500 | 0.25 | 0.5 | 32.7 | 63 | 3EZ43D5 |
| 3EZ47D5 | 47 | 16 | 38 | 1500 | 0.25 | 0.5 | 35.6 | 57 | 3EZ47D5 |
| 3EZ51D5 | 51 | 15 | 45 | 1500 | 0.25 | 0.5 | 38.8 | 53 | 3EZ51D5 |
| 3EZ56D5 | 56 | 13 | 50 | 2000 | 0.25 | 0.5 | 42.6 | 48 | 3EZ56D5 |
| 3EZ62D5 | 62 | 12 | 55 | 2000 | 0.25 | 0.5 | 47.1 | 44 | 3EZ62D5 |
| 3EZ68D5 | 68 | 11 | 70 | 2000 | 0.25 | 0.5 | 51.7 | 40 | 3EZ68D5 |
| 3EZ75D5 | 75 | 10 | 85 | 2000 | 0.25 | 0.5 | 56.0 | 36 | 3EZ75D5 |

Notes: 4. TOLERANCES - Suffix Indicates 5% Tolerance any Other Tolerance Will be Considered as a Special Device.

5. ZENER VOLTAGE (VZ) MEASUREMENT - Guarantees the Zener Voltage When Measured at 40 ms from the Diode Body, and an Ambient Temperature of 25 °C

6. ZENER IMPEDANCE (Zz) DERIVATION - The Zener Impedance is Derived from the 60 Cycle AC Voltage, Which Results When an AC Current Having an rms Falue Equal to 10% of the DC Zener Current (I_{ZT} or I_{ZK}) is Superimposed on I_{ZT} or I_{ZK}

Curve Characteristics

Fig. 1 - Power Derating Curve

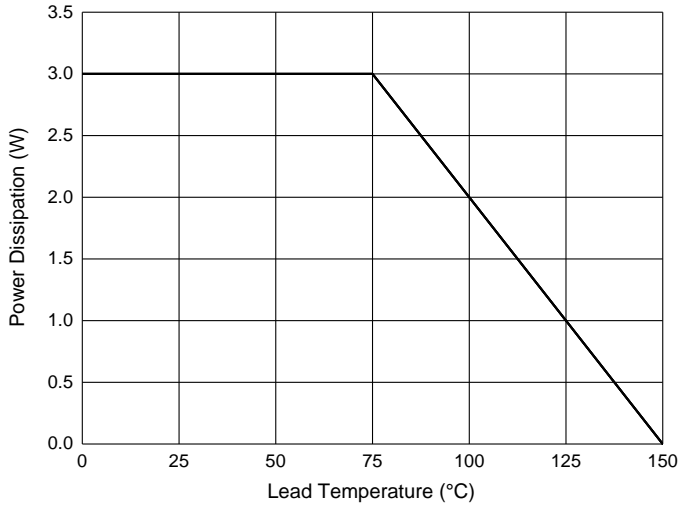


Fig. 2 - Typical Zener Breakdown Characteristics

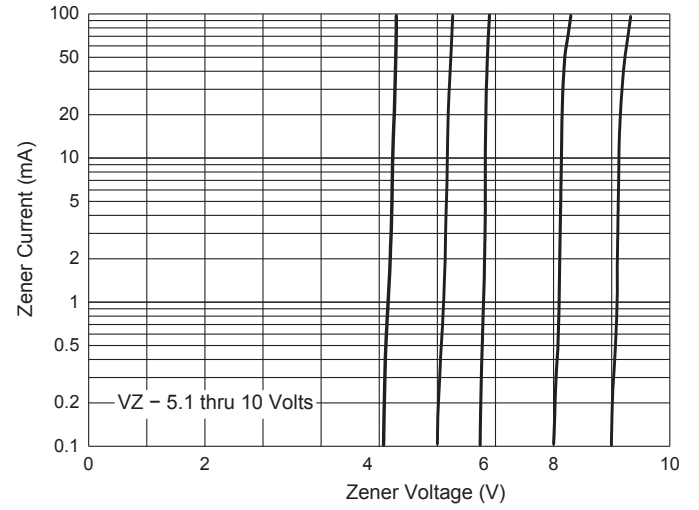
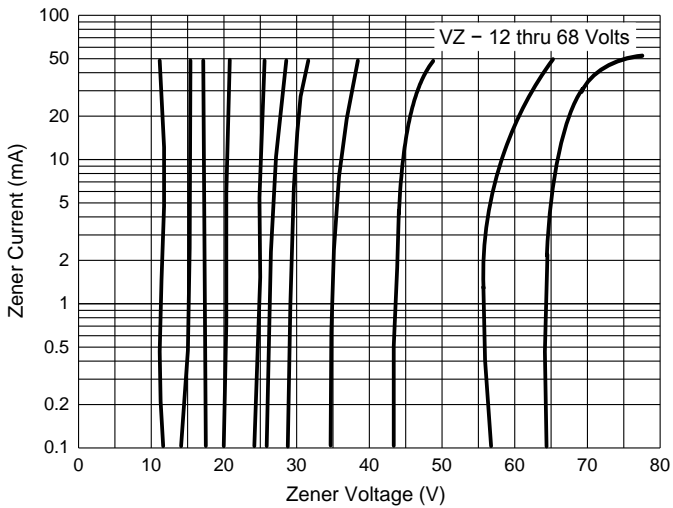


Fig. 3 - Typical Zener Breakdown Characteristics



Ordering Information

| Device | Packing |
|------------------|------------------------------|
| (Part Number)-TP | Tape&Reel: 4Kpcs/Reel |
| (Part Number)-AP | Ammo Packing: 3Kpcs/Ammo Box |
| (Part Number)-BP | Bulk: 25Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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