

## 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

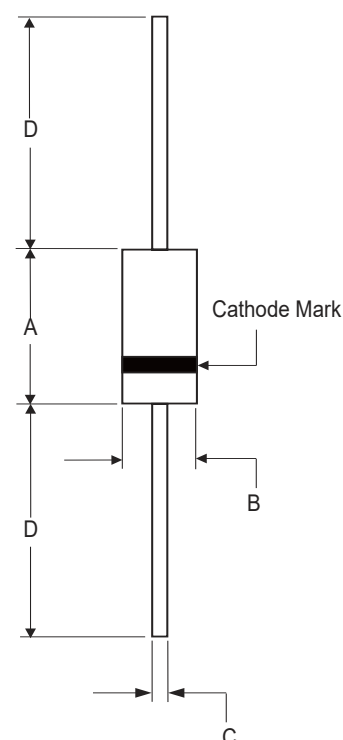
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

| 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 5.0mm<sup>2</sup> (.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<br>Part Number<br>(Note 4) | Nominal Zener<br>Voltage<br>(Note 5) | Test current | Maximum Zener Impedance (Note 6) |                   |          | Leakage Current      |       | Maximum Zener<br>Current | MARKING<br>CODE |
|--------------------------------|--------------------------------------|--------------|----------------------------------|-------------------|----------|----------------------|-------|--------------------------|-----------------|
|                                | $V_Z @ I_{ZT}$                       | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$                | $Z_{ZK} @ I_{ZK}$ | $I_{ZK}$ | $I_R$                | $V_R$ | $I_{ZM}$                 |                 |
|                                | V                                    | mA           | $\Omega$                         | $\Omega$          | 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 ( $V_Z$ ) MEASUREMENT - Guarantees the Zener Voltage When Measured at 40 ms from the Diode Body, and an Ambient Temperature of 25 °C

6. ZENER IMPEDANCE ( $Z_Z$ ) DERIVATION - 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 on  $I_{ZT}$  or  $I_{ZK}$

## Curve Characteristics

Fig. 1 - Power Derating Curve

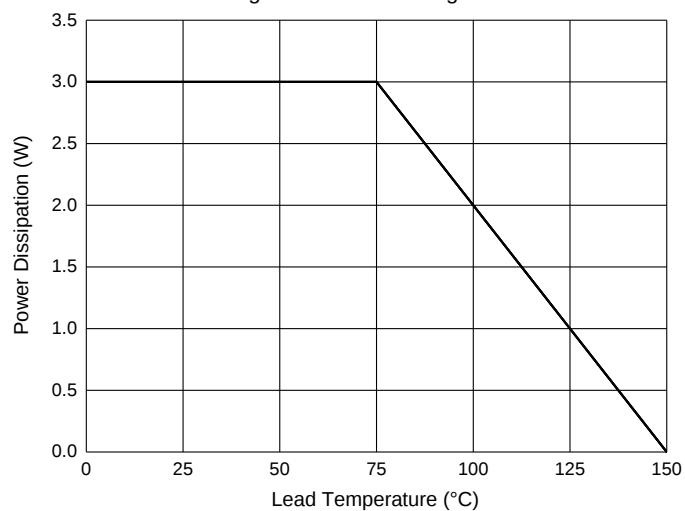


Fig. 2 - Typical Zener Breakdown Characteristics

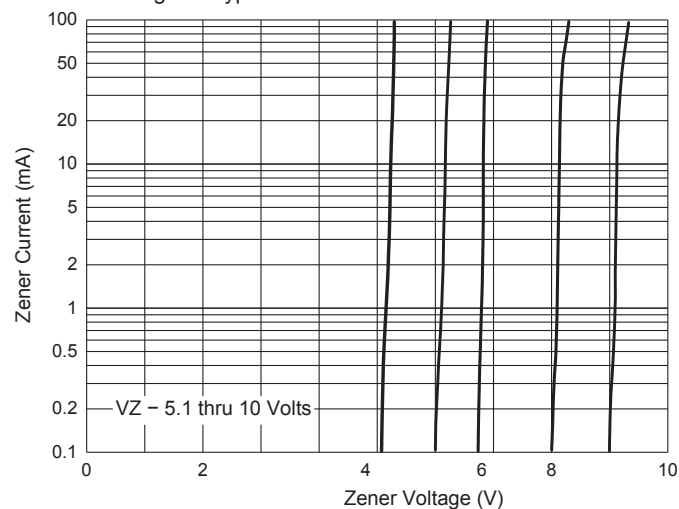
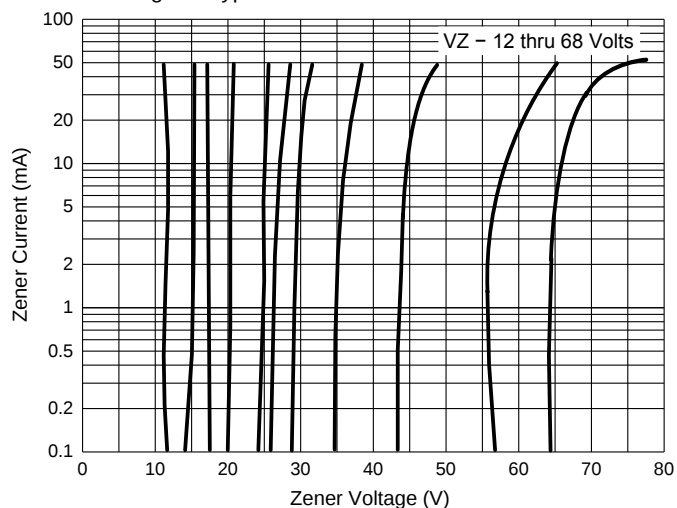


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

| Device           | Packing                       |
|------------------|-------------------------------|
| (Part Number)-TP | Tape&Reel: 4Kpcs/Reel         |
| (Part Number)-AP | Ammo Packing: 3Kpcs/Ammo Box  |
| (Part Number)-BP | Bulk:500pcs/Box,25Kpcs/Carton |

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

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