

## Features

- $V_Z$ -Tolerance  $\pm 5\%$
- Glass Passivated Junction
- Excellent Clamping Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

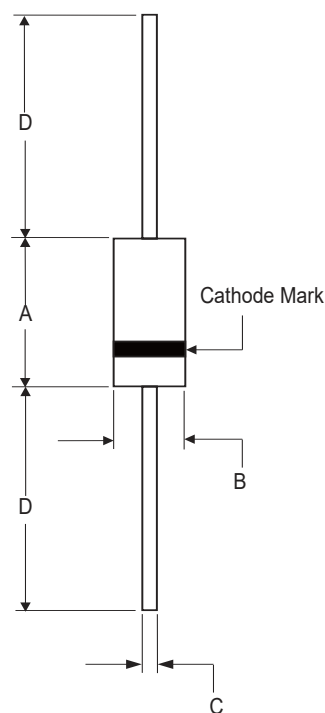
- Operating Junction Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$

| Parameter               | Symbol | Rating | Conditions                 |
|-------------------------|--------|--------|----------------------------|
| Power Dissipation       | $P_D$  | 1.0W   | $T_L = 75^{\circ}\text{C}$ |
| Maximum Forward Voltage | $V_F$  | 1.2V   | $I_F = 200\text{mA}$       |

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a

## 1.0 W Silicon Zener Diodes 5.6 to 39 Volts

### DO-41



| DIMENSIONS |        |       |       |       |        |
|------------|--------|-------|-------|-------|--------|
| DIM        | INCHES |       | MM    |       | NOTE   |
|            | MIN    | MAX   | MIN   | MAX   |        |
| A          | 0.160  | 0.205 | 4.10  | 5.20  |        |
| B          | 0.080  | 0.107 | 2.00  | 2.70  | $\Phi$ |
| C          | 0.028  | 0.035 | 0.70  | 0.90  | $\Phi$ |
| D          | 1.000  | ----- | 25.40 | ----- |        |

# Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC<br>PART NUMBER | ZENER VOLTAGE<br>@TEST CURRENT <sup>(2)</sup> |                 | MAXIMUM ZENER IMPEDANCE |                 |                 | LEAKAGE CURRENT |                | I <sub>ZM</sub><br><br>mA | MARKING<br>CODE |
|--------------------|-----------------------------------------------|-----------------|-------------------------|-----------------|-----------------|-----------------|----------------|---------------------------|-----------------|
|                    | V <sub>Z</sub>                                | I <sub>ZT</sub> | Z <sub>ZT</sub>         | Z <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub>  | V <sub>R</sub> |                           |                 |
|                    | V                                             | mA              | Ohms                    | Ohms            | mA              | μA              | V              |                           |                 |
| 1EZ5.6D5           | 5.6                                           | 44.6            | 5.0                     | 600             | 1               | 10              | 2.0            | 162                       | 1EZ5.6D5        |
| 1EZ6.2D5           | 6.2                                           | 40.3            | 2.0                     | 700             | 1               | 10              | 3.0            | 146                       | 1EZ6.2D5        |
| 1EZ6.8D5           | 6.8                                           | 36.8            | 3.5                     | 700             | 1               | 10              | 4.0            | 133                       | 1EZ6.8D5        |
| 1EZ7.5D5           | 7.5                                           | 33.3            | 4.0                     | 700             | 0.5             | 10              | 5.0            | 121                       | 1EZ7.5D5        |
| 1EZ8.2D5           | 8.2                                           | 30.5            | 4.5                     | 700             | 0.5             | 10              | 6.0            | 110                       | 1EZ8.2D5        |
| 1EZ9.1D5           | 9.1                                           | 27.5            | 5.0                     | 700             | 0.5             | 10              | 7.0            | 100                       | 1EZ9.1D5        |
| 1EZ10D5            | 10                                            | 25              | 7.0                     | 700             | 0.25            | 10              | 7.6            | 91                        | 1EZ10D5         |
| 1EZ11D5            | 11                                            | 22.7            | 8.0                     | 700             | 0.25            | 5               | 8.4            | 83                        | 1EZ11D5         |
| 1EZ12D5            | 12                                            | 20.8            | 9.0                     | 700             | 0.25            | 5               | 9.1            | 76                        | 1EZ12D5         |
| 1EZ13D5            | 13                                            | 19.2            | 10                      | 700             | 0.25            | 5               | 9.9            | 69                        | 1EZ13D5         |
| 1EZ14D5            | 14                                            | 17.9            | 12                      | 700             | 0.25            | 5               | 10.6           | 65                        | 1EZ14D5         |
| 1EZ15D5            | 15                                            | 16.7            | 14                      | 700             | 0.25            | 5               | 11.4           | 61                        | 1EZ15D5         |
| 1EZ16D5            | 16                                            | 15.6            | 16                      | 700             | 0.25            | 5               | 12.2           | 57                        | 1EZ16D5         |
| 1EZ17D5            | 17                                            | 14.7            | 18                      | 750             | 0.25            | 5               | 13.0           | 53                        | 1EZ17D5         |
| 1EZ18D5            | 18                                            | 13.9            | 20                      | 750             | 0.25            | 5               | 13.7           | 50                        | 1EZ18D5         |
| 1EZ19D5            | 19                                            | 13.2            | 21                      | 750             | 0.25            | 5               | 14.4           | 47                        | 1EZ19D5         |
| 1EZ20D5            | 20                                            | 12.5            | 22                      | 750             | 0.25            | 5               | 15.2           | 45                        | 1EZ20D5         |
| 1EZ22D5            | 22                                            | 11.4            | 23                      | 750             | 0.25            | 5               | 16.7           | 41                        | 1EZ22D5         |
| 1EZ24D5            | 24                                            | 10.4            | 25                      | 750             | 0.25            | 5               | 18.2           | 38                        | 1EZ24D5         |
| 1EZ27D5            | 27                                            | 9.3             | 35                      | 750             | 0.25            | 5               | 20.6           | 34                        | 1EZ27D5         |
| 1EZ30D5            | 30                                            | 8.3             | 40                      | 1000            | 0.25            | 5               | 22.5           | 30                        | 1EZ30D5         |
| 1EZ33D5            | 33                                            | 7.6             | 45                      | 1000            | 0.25            | 5               | 25.1           | 27                        | 1EZ33D5         |
| 1EZ36D5            | 36                                            | 6.9             | 50                      | 1000            | 0.25            | 5               | 27.4           | 25                        | 1EZ36D5         |
| 1EZ39D5            | 39                                            | 6.4             | 60                      | 1000            | 0.25            | 5               | 29.7           | 23                        | 1EZ39D5         |

Note: 2. Based on DC-measurement at thermal equilibrium while maintaining the lead temperature(T<sub>L</sub>) at 25°C,9.5mm (3/8") from the diode body.

## Curve Characteristics

Fig. 1 - Power Derating Curve

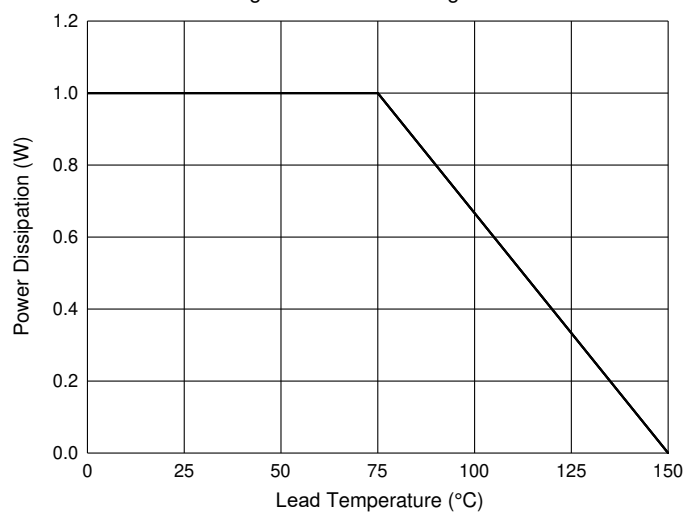


Fig. 2 - Typical Zener Breakdown Characteristics

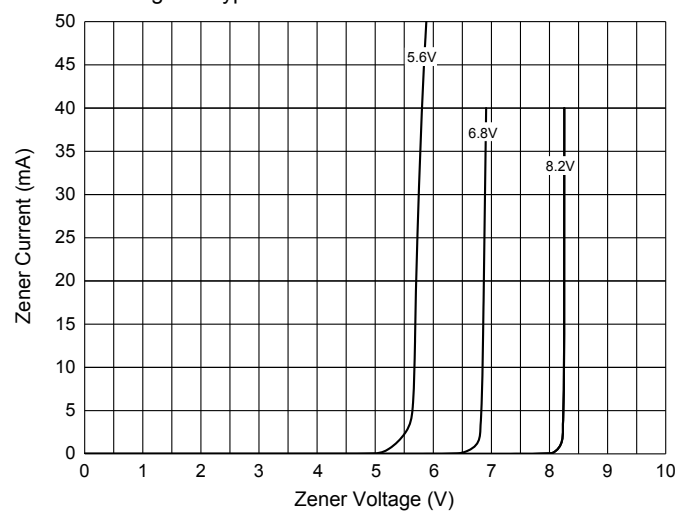
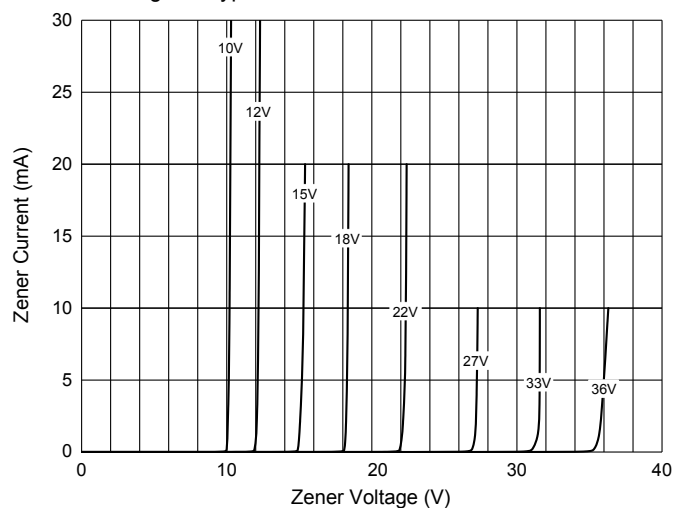


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

| Device           | Packing                        |
|------------------|--------------------------------|
| (Part Number)-TP | Tape&Reel: 5Kpcs/Reel          |
| (Part Number)-AP | Ammo Packing: 5Kpcs/Ammo Box   |
| (Part Number)-BP | Bulk: 1Kpcs/Box, 50Kpcs/Carton |

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

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