

**ZENER SILICON RECTIFIER**

**VOLTAGE RANGE 90 to 330 Volts CURRENT 1.0 Ampere**

**FEATURES**

- \* High reliability
- \* Low leakage
- \* Low forward voltage drop
- \* Excellent clamping capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.4 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



**DO-41**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

| TYPE | Zener Breakdown Voltage | Dynamic Impedances @ 25°C TA |      |     |      | Maximum Reverse Current @ Measurement Voltage and 25°C TA |     | Maximum Forward Voltage @ 25°C TA @ IF = 1.0A |
|------|-------------------------|------------------------------|------|-----|------|---|-----|---|
|      |                         | IzT                          | ZzT  | IzK | ZzK  | VR  | IR  |   |
|      | V                       | mA                           | Ohms | mA  | Ohms | V   | uA  | V   |
| Z90  | 90                      | 2.7                          | 250  | .25 | 2000 | 70  | 0.5 | 1.0   |
| Z100 | 100                     | 2.5                          | 350  | .25 | 3000 | 75  | 0.5 | 1.0   |
| Z105 | 105                     | 2.4                          | 400  | .25 | 3500 | 77  | 0.5 | 1.0   |
| Z110 | 110                     | 2.3                          | 450  | .25 | 4000 | 80  | 0.5 | 1.0   |
| Z115 | 115                     | 2.2                          | 500  | .25 | 4250 | 85  | 0.5 | 1.0   |
| Z120 | 120                     | 2.1                          | 550  | .25 | 4500 | 90  | 0.5 | 1.0   |
| Z130 | 130                     | 1.9                          | 700  | .25 | 5000 | 95  | 0.5 | 1.0   |
| Z135 | 135                     | 1.85                         | 750  | .25 | 5250 | 100   | 0.5 | 1.0   |

OPERATING AND STORAGE TEMPERATURE - 55°C to + 150°C

NOTE: Standard tolerance: +/-20%, Suffix "A" : +/-10%

| TYPE | Zener Breakdown Voltage | Dynamic Impedances<br>@<br>25°C TA |      |     |      | Maximum Reverse Current<br>@ Measurement Voltage<br>and 25°C TA |     | Maximum Forward Voltage<br>@ 25°C TA<br>@ IF = 1.0A |
|------|-------------------------|------------------------------------|------|-----|------|---|-----|---|
|      |                         | IzT                                | ZzT  | IzK | ZzK  | VR  | IR  | Vf  |
|      | V                       | mA                                 | Ohms | mA  | Ohms | V   | uA  | V   |
| Z140 | 140                     | 1.8                                | 800  | .25 | 5500 | 105   | 0.5 | 1.0   |
| Z150 | 150                     | 1.7                                | 1000 | .25 | 6000 | 110   | 0.5 | 1.0   |
| Z160 | 160                     | 1.6                                | 1100 | .25 | 6500 | 120   | 0.5 | 1.0   |
| Z170 | 170                     | 1.5                                | 1200 | .25 | 6750 | 130   | 0.5 | 1.0   |
| Z180 | 180                     | 1.4                                | 1350 | .25 | 7000 | 140   | 0.5 | 1.0   |
| Z190 | 190                     | 1.3                                | 1500 | .25 | 7500 | 150   | 0.5 | 1.0   |
| Z200 | 200                     | 1.2                                | 1700 | .25 | 8000 | 160   | 0.5 | 1.0   |
| Z220 | 220                     | 1.1                                | 2000 | .25 | 8250 | 170   | 0.5 | 1.0   |
| Z240 | 240                     | 1.0                                | 2200 | .25 | 8500 | 180   | 0.5 | 1.0   |
| Z270 | 270                     | 0.9                                | 2500 | .25 | 8750 | 200   | 0.5 | 1.0   |
| Z300 | 300                     | 0.8                                | 3000 | .25 | 9000 | 220   | 0.5 | 1.0   |
| Z330 | 330                     | 0.75                               | 4000 | .25 | 9500 | 240   | 0.5 | 1.0   |

OPERATING AND STORAGE TEMPERATURE - 55°C to + 150°C

2002-12

NOTE: Standard tolerance: +/-20%, Suffix "A" : +/-10%

# RATING AND CHARACTERISTIC CURVES ( Z90 THRU Z330 )

