

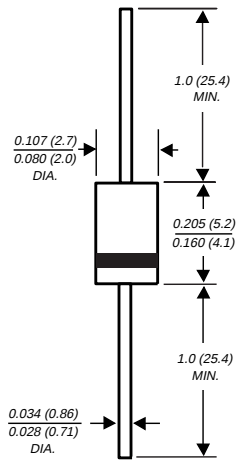
# Z4KE100 THRU Z4KE200A

## GLASS PASSIVATED ZENER

Zener Voltage - 100 to 200 Volts

Steady State Power - 1.5 Watts

DO-204AL



Dimensions in inches and (millimeters)

### FEATURES

- ♦ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ♦ Low Zener impedance
- ♦ Low regulation factor
- ♦ Glass passivated junction
- ♦ High temperature soldering guaranteed: 260°C/10 seconds 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** JEDEC DO-204AL molded plastic over passivated junction

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes positive end (cathode)

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.3 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

OPERATING JUNCTION AND STORAGE TEMPERATURE RANGE: T<sub>J</sub>, T<sub>STG</sub>: -55°C to +150°C

| TYPE     | ZENER VOLTAGE at 5.0mA |     | MAXIMUM ZENER DYNAMIC IMPEDANCE |                        |                      |                        | MAXIMUM DC REVERSE LEAKAGE CURRENT AT V <sub>R</sub> |                            |                           | MAXIMUM INSTANTANEOUS FORWARD VOLTAGE at 0.50A | MAXIMUM CONTINUOUS REGULATOR CURRENT <sup>(1)</sup> |
|----------|------------------------|-----|---------------------------------|------------------------|----------------------|------------------------|------------------------------------------------------|----------------------------|---------------------------|------------------------------------------------|-----------------------------------------------------|
|          | V <sub>Z</sub> (Volts) |     | I <sub>ZT</sub> (mA)            | Z <sub>zT</sub> (Ohms) | I <sub>ZK</sub> (mA) | Z <sub>zK</sub> (Ohms) | V <sub>R</sub> (Volts)                               | I <sub>R</sub> @ 25°C (μA) | I <sub>R</sub> 100°C (μA) | V <sub>FM</sub> (Volts)                        | I <sub>ZM</sub> (μA)                                |
|          | MIN                    | MAX |                                 |                        |                      |                        |                                                      |                            |                           |                                                |                                                     |
| Z4KE100  | 90                     | 110 | 5.0                             | 500                    | 0.25                 | 5000                   | 72.0                                                 | 0.5                        | 100.0                     | 1.0                                            | 15.0                                                |
| Z4KE100A | 95                     | 105 | 5.0                             | 500                    | 0.25                 | 5000                   | 76.0                                                 | 0.5                        | 100.0                     | 1.0                                            | 15.0                                                |
| Z4KE110  | 99                     | 121 | 5.0                             | 600                    | 0.25                 | 5000                   | 79.2                                                 | 0.5                        | 100.0                     | 1.0                                            | 13.0                                                |
| Z4KE110A | 104                    | 116 | 5.0                             | 600                    | 0.25                 | 5000                   | 83.2                                                 | 0.5                        | 100.0                     | 1.0                                            | 13.0                                                |
| Z4KE120  | 108                    | 132 | 5.0                             | 700                    | 0.25                 | 5000                   | 86.4                                                 | 0.5                        | 100.0                     | 1.0                                            | 12.0                                                |
| Z4KE120A | 114                    | 126 | 5.0                             | 700                    | 0.25                 | 5000                   | 91.2                                                 | 0.5                        | 100.0                     | 1.0                                            | 12.0                                                |
| Z4KE130  | 117                    | 143 | 5.0                             | 800                    | 0.25                 | 5000                   | 93.6                                                 | 0.5                        | 100.0                     | 1.0                                            | 11.0                                                |
| Z4KE130A | 124                    | 137 | 5.0                             | 800                    | 0.25                 | 5000                   | 99.2                                                 | 0.5                        | 100.0                     | 1.0                                            | 11.0                                                |
| Z4KE140  | 126                    | 154 | 5.0                             | 900                    | 0.25                 | 5000                   | 100                                                  | 0.5                        | 100.0                     | 1.0                                            | 10.7                                                |
| Z4KE140A | 133                    | 147 | 5.0                             | 900                    | 0.25                 | 5500                   | 106.4                                                | 0.5                        | 100.0                     | 1.0                                            | 10.7                                                |
| Z4KE150  | 135                    | 165 | 5.0                             | 1000                   | 0.25                 | 6000                   | 108.0                                                | 0.5                        | 100.0                     | 1.0                                            | 10.0                                                |
| Z4KE150A | 142                    | 158 | 5.0                             | 1000                   | 0.25                 | 6000                   | 113.6                                                | 0.5                        | 100.0                     | 1.0                                            | 10.0                                                |
| Z4KE160  | 144                    | 176 | 5.0                             | 1100                   | 0.25                 | 6500                   | 115.2                                                | 0.5                        | 100.0                     | 1.0                                            | 9.0                                                 |
| Z4KE160A | 152                    | 168 | 5.0                             | 1100                   | 0.25                 | 6500                   | 121.6                                                | 0.5                        | 100.0                     | 1.0                                            | 9.0                                                 |
| Z4KE170  | 153                    | 187 | 5.0                             | 1200                   | 0.25                 | 7000                   | 122.4                                                | 0.5                        | 100.0                     | 1.0                                            | 8.8                                                 |
| Z4KE170A | 162                    | 179 | 5.0                             | 1200                   | 0.25                 | 7000                   | 129.6                                                | 0.5                        | 100.0                     | 1.0                                            | 8.0                                                 |
| Z4KE180  | 162                    | 198 | 5.0                             | 1300                   | 0.25                 | 7000                   | 129.6                                                | 0.5                        | 100.0                     | 1.0                                            | 8.0                                                 |
| Z4KE180A | 171                    | 189 | 5.0                             | 1300                   | 0.25                 | 7000                   | 136.8                                                | 0.5                        | 100.0                     | 1.0                                            | 8.0                                                 |
| Z4KE190  | 171                    | 209 | 5.0                             | 1400                   | 0.25                 | 7500                   | 136.8                                                | 0.5                        | 100.0                     | 1.0                                            | 7.9                                                 |
| Z4KE190A | 180                    | 200 | 5.0                             | 1400                   | 0.25                 | 7500                   | 144.0                                                | 0.5                        | 100.0                     | 1.0                                            | 7.9                                                 |
| Z4KE200  | 180                    | 220 | 5.0                             | 1500                   | 0.25                 | 8000                   | 144.0                                                | 0.5                        | 100.0                     | 1.0                                            | 7.0                                                 |
| Z4KE200A | 190                    | 210 | 5.0                             | 1500                   | 0.25                 | 8000                   | 152.0                                                | 0.5                        | 100.0                     | 1.0                                            | 7.0                                                 |

#### NOTES:

(1) Standard voltage tolerance is ±10%, suffix "A" is ± 5%

(2) Temperature rating at specified regulator current is T<sub>L</sub>=30°C

(3) Maximum steady state power dissipation is 1.5 watts at T<sub>L</sub>=75°C with lead length 0.375" (9.5mm)

# RATINGS AND CHARACTERISTICS CURVES Z4KE100 THRU Z4KE200A

FIG.1 - MAXIMUM CONTINUOUS POWER DISSIPATION

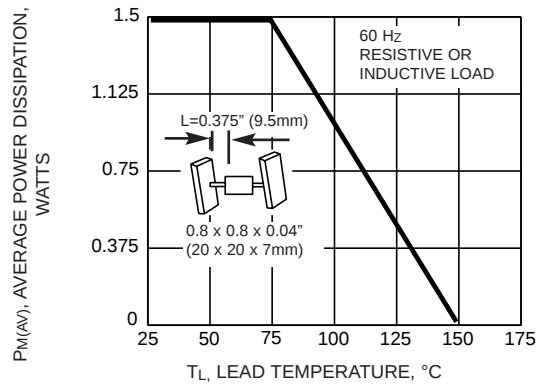


FIG. 2 - TYPICAL ZENER IMPEDANCE

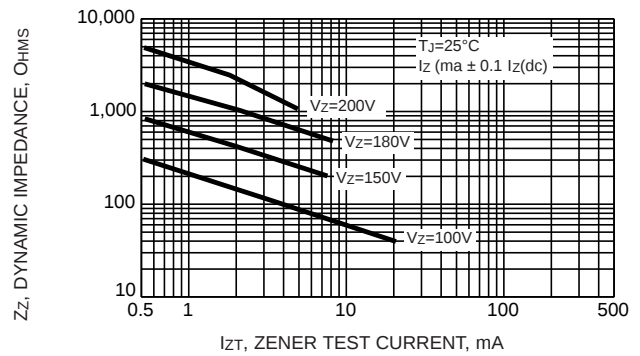


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

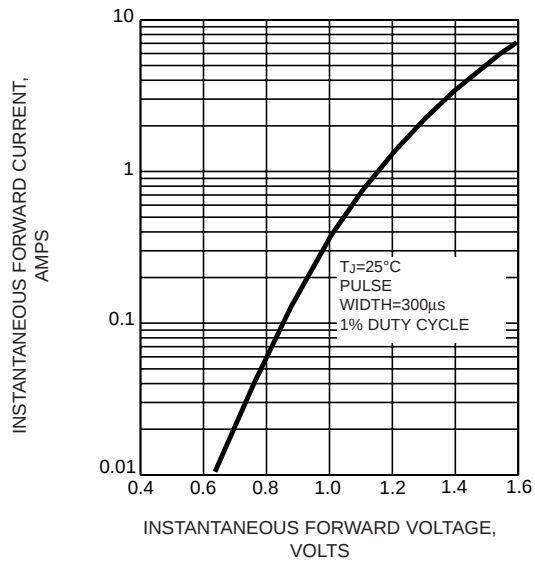


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

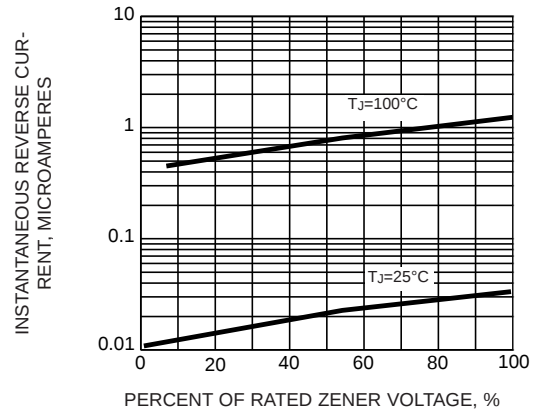


FIG. 5 - TYPICAL TEMPERATURE COEFFICIENTS

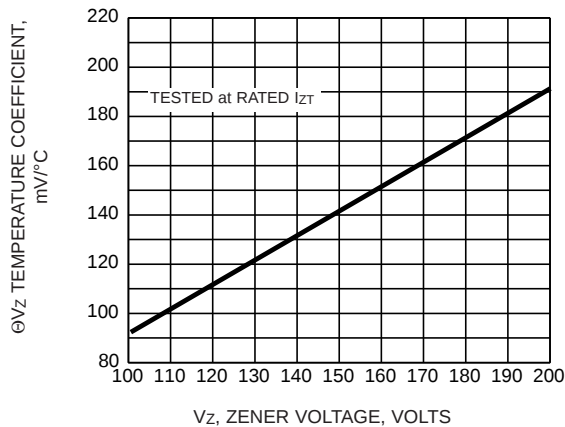


FIG. 6 - TYPICAL ZENER VOLTAGE

