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# 1N5139
## thru
# 1N5148A

## ELECTRICAL CHARACTERISTICS $T_A$ = 25 °C unless otherwise specified

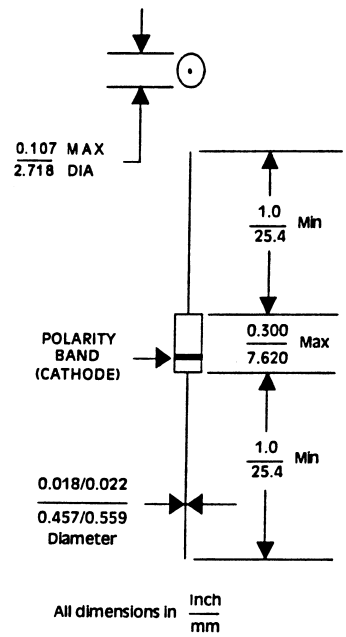
| CHARACTERISTICS - ALL TYPES | TEST CONDITIONS | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Reverse Breakdown Voltage ($V_{BR}$) | $I_R$ = 10 uadc | 65 | 100 | - | Vdc |
| Reverse Voltage Leakage Current ($I_R$) | $V_R$ = 55 Vdc, $T_A$ = 25 °C<br>$V_R$ = 55 Vdc, $T_A$ = 150 °C | - | 0.0001<br>0.16 | 0.02 | uadc |
| Series Inductance ($L_S$) | f = 250 MHz, L 1/16" | - | 5 | - | nH |
| Case Capacitance ($C_C$) | f = 1 MHz, L 1/16" | - | 0.25 | - | pf |
| Diode Capacitance ($TC_C$) Temperature Coefficient | VR = 4 Vdc, f = 1 MHz | - | 200 | 300 | ppm/°C |
| Figure of Merit (Q) | VR = 4 Vdc, f = 50 MHz | See Table Below | | | |
| Power ($P_T$) Derate 2.65 mW/°C above $T_A$=25°C | | - | - | 400 | mW |
| Operating Temp. Range | -55 to +150 | | | | °C |
| Storage Temp. Range | -55 to +200 | | | | °C |

## RATINGS AND CHARACTERISTICS

| ISI PART NUMBER | $C_J$ CAPACITANCE (Picofarads) $V_R$ = 4 VDC f = 1 MHz | | | CAPACITANCE RATIO From $V_R$ = 4 VDC To $V_R$ = 60 VDC | | Q FIGURE OF MERIT $V_R$ = 4 VDC F = 50 mHZ |
|---|---|---|---|---|---|---|
| | Nom. | Min. | Max. | Min. | Typ. | Min. |
| 1N5139A | 6.8 | 6.46 | 7.14 | 2.7 | 2.9 | 350 |
| 1N5140A | 10 | 9.50 | 10.5 | 2.8 | 3.0 | 300 |
| 1N5141A | 12 | 11.4 | 12.6 | 2.8 | 3.3 | 300 |
| 1N5142A | 15 | 14.3 | 15.7 | 2.8 | 3.3 | 250 |
| 1N5143A | 18 | 17.1 | 18.9 | 2.8 | 3.4 | 250 |
| 1N5144A | 22 | 20.9 | 23.1 | 3.2 | 3.4 | 200 |
| 1N5145A | 27 | 25.7 | 28.3 | 3.2 | 3.4 | 200 |
| 1N5146A | 33 | 31.4 | 34.6 | 3.2 | 3.4 | 200 |
| 1N5147A | 39 | 37.1 | 40.9 | 3.2 | 3.4 | 200 |
| 1N5148A | 47 | 44.7 | 49.3 | 3.2 | 3.4 | 200 |

**Capacitance Tolerance:** A Suffix = ±5%
No Suffix = ±10%

**Quality Semi-Conductors**




**DO-7**

## DESIGN DATA

**CASE:** Hermetically sealed glass case. DO-7 Outline.

**LEAD MATERIAL:** Copper clad steel

**LEAD FINISH:** Tin Plate

**THERMAL RESISTANCE:** 250 °C/w (Typical) junction to ambient

**POLARITY:** Diode to be operated with the banded (cathode) end positive with respect to the opposite end

**WEIGHT:** 0.2 Grams

**MOUNTING POSITION:** Any

## MAXIMUM RATINGS

**OPERATING TEMPERATURE:** -65 TO +175 °C

**STORAGE TEMPERATURE** -65 TO +200 °C

**LEAD TEMPERATURE:** 1/16 inch from case for 10 seconds - 260 °C