

# DATA SHEET

## 1N4148-35

### SWITCHING DIODES

**VOLTAGE** 100 Volts **POWER** 500 mWatts

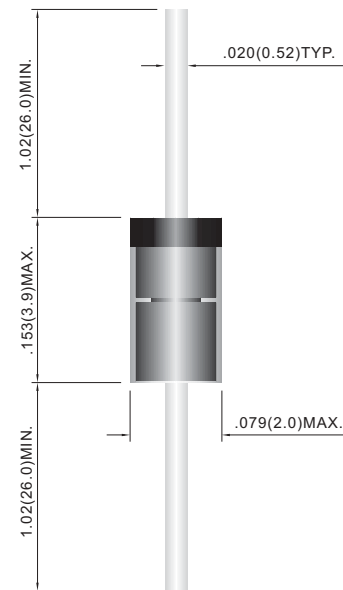
**DO-35** Unit: inch (mm)

#### FEATURES

- Fast switching Speed.
- Electrically Identical to Standard JEDEC
- High Conductance
- Axial lead Package Ideally Suited for Automatic Insertion.
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

- Case: Molded Glass DO-35
- Terminals: Solderable per MIL-STD-202E, Method 208
- Polarity: See Diagram Below
- Approx. Weight: 0.13 grams
- Mounting Position: Any
- Ordering information: Suffix : " -35 " to order DO-35 Package
- Packing information  
B - 2K per Bulk box  
T/R - 10K per 13" plastic Reel  
T/B - 5K per horiz. tape & Ammo box



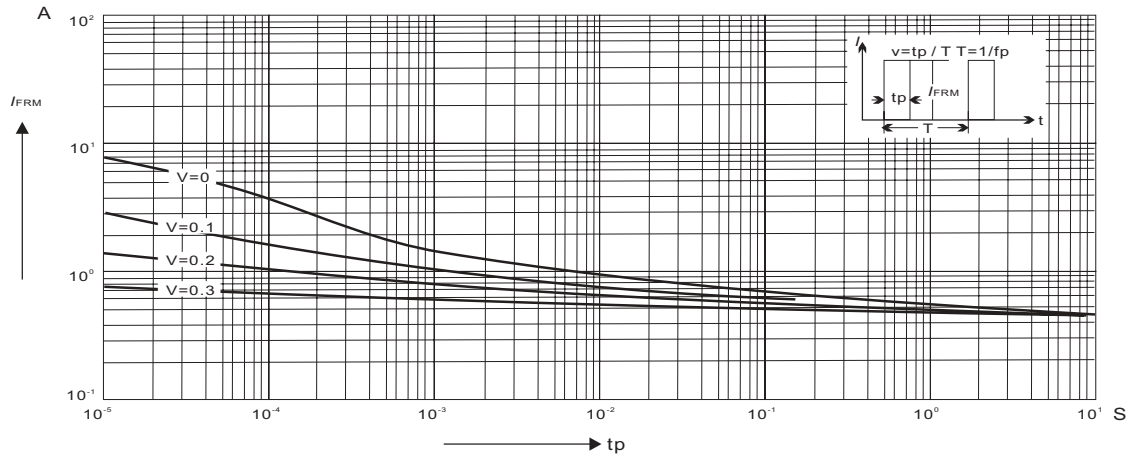
### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C unless otherwise noted)

| PARAMETER                                                                                                                      | SYMBOL                         | 1N4148        | UNITS          |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------|----------------|
| Reverse Voltage                                                                                                                | V <sub>R</sub>                 | 75            | V              |
| Peak Reverse Voltage                                                                                                           | V <sub>RM</sub>                | 100           | V              |
| RMS Voltage                                                                                                                    | V <sub>RMS</sub>               | 50            | V              |
| Maximum Average Forward Current at T <sub>a</sub> =25°C And f <sub>≥</sub> 50Hz                                                | I <sub>F</sub>                 | 150           | mA             |
| Surge Forward Current at t<1s and T <sub>J</sub> ≤25 °C                                                                        | I <sub>SM</sub>                | 500           | mA             |
| Power Dissipation at T <sub>amb</sub> = 25 °C                                                                                  | P <sub>TOT</sub>               | 500           | mW             |
| Maximum Forward Voltage at I <sub>F</sub> =10mA                                                                                | V <sub>F</sub>                 | 1.0           | V              |
| Maximum Leakage Current<br>at V <sub>R</sub> =20V<br>at V <sub>R</sub> =75V<br>at V <sub>R</sub> =20V ,T <sub>J</sub> = 150 °C | I <sub>R</sub>                 | 25<br>5<br>50 | nA<br>μA<br>μA |
| Maximum Capacitance (Note 1)                                                                                                   | C <sub>J</sub>                 | 4             | pF             |
| Maximum Reverse Recovery Time (Note 2)                                                                                         | T <sub>RR</sub>                | 4             | ns             |
| Maximum Thermal Resistance                                                                                                     | R <sub>θJA</sub>               | 350           | °C /W          |
| Junction Temperature and Storage Temperature Range                                                                             | T <sub>J</sub> ,T <sub>s</sub> | -65 to +175   | °C             |

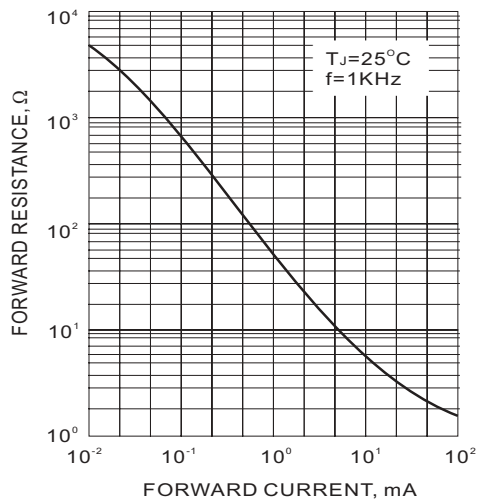
#### NOTE:

1. C<sub>J</sub> at V<sub>R</sub>=0, f=1MHZ
2. From I<sub>F</sub>=10mA to I<sub>R</sub>=1mA, V<sub>R</sub>=6Volts, R<sub>L</sub>=100Ω

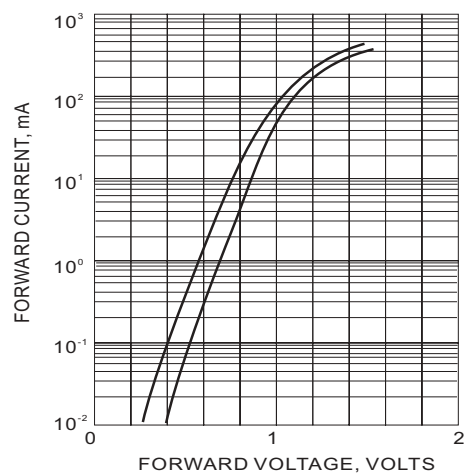
## RATING AND CHARACTERISTIC CURVES



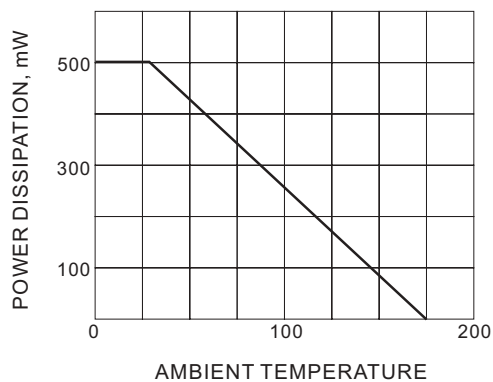
**Fig.1 ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION**



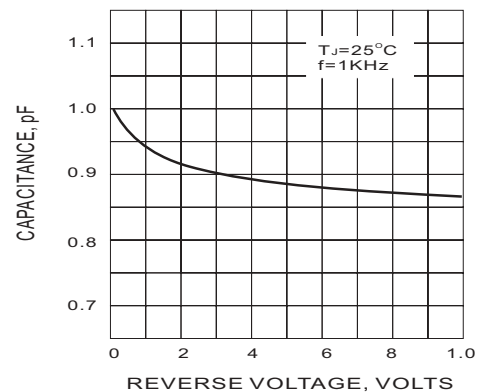
**Fig.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 DERATING CURVE**



**Fig.5 TYPICAL JUNCTION CAPACITANCE**