

# 1N5820 THRU 1N5822

## 3 AMPERE SCHOTTKY BARRIER RECTIFIER VOLTAGE - 20 to 40 Volts CURRENT - 3.0 Amperes

### FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- High current operation 3.0 ampere at  $T_L=95$  °C
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

### MECHANICAL DATA

Case: Molded plastic, DO-201AD

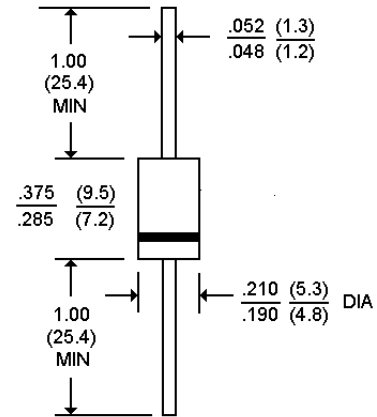
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.04 ounce, 1.1 gram

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

\*At  $T_A=25$  °C unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

\*\*All values except Maximum RMS voltage are registered JEDEC Parameters.

|   | 1N5820      | 1N5821 | 1N5822 | UNITS |
|---|-------------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage  | 20          | 30     | 40     | V     |
| Maximum RMS Voltage   | 14          | 21     | 28     | V     |
| Maximum DC Blocking Voltage   | 20          | 30     | 40     | V     |
| Maximum Average Forward Rectified Current 3/8" Lead Length $T_L=95$ °C  | 3.0         |        |        | A     |
| Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC method) $T_L=75$ °C | 80          |        |        | A     |
| Maximum Forward Voltage at 3.0A DC  | .475        | .500   | .525   | V     |
| Maximum Forward Voltage at 9.4A DC  | .850        | .900   | .950   | V     |
| Maximum Average DC Reverse Current $T_A=25$ °C at Rated Reverse Voltage $T_A=100$ °C                          | 0.5         |        |        | mA    |
|   | 20          |        |        | mA    |
| Typical Junction capacitance (Note 1)   | 28          |        |        | °C/W  |
| Typical Thermal Resistance(Note 2)  | 190         |        |        | pF    |
| Operating and Storage Temperature Range   | -50 to +125 |        |        | °C    |

### NOTES:

1. Thermal Resistance Junction to Ambient Vertical PC Board Mounting. 1/2" Lead Length
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

RATING AND CHARACTERISTIC CURVES

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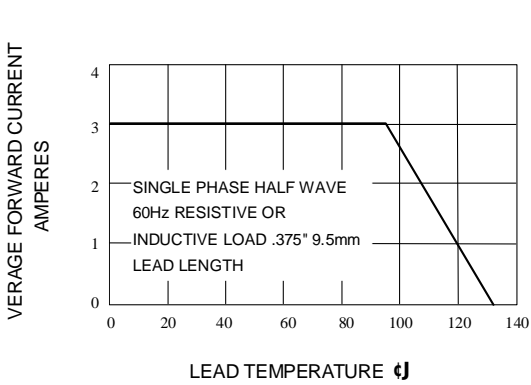


Fig. 1-FORWARD CURRENT DERATING CURVE

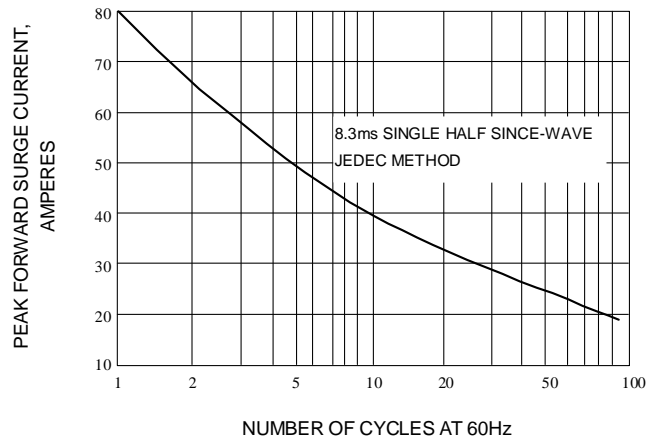


Fig. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

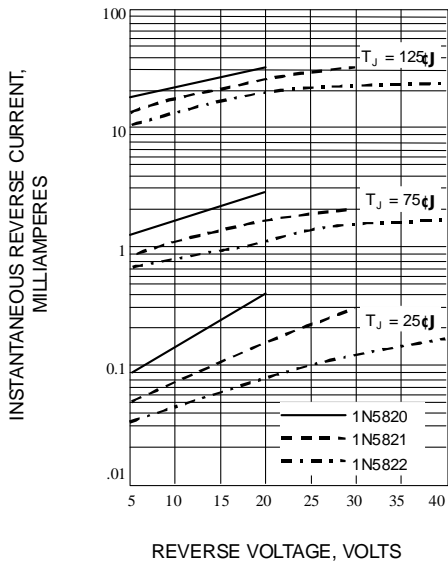


Fig. 2-TYPICAL REVERSE CHARACTERISTICS

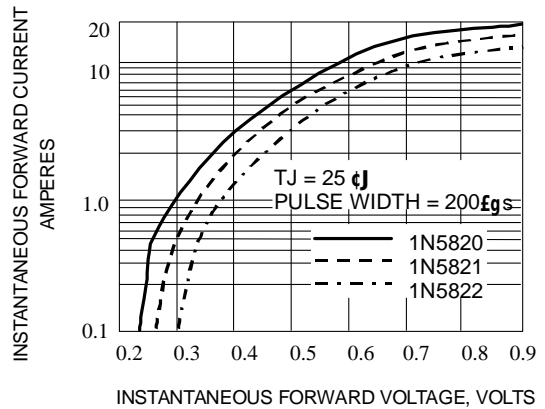


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

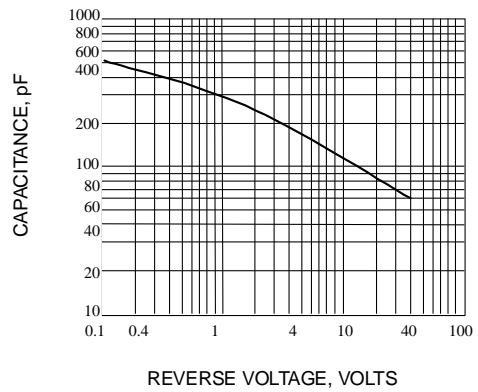


Fig. 5-TYPICAL JUNCTION CAPACITANCE