

# 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  $T_L=95\text{ }^{\circ}\text{C}$
- 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

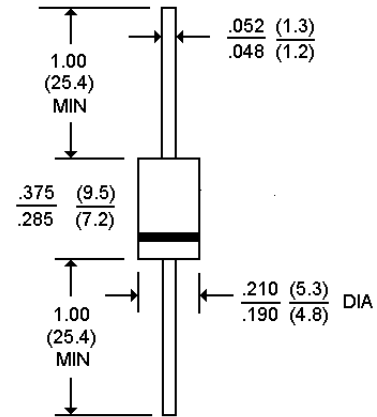
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

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  $T_A=25\text{ }^{\circ}\text{C}$  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 $T_L=95\text{ }^{\circ}\text{C}$	3.0			A
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC method) $T_L=75\text{ }^{\circ}\text{C}$	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 $T_A=25\text{ }^{\circ}\text{C}$ at Rated Reverse Voltage $T_A=100\text{ }^{\circ}\text{C}$	0.5			mA
	20			mA
Typical Junction capacitance (Note 1)	28			$\text{pF}/\text{W}$
Typical Thermal Resistance(Note 2)	190			$\text{pF}$
Operating and Storage Temperature Range	-50 to +125			$\text{ }^{\circ}\text{C}$

### 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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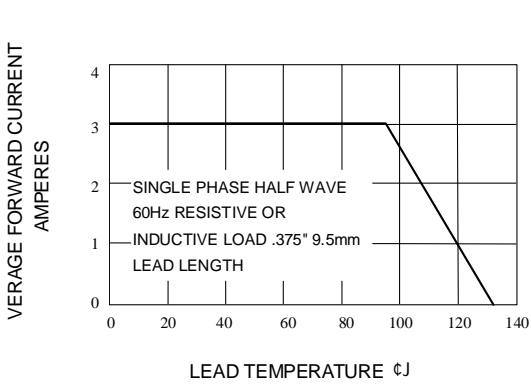


Fig. 1- FORWARD CURRENT DERATING CURVE

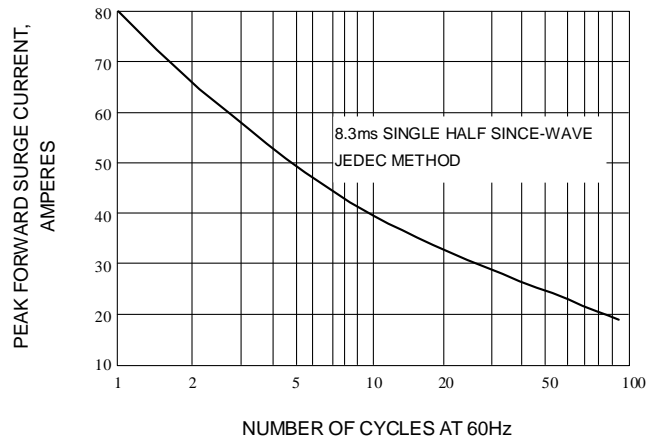


Fig. 3- MAXIMUM NON-REPETITIVE SURGE CURRENT

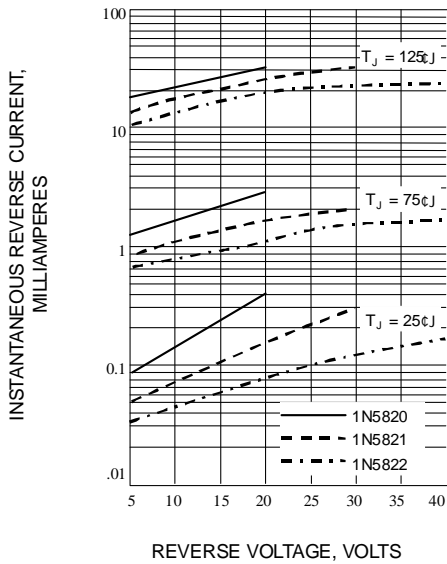


Fig. 2- TYPICAL REVERSE CHARACTERISTICS

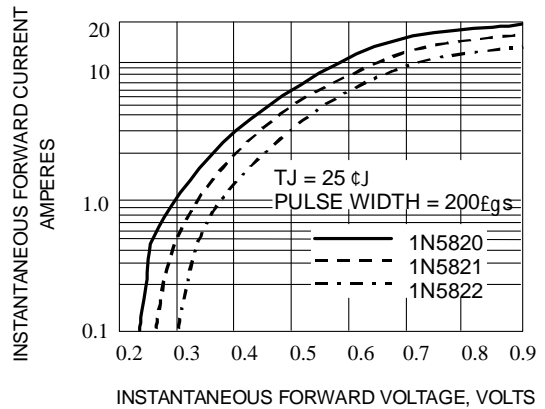


Fig. 4- TYPICAL FORWARD CHARACTERISTICS

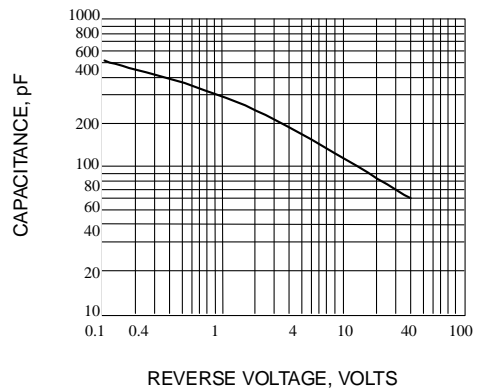


Fig. 5- TYPICAL JUNCTION CAPACITANCE