

# 1N5820 THRU 1N5822

## SCHOTTKY BARRIER RECTIFIER



**REVERSE VOLTAGE:** 20 to 40 VOLTS  
**FORWARD CURRENT:** 3.0 AMPERE

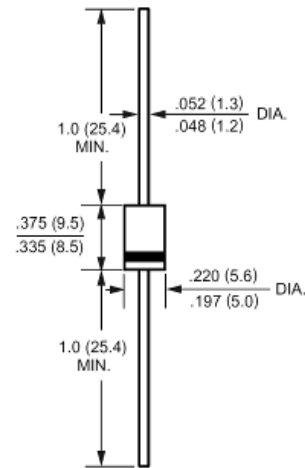
### FEATURES

- High current capability
- 3.0 ampere operation at  $T_L=95^\circ\text{C}$  with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and porlarlity protection applications

### MECHANICAL DATA

Case: Molded plastic, DO-201AD  
 Epoxy: UL 94V-O rate flame retardant  
 Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed  
 Polarity: Color band denotes cathode end  
 Mounting position: Any  
 Weight: 0.04ounce, 1.1gram

### DO-201AD



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

	Symbols	1N5820	1N5821	1N5822	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_L=95^\circ\text{C}$	$I_{(AV)}$	3.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80			Amp
Maximum Forward Voltage at 3.0A DC	$V_F$	0.475	0.50	0.525	Volts
Maximum Forward Voltage at 9.4A DC		0.850	0.90	0.950	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	$I_R$	1.0			mAmp
		20			
Typical Junction Capacitance (Note 1)	$C_J$	250			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	28			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150			$^\circ\text{C}$

### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance From Junction to Ambient 0.5"(12.7mm) lead length P.C.B. Mounted.

# 1N5820 THRU 1N5822

## SCHOTTKY BARRIER RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

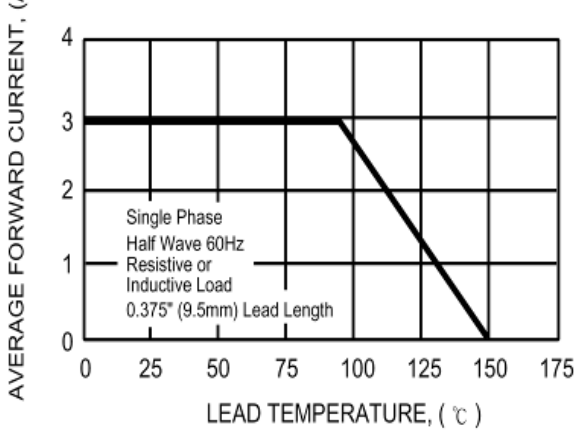


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

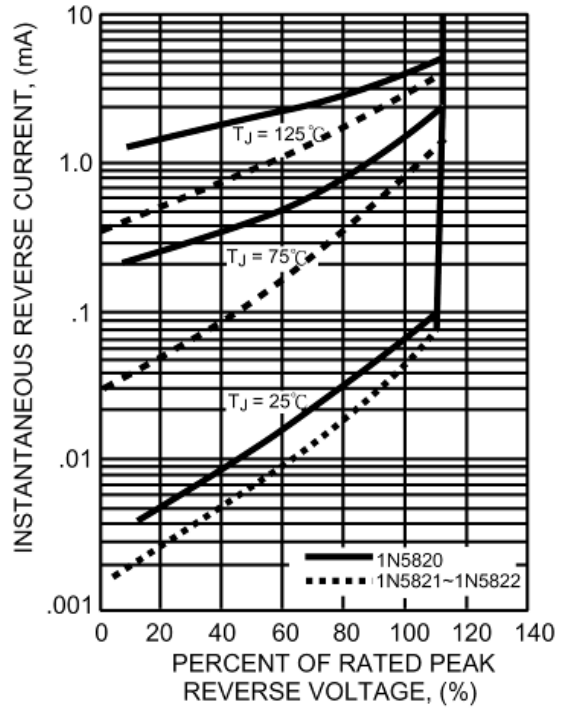


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

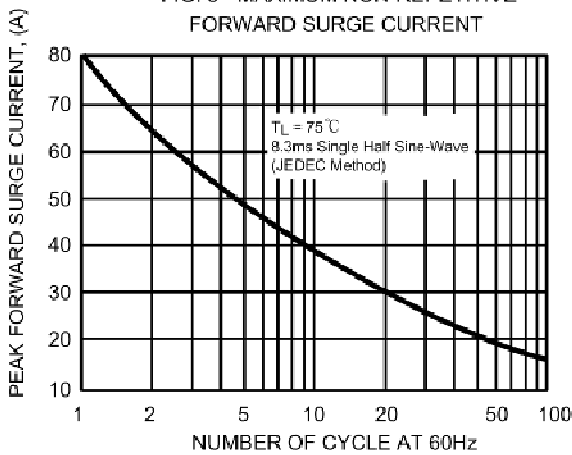


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

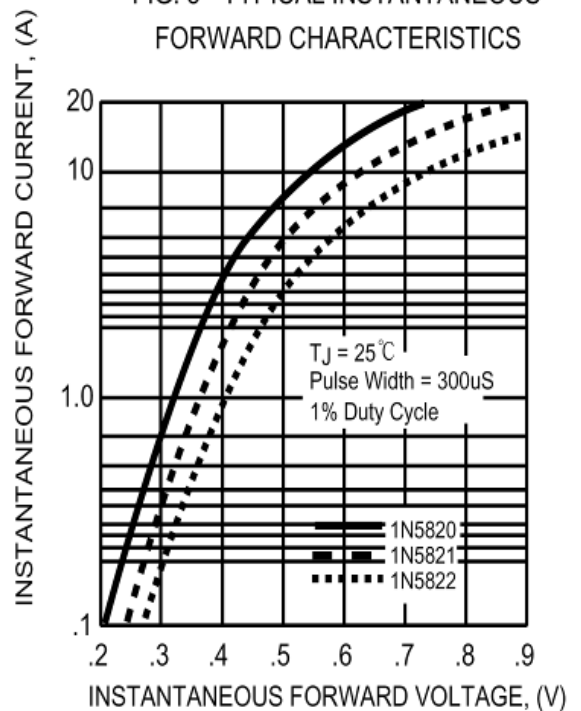


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

