



# 1N5820 THRU 1N5822

## 3.0 AMPS. SCHOTTKY BARRIER RECTIFIERS



### FEATURES

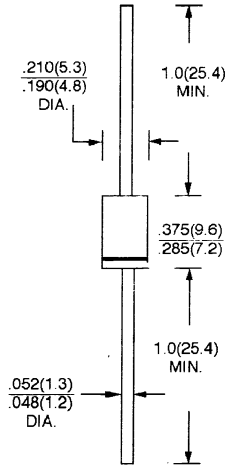
- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

- \* Case: DO-201 AD Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Weight: 1.10grams

**VOLTAGE RANGE**  
20 to 40 volts  
**CURRENT**  
3.0 Amperes

### DO-201AD



Dimensions in inches and ( millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	1N5820	1N5821	1N5822	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward Rectified Current @ $T_L = 90^\circ C$	$I_{F(AV)}$	3.0			A
Peak Forward Surge Current (8.3 ms half sine)	$I_{FSM}$	80			A
Maximum Instantaneous Forward Voltage @ 3.0A (Note 1)	$V_F$	0.475	0.500	0.525	V
Maximum Instantaneous Forward Voltage @ 9.0A	$V_{FM}$	0.850	0.900	0.950	V
Maximum D. C Reverse Current at Rated D. C Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 100^\circ C$	$I_R$	2.0 20			mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40			$^\circ C/W$
Typical Junction Capacitance (Note 3)	$C_J$	300			pF
Operating and Storage Temperature Range	$T_J$	-65 to +125			$^\circ C$

**NOTE:** (1) Pulse test: 300 $\mu$ s pulse width, 1% duty cycle  
 (2) Thermal Resistance Junction to Ambient Vertical PC Board Mounted, .0500" (12.7mm) Lead Length with 2.5 x 2.5" (63.5 x 63.5mm) copper pads.  
 (3) Measured at 1 MHz and applied reverse voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

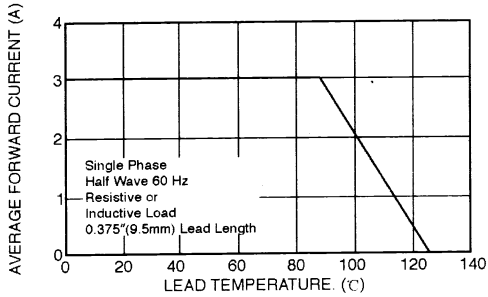


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

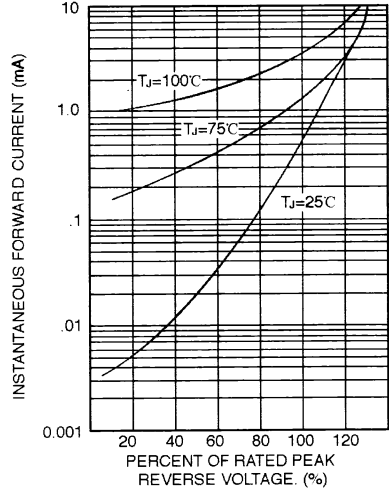


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

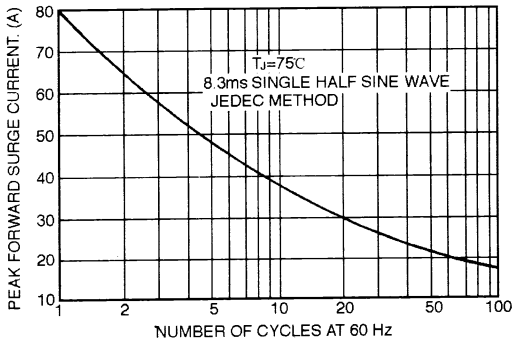


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

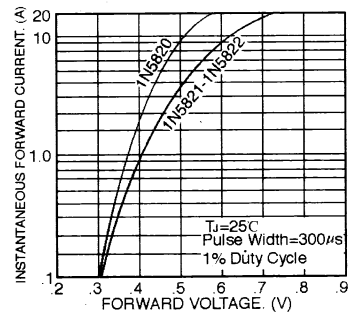


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

