

1N5820 THRU 1N5822

## SCHOTTKY BARRIER RECTIFIER

## **VOLTAGE RANGE 20 to 40 Volts CURRENT 3.0 Amperes**

## **FEATURES**

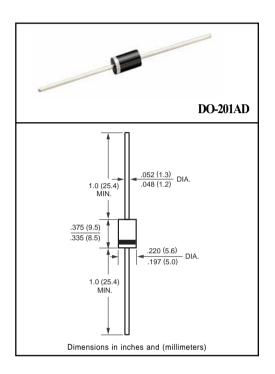
- \* Low switching noise
- \* Low forward voltage drop
- \* High current capability
- \* High switching capabitity
- \* High surge capability
- \* High reliability

### **MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any \* Weight: 1.18 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



## MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	1N5820	1N5821	1N5822	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	Volts
Maximum RMS Voltage	VRMS	14	21	28	Volts
Maximum DC Blocking Voltage	VDC	20	30	40	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at TL = 95°C	lo	3.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM		Amps		
Typical Thermal Resistance (Note 2)	RθJA	28			°C/W
Typical Junction Capacitance (Note 3)	CJ	250			pF
Storage and Operating Temperature Range	TJ, TSTG		۰c		

#### ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

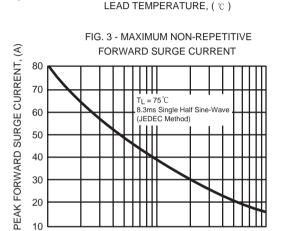
CHARACTERISTICS		SYMBOL	1N5820	1N5821	1N5822	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC (Note 1)		VF	.475	.500	.525	Volts
Maximum Instantaneous Forward Voltage at 9.4A DC (Note 1)		VF	.850	.900	.950	Volts
Maximum Average Reverse Current at	@TA = 25°C	lo.	2.0			- mAmps
Rated DC Blocking Voltage (Note 1)	@Ta = 100°C	lR				

NOTES: 1. Measured at Pulse Width 300 uS, Duty 2%.

- 2. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.
- 3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

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

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE AVERAGE FORWARD CURRENT, (A) Single Phase Half Wave 60Hz Resistive or Inductive Load 0.375" (9.5mm) Lead Length 



NUMBER OF CYCLE AT 60Hz

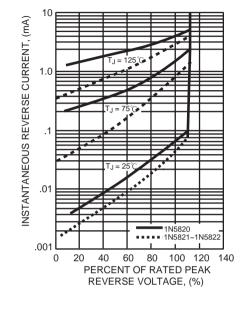


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

