

**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 capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

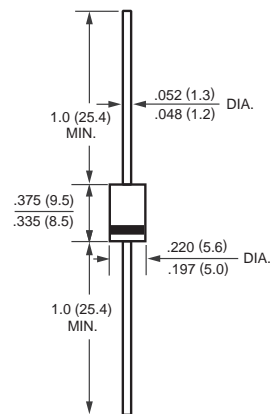
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 1.18 grams

**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%.



**DO-201AD**



Dimensions in inches and (millimeters)

**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	Vbc	20	30	40	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at TL = 95°C	IO	3.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	80			Amps
Typical Thermal Resistance (Note 2)	R θJA	28			°C/W
Typical Junction Capacitance (Note 3)	CJ	250			pF
Storage and Operating Temperature Range	TJ, TSTG	-55 to + 150			°C

**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)		V <sub>F</sub>	.475	.500	.525	Volts
Maximum Instantaneous Forward Voltage at 9.4A DC (Note 1)		V <sub>F</sub>	.850	.900	.950	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage (Note 1)	@ T <sub>A</sub> = 25°C	I <sub>R</sub>	2.0			mAmps
	@ T <sub>A</sub> = 100°C		20			

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.

2002-11

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

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

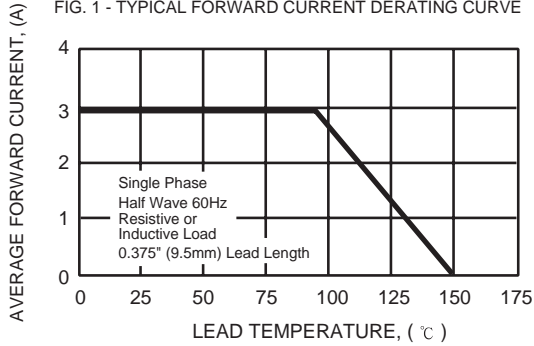


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

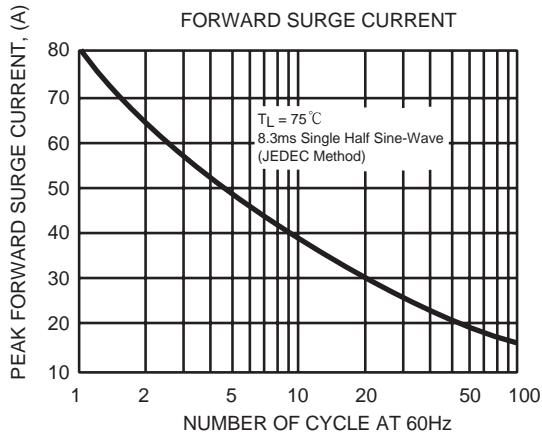


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

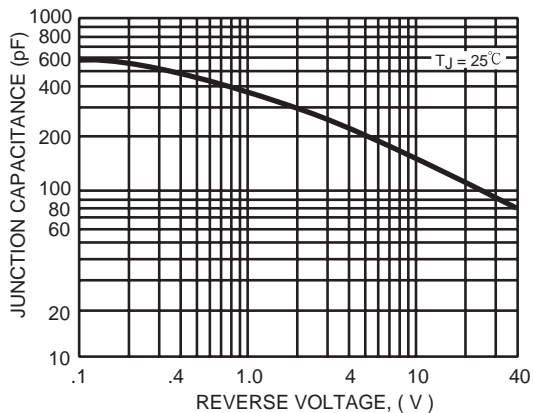


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

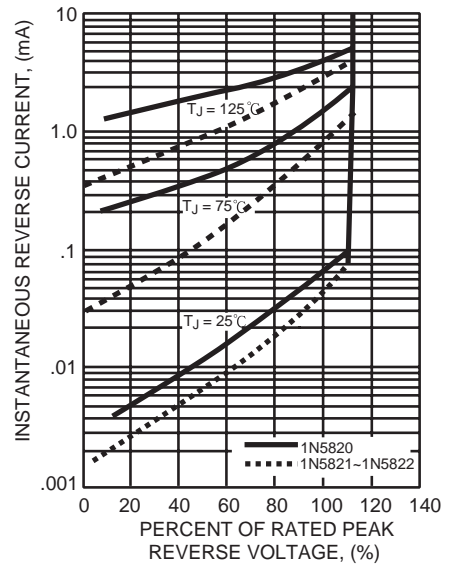


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

