

## SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **20 to 40** Volts  
FORWARD CURRENT - **3.0** Amperes

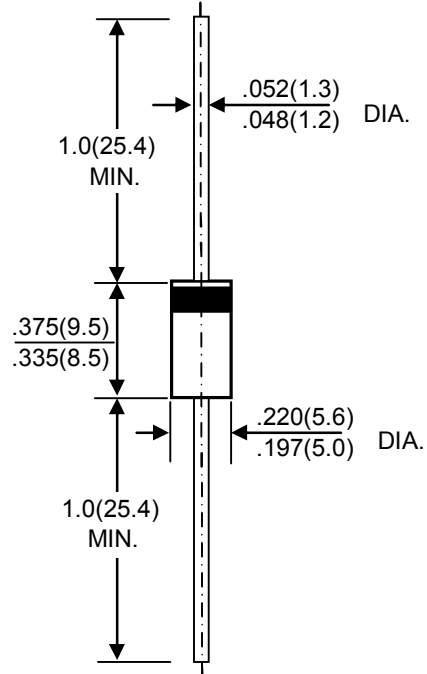
### FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: JEDEC DO-27 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.04 ounces , 1.1 grams
- Mounting position: Any

### DO- 27



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	1N5820	1N5821	1N5822	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths @T <sub>L</sub> =95 °C	I <sub>(AV)</sub>	3.0			A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I <sub>FSM</sub>	80			A
Maximum Forward Voltage at 3.0A DC	V <sub>F</sub>	0.45	0.55	0.60	V
Maximum Forward Voltage at 9.4A DC	V <sub>F</sub>	0.850	0.900	0.950	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =100°C	I <sub>R</sub>	1.0 20			mA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	250			pF
Typical Thermal Resistance (Note2)	R <sub>θJL</sub>	20			°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +125			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150			°C

NOTES: 1.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

2.Thermal resistance junction to lead,



FIG. 1 – FORWARD CURRENT DERATING CURVE

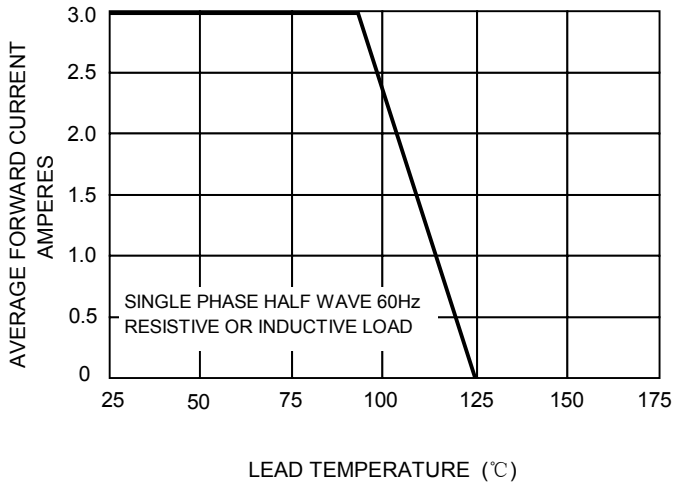


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

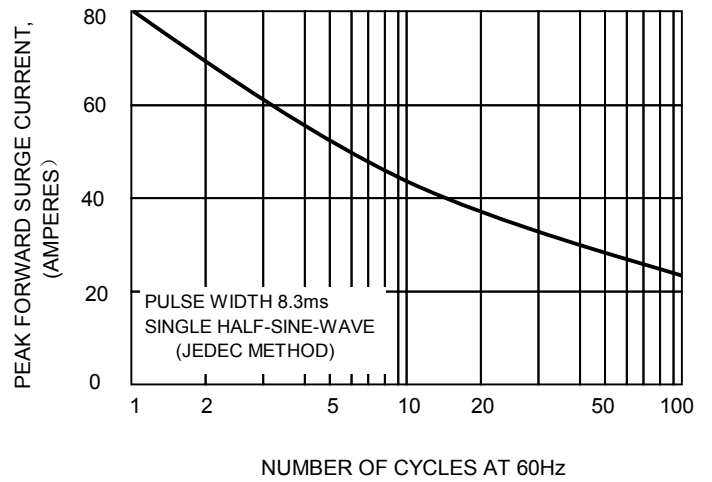


FIG.3 – TYPICAL JUNCTION CAPACITANCE

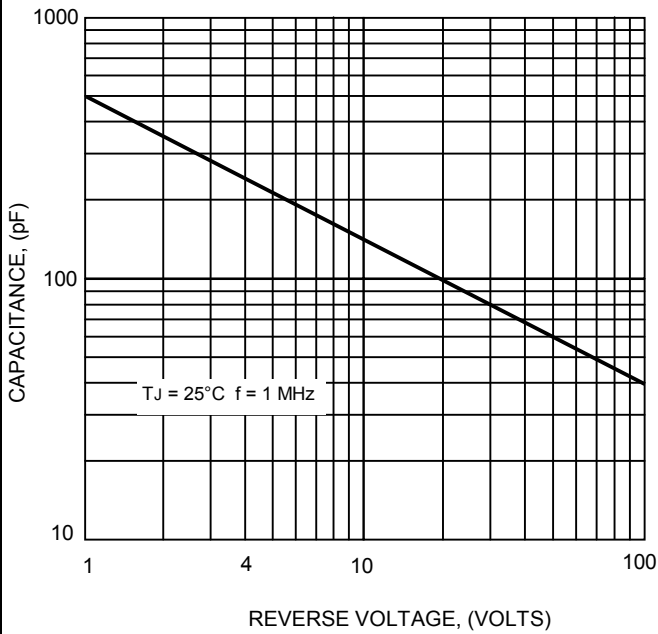


FIG.3-TYPICAL FORWARD CHARACTERISTICS

