



## SCHOTTKY BARRIER RECTIFIER

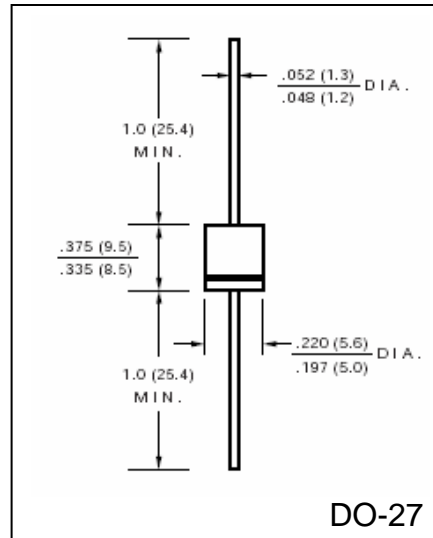
1N5820 THRU 1N5822	VOLTAGE RANGE CURRENT	20 to 40 Volts 3.0 Ampere
--------------------	--------------------------	------------------------------

### FEATURES

- Fast switching speed
- Low forward voltage
- Low power loss, high efficiency
- High surge current capacity
- High Temperature soldering guaranteed:  
260°C / 10 second, 0.375" (9.5mm) lead length

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color Band denotes cathode end
- Lead: Plated axial lead, solderable per MIL – STD-202E Method 208C
- Mounting Position: Any
- Weight: 0.042ounce, 1.19 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°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	UNIT
Maximum Repetitive 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, 0.375" (9.5mm) lead length at $T_L = 95^\circ\text{C}$ (Note 1)	$I_{(AV)}$	3.0			Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80			Amps
Maximum Instantaneous Forward Voltage @ 3.0A @ 9.4A	$V_F$	0.475 0.850	0.500 0.900	0.525 0.950	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element $T_A = 100^\circ\text{C}$	$I_R$	2.0			MA
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	250			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	40			$^\circ\text{C}/\text{W}$
Operating Junction Temperature	$T_J$	(-55 to +125)			$^\circ\text{C}$
Storage Temperature Rang	$T_{STG}$	(-55 to +125)			$^\circ\text{C}$

### Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted, with 2.5" x 2.5" (63.5cm x 63.5cm) copper pads



## RATINGS AND CHARACTERISTIC CURVES 1N5820 THRU 1N5822

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

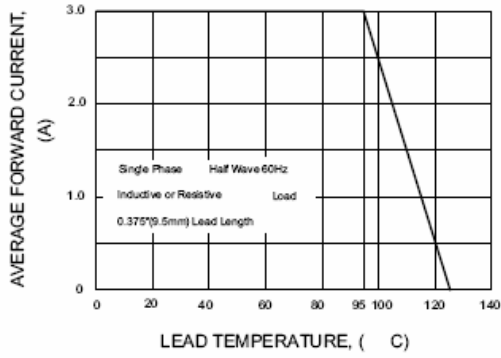


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

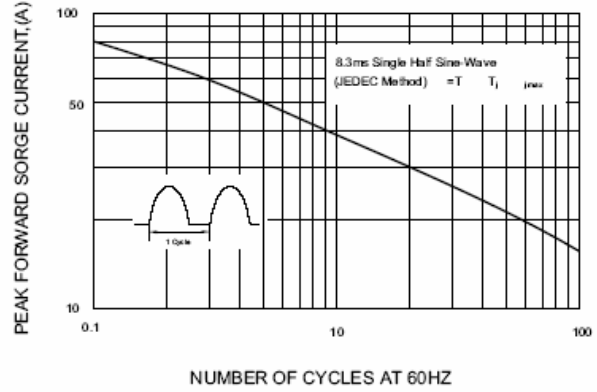


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

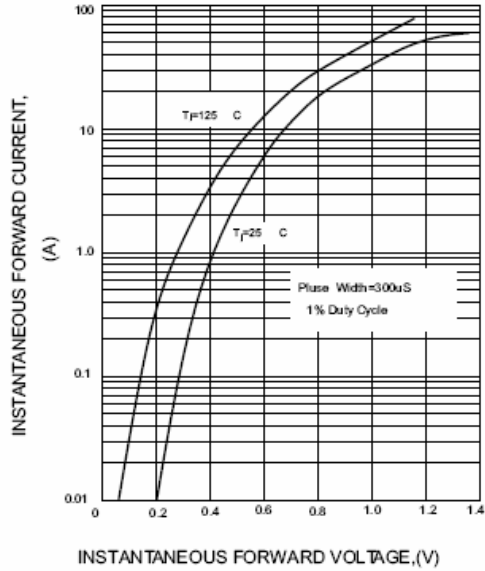


FIG.4-TYPICAL REVERSE CHARACTERISTICS

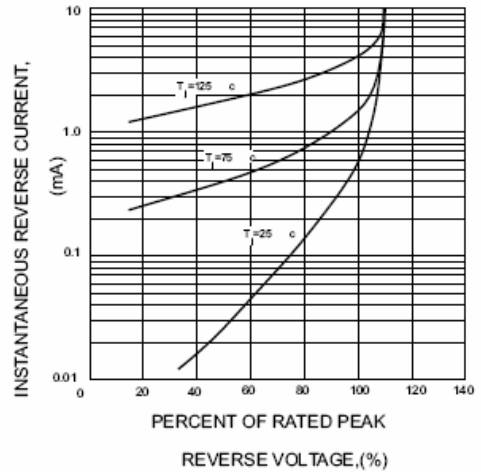


FIG.5-TYPICAL JUNCTION CAPACITANCE

