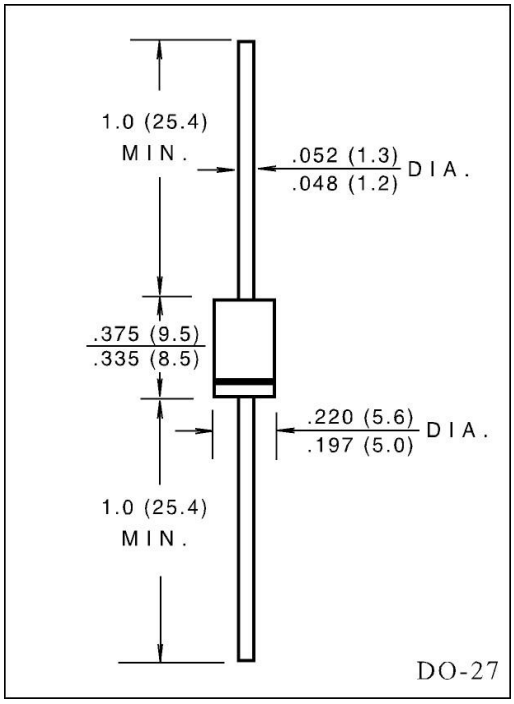
SCHOTTKY BARRIER RECTIFIER

1N5820 THRU 1N5822

VOLTAGE RANGE 20 **to** 40 **Vo**
CURRENT 3.0 **Amper**



FEATURES

- Fast switching.
- Low forward voltage, high current capability.
- Low power loss, high efficiency.
- High current surge capability.
- High temperature soldering guaranteed:
  250℃/10 seconds, 0.375" (9.5mm) lead length
  at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denoted cathode end.
- Lead: Plastic axial lead, solderable per MIL - STD - 202E method 208C
- Mounting position : Any
- Weight: 0.042 ounce, 1.19 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ 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℃		$I_{(AV)}$	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 (Note 1) at	3.0A	V_F	0.475	0.500	0.525	Volts
	9.4A		0.850	0.900	0.950	
Maximum DC Reverse Current at rated DC blocking voltage (Note 1)	T_A = 25℃	I_R	2.0			mA
	T_A = 100℃		20			
Typical Junction Capacitance (Note 2)		C_j	250			pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	40			℃/W
Operating and Storage Temperature Range		T_J, T_{STG}	(-55 to +125)			℃

NOTES:

1. Pulse test: 300 μs pulse width, 1% duty cycle.
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.
3. Thermal resistance from junction to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 2.5" x 2.5" (63.5 X 63.5mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES IN5820 THRU IN5822

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

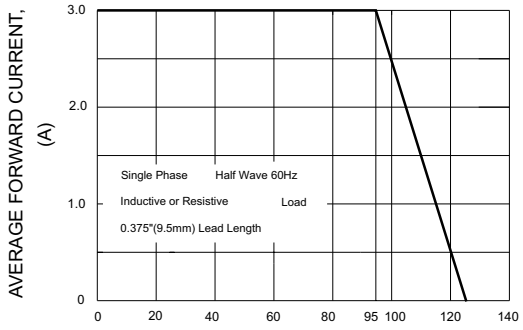


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

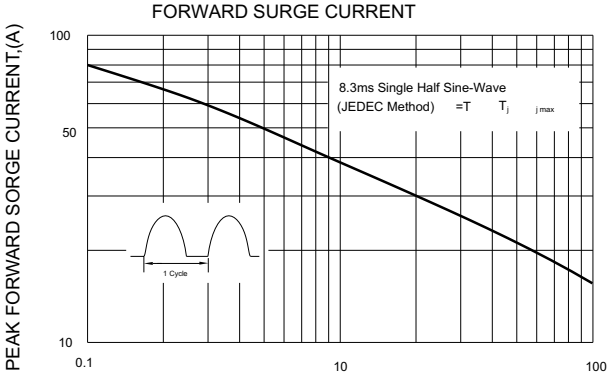


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

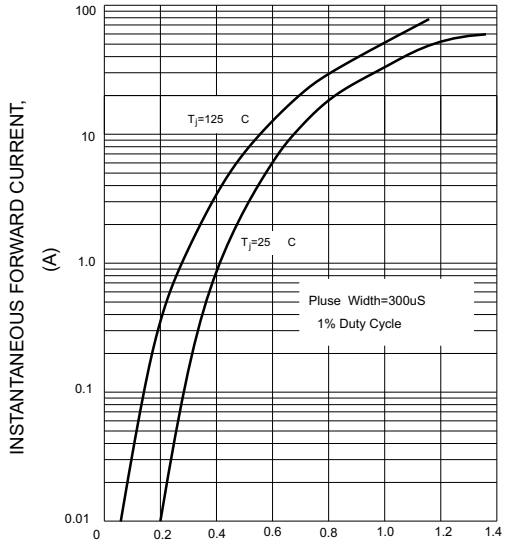


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

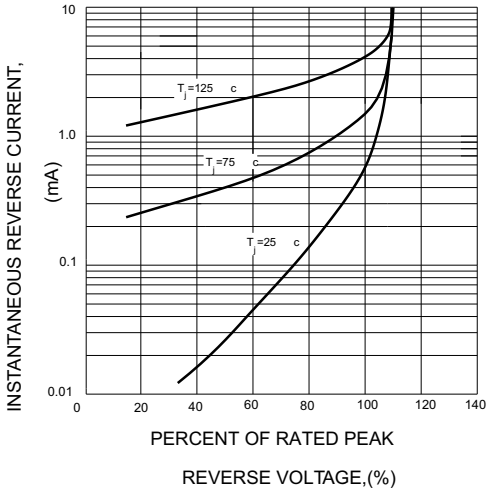


FIG.5-TYPICAL JUNCTION CAPACITANCE