



SCHOTTKY BARRIER RECTIFIER

1N5820 THRU 1N5822

VOLTAGE RANGE

20 to 40 Volts

CURRENT

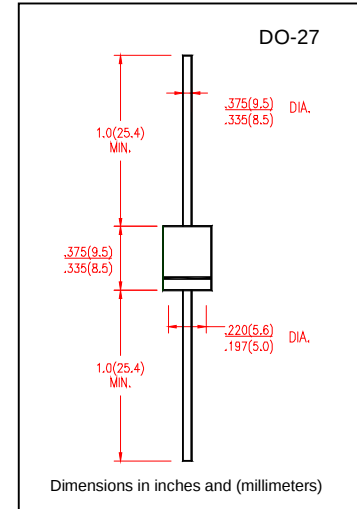
3.0 Ampere

FEATURES

- Fast switching
- Low forward voltage, high current capability
- Low power loss, high efficiency
- High current surge capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.373" (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: 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 °C		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 at (Note 1)	T _A = 25 °C	I _R	0.5			mA
	T _A = 100 °C		20			
Typical Junction Capacitance (NOTE 2)		C _J	250			pF
Typical Thermal Resistance (NOTE 3)		R _{θJL}	15			°C/W
Operation and Storage Temperature Range		T _J ,T _{STG}	(-55 to +125)			°C

Notes:

1. Pulse test 300 μs pulse width, 1% duty cycle
2. Measured at 1.0MHz 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" $\times$ 2.5" (63.5 $\times$ 63.5mm) copper pads



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RATING AND CHARACTERISTIC CURVES 1N5820 THRU 1N5822

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

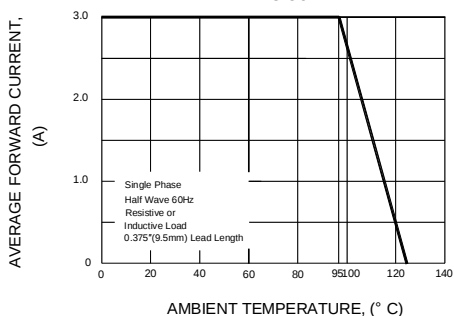


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

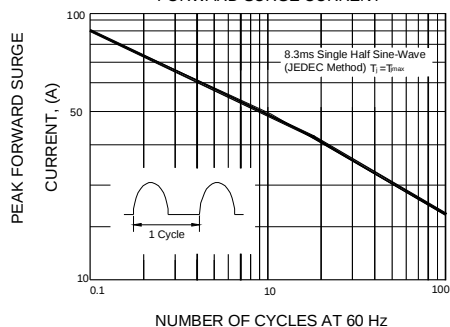


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

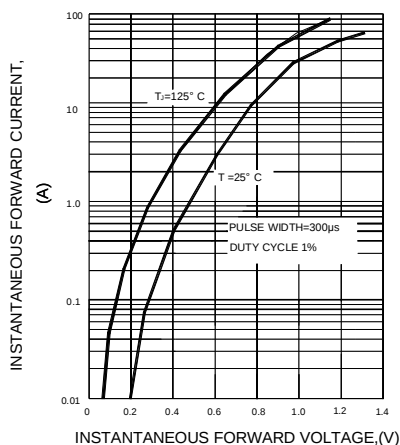


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

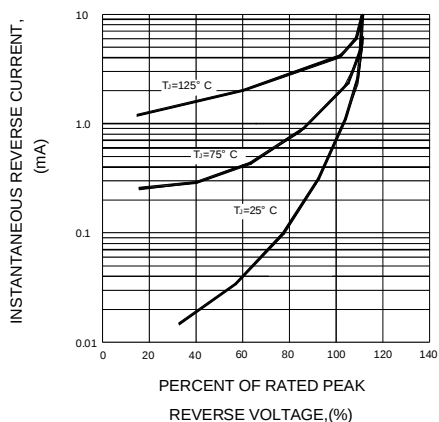


FIG.5-TYPICAL JUNCTION CAPACITANCE

