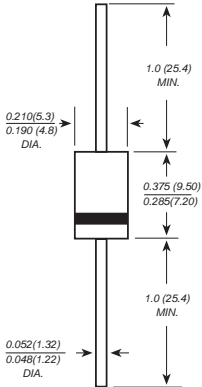


1N5820 THRU 1N5822

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts Forward Current - 3.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Guardring for overvoltage protection
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.10 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for current capacitive load derate by 20%.

	SYMBOLS	1N5820	1N5821	1N5822	UNITS
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 $T_L=95^\circ\text{C}$	$I_{(AV)}$	3.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80.0			Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.475	0.500	0.525	Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	2.0 40.0			mA
Typical junction capacitance (NOTE 1)	C_J	300.0			pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	40.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +125			$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES 1N5820 THRU 1N5822

FIG. 1- FORWARD CURRENT DERATING CURVE

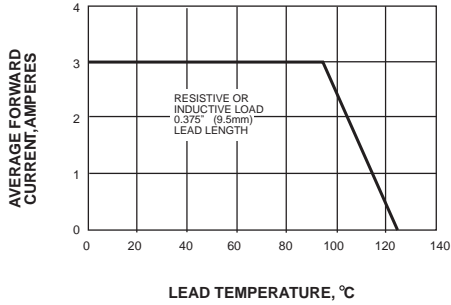


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

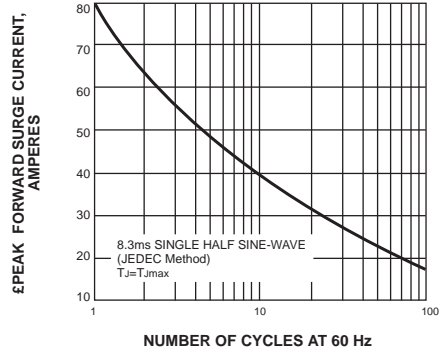


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

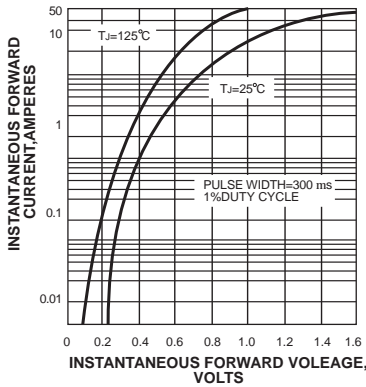


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

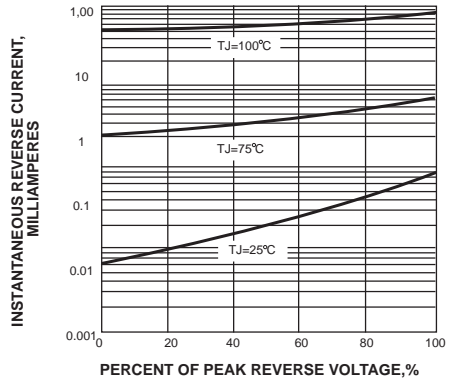


FIG. 5-TYPICAL JUNCTION CAPACITANCE

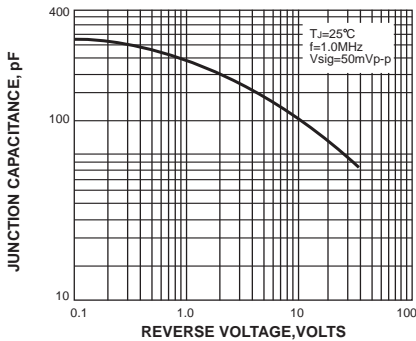


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

