



1N5820 thru 1N5822

3.0 Amps. Schottky Barrier Rectifiers
Voltage Range 20 to 40 Volts Forward Current 3.0 Amperes

Features

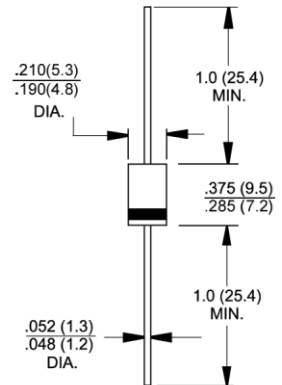
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



DO-201AD

Mechanical Data

- ◆ **Case:** JEDEC DO-201AD molded plastic body
- ◆ **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed:
250°C/10 seconds 0.375" (9.5mm) lead length,
5lbs (2.3kg) tension
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any
- ◆ **Weight:** 0.041 ounce, 1.15 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	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
Non-repetitive peak reverse voltage	V_{RSM}	24	36	48	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 95^\circ\text{C}$	$I_{F(AV)}$	3.0			Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A = 75^\circ\text{C}$	I_{FSM}	80.0			Amps
Maximum instantaneous forward voltage at 3.0 (Note 1)	V_F	0.475	0.500	0.525	Volts
Maximum instantaneous forward voltage at 9.4 (Note 1)	V_F	0.850	0.900	0.950	Volts
Maximum average reverse current at rated DC blocking voltage ⁽¹⁾ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	2.0 20			mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	40 10			$^\circ\text{C/W}$
Storage temperature range	T_J, T_{STG}	-65 to +125			$^\circ\text{C}$

Notes: 1. Pulse test: 300 μs pulse width, 1% duty cycle

2. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.500" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

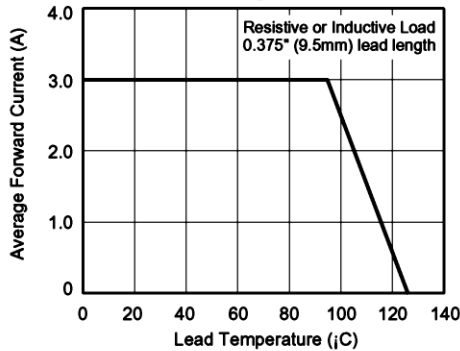


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

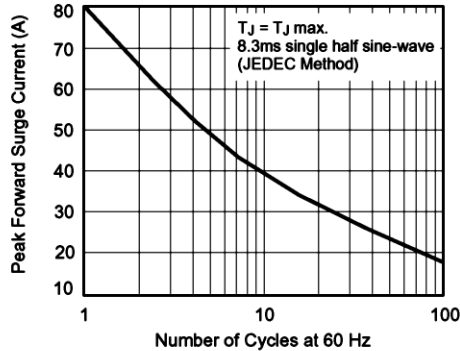


Fig. 3 - Typical Instantaneous Forward Characteristics

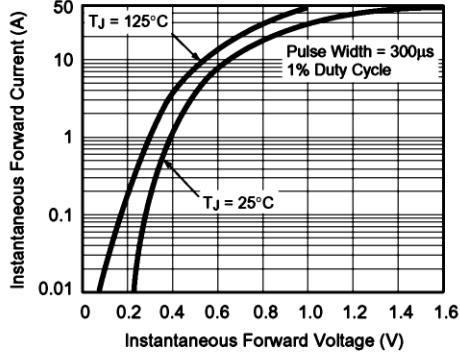


Fig. 4 - Typical Reverse Characteristics

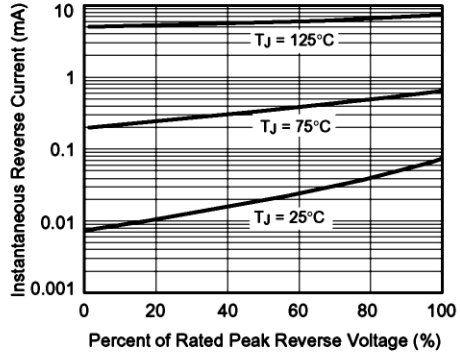


Fig. 5 - Typical Junction Capacitance

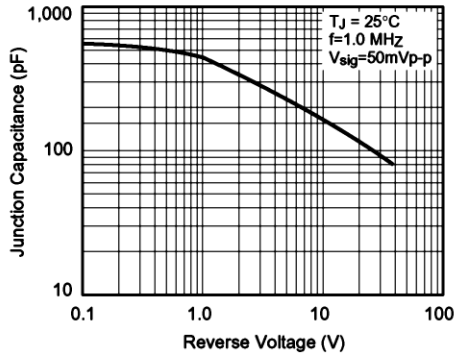


Fig. 6 - Typical Transient Thermal Impedance

