



1N5820 thru 1N5822

Schottky Barrier Rectifiers
Reverse Voltage 20 to 40 Volts Forward Current 3.0 Amperes

Features

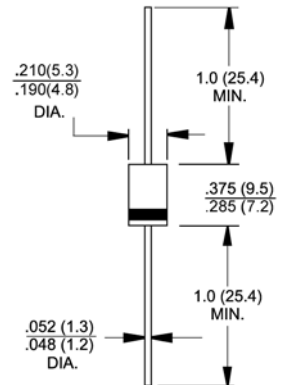
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



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 $T_L=95^\circ\text{C}$	$I_{F(AV)}$		3.0		Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=75^\circ\text{C}$	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 (Note 1)	I_R	@ $T_A=25^\circ\text{C}$ @ $T_A=100^\circ\text{C}$	2.0 20		mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$		40 10		$^\circ\text{C/W}$
Operating junction temperature range	T_J		-55 to +125		$^\circ\text{C}$
Storage temperature range	T_{STG}		-55 to +150		$^\circ\text{C}$

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

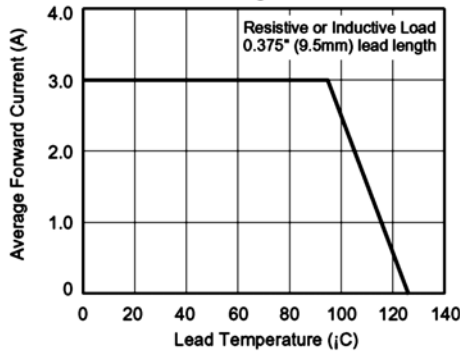


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

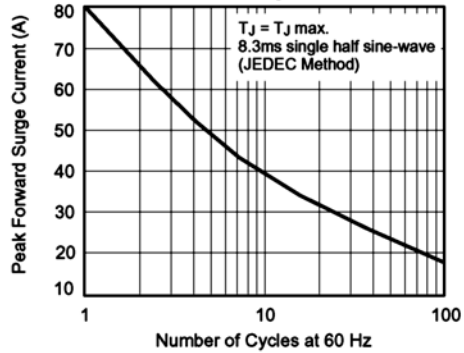


Fig. 3 - Typical Instantaneous Forward Characteristics

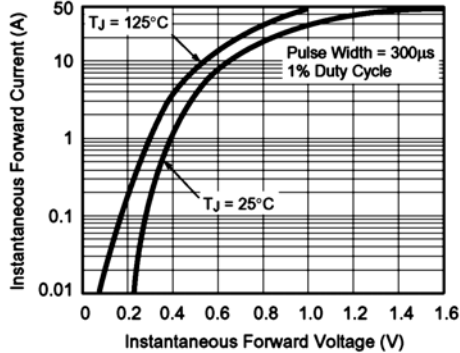


Fig. 4 - Typical Reverse Characteristics

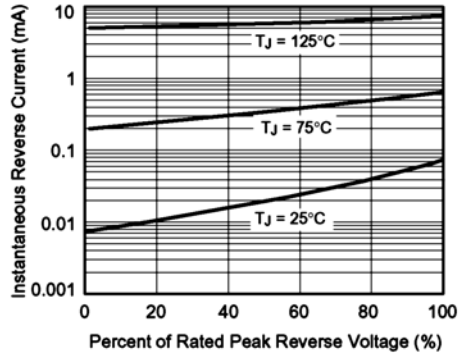


Fig. 5 - Typical Junction Capacitance

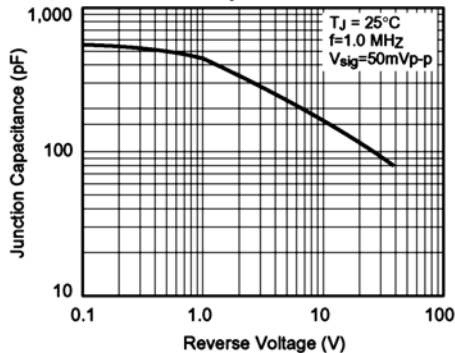


Fig. 6 - Typical Transient Thermal Impedance

