

1N5820 THRU 1N5822

SCHOTTKY BARRIER RECTIFIER

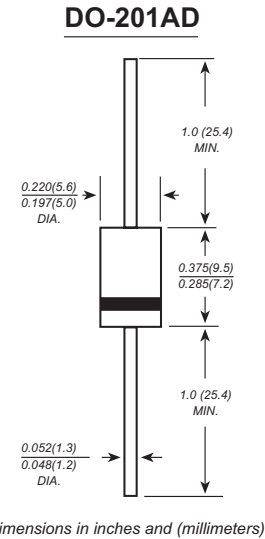
Reverse Voltage - 20 to 40 Volts Forward Current - 3.0 Amperes

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}	70.0			Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.475	0.500	0.525	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	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			$^\circ\text{C}/\text{W}$
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

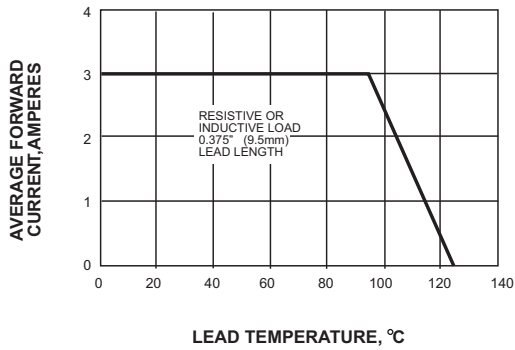


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

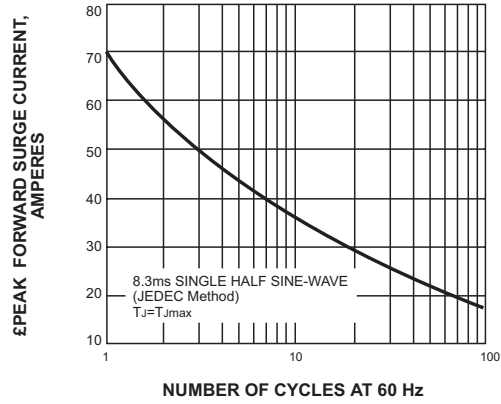


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

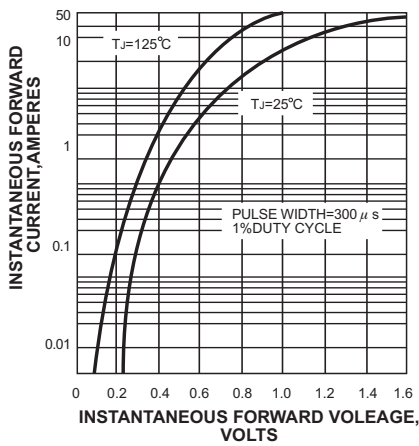


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

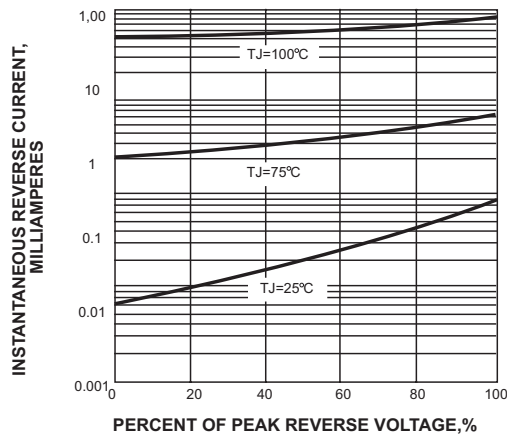


FIG. 5-TYPICAL JUNCTION CAPACITANCE

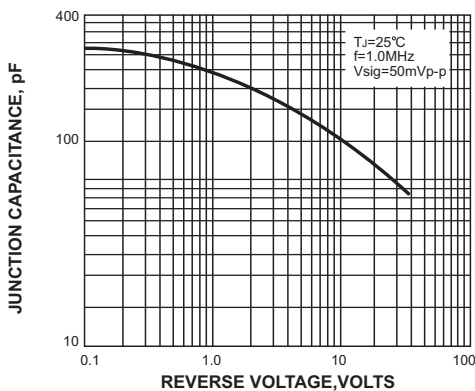


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

