

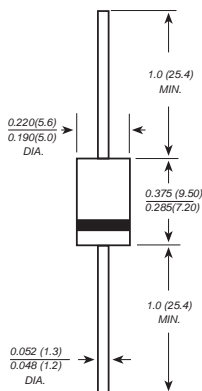


# 1N5820 THRU 1N5822

## 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%.

YXW Catalog Number	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 $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	0.5 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

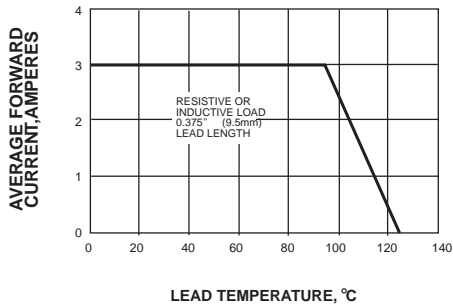


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

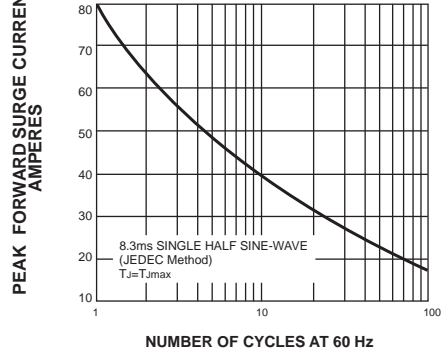


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

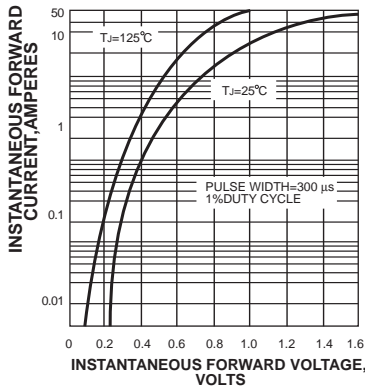


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

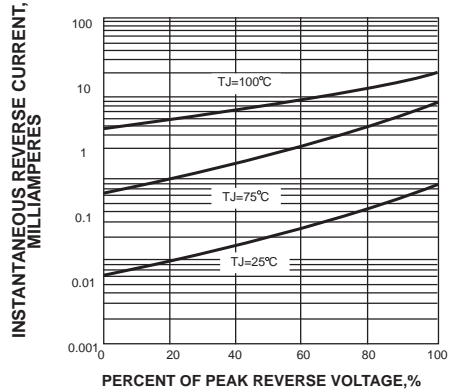


FIG. 5-TYPICAL JUNCTION CAPACITANCE

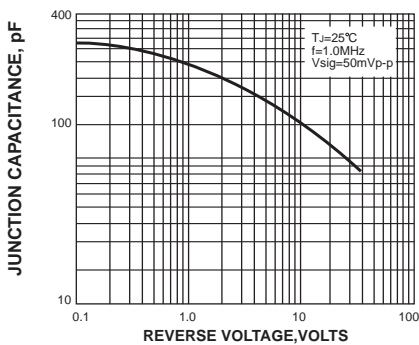
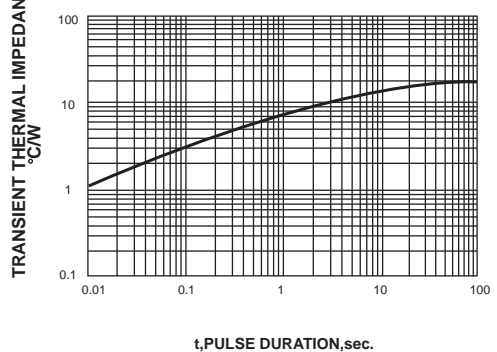


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考!)