

# 1N5820 thru 1N5822

Schottky Barrier Rectifiers  
Reverse Voltage 20 to 40V Forward Current 3.0A

## Feature & Dimensions

- \* 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
- \* Guarding for overvoltage protection
- \* High temperature soldering guaranteed:  
260°C/10 seconds at terminals

## Mechanical Data

**Case:** JEDEC DO-201AD, molded plastic over glass DIE

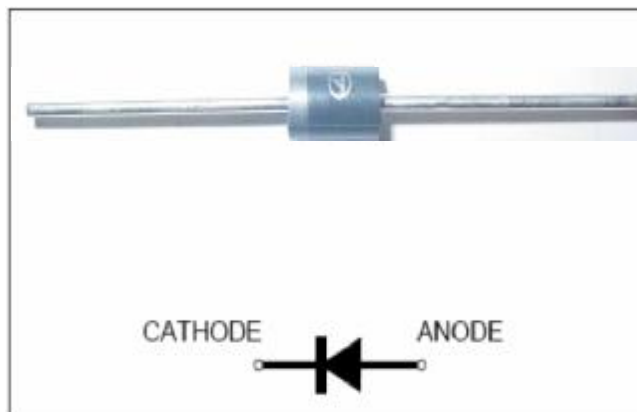
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.038oz., 1.03 g

**Handling precaution:** None



We declare that the material of product compliance with ROHS requirements

## 1. Electrical Characteristic

**Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.**

Parameter Symbol	symbol	1N5820	1N5821	1N5822	Unit
device marking code		1N5820	1N5821	1N5822	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_F(AV)$	3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80			A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	50			°C/W
Operating junction and storage temperature range	TJ, TSTG	-40 to +150			°C

**Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.**

Parameter Symbol	symbol	1N5820	1N5821	1N5822	Unit
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.475	0.500	0.53	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	IR	2.0 30			mA
Typical junction capacitance at 4.0V, 1MHz	CJ	110			PF

NOTES:

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

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## 2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

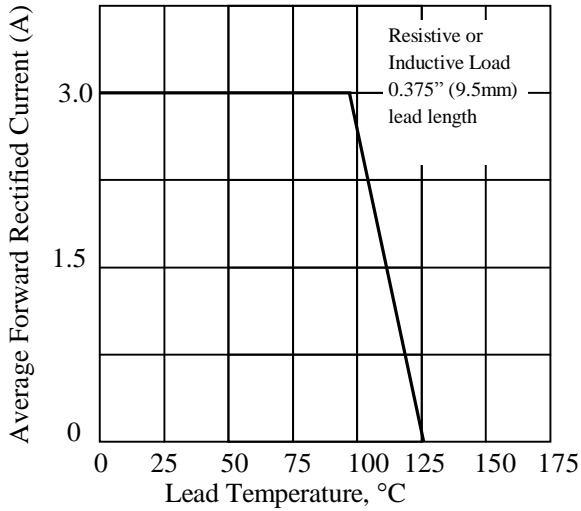


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

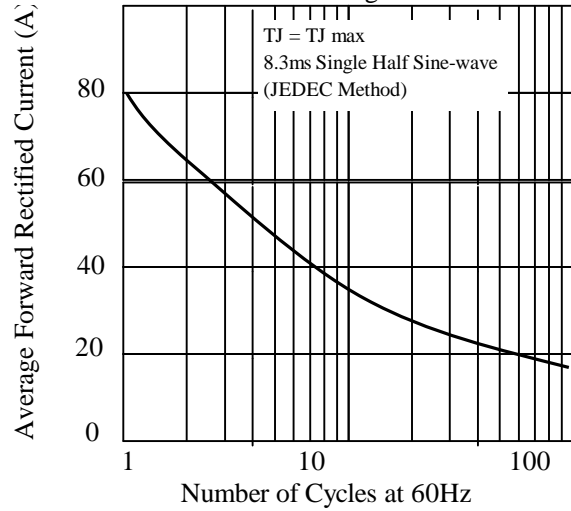


Fig. 3 - Typical Instantaneous Forward Characteristics

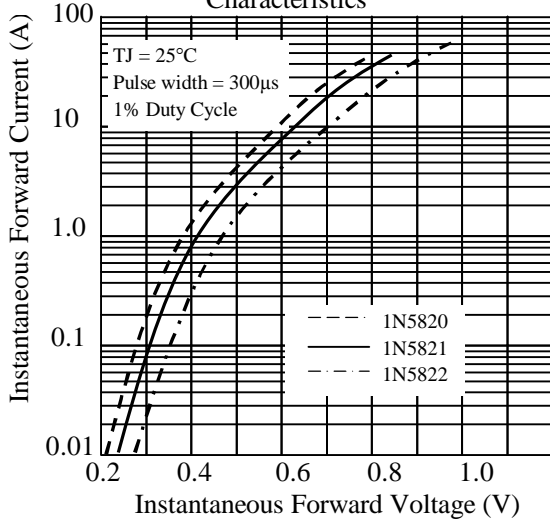


Fig. 4 - Typical Reverse Characteristics

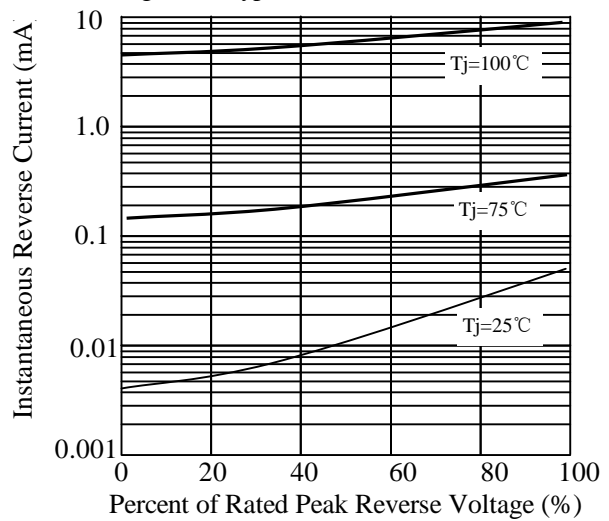


Fig. 5 - typical transient thermal impedance

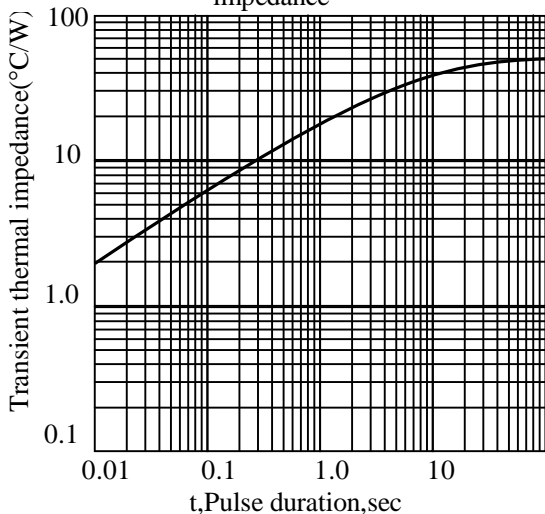
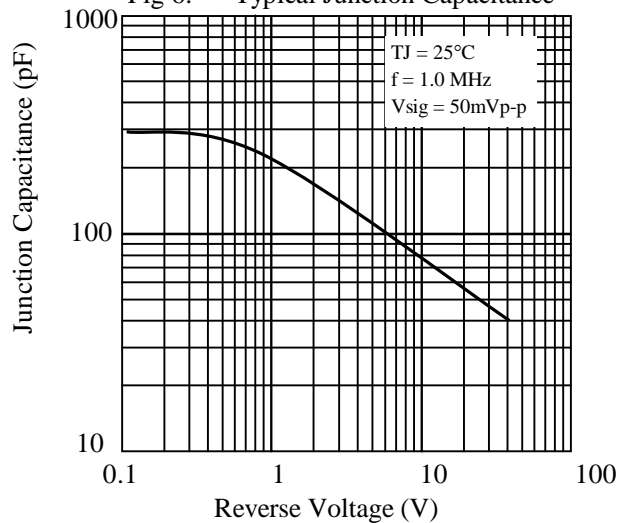
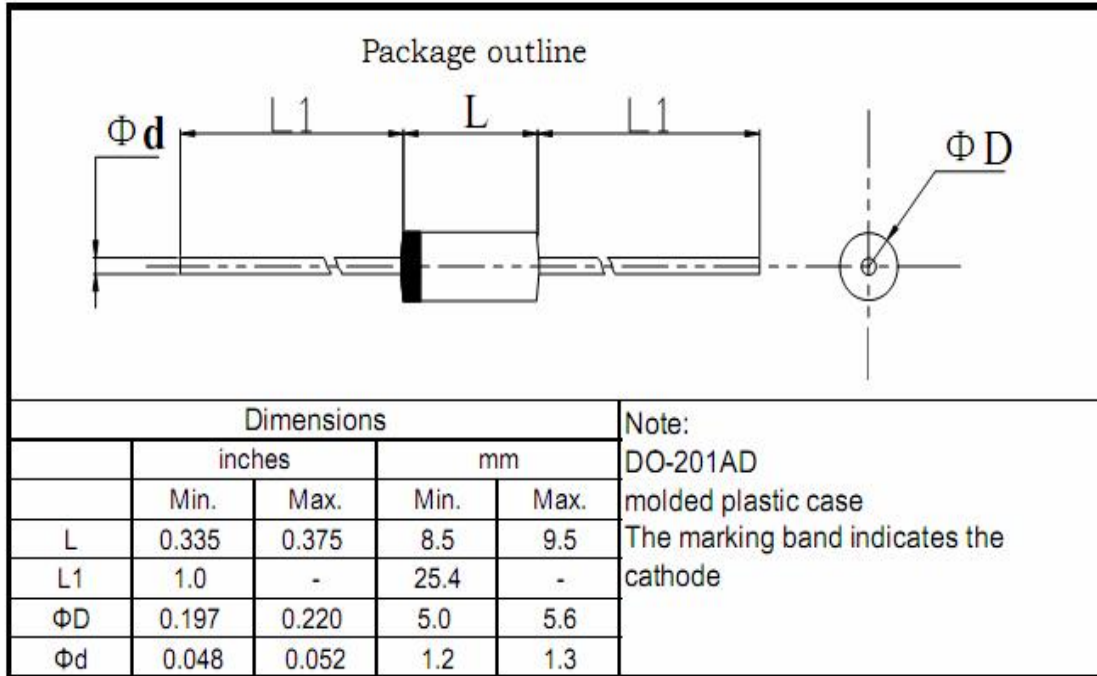


Fig. 6 - Typical Junction Capacitance



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### 3. dimension:



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### 4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2011.09.16