



# 1N5820 THRU 1N5822

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

## SCHOTTKY BARRIER RECTIFIER

### 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

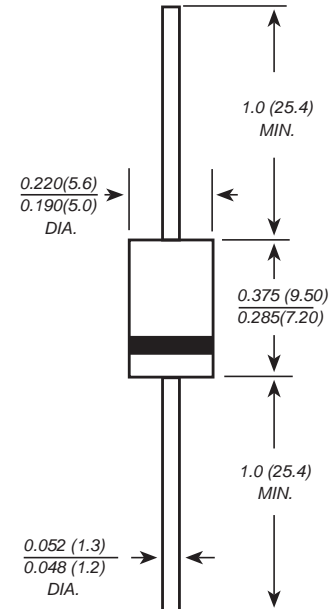
**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

**Weight :** 0.04 ounce, 1.1 grams

DO-201AD



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	1N5820	1N5821	1N5822	UNITS
Marking Code		MDD 1N5820	MDD 1N5821	MDD 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 at $T_L=95^\circ\text{C}$	$I_{AV}$	3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80			A
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.475	0.500	0.525	V
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



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## Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

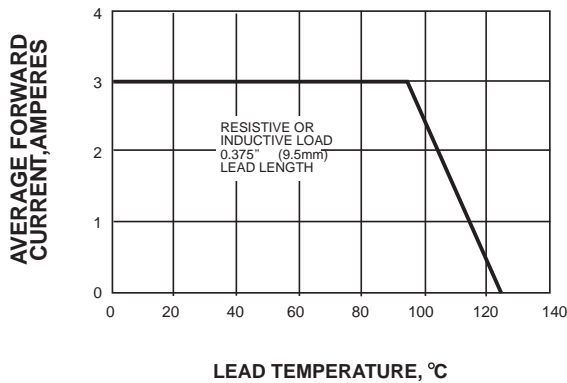


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

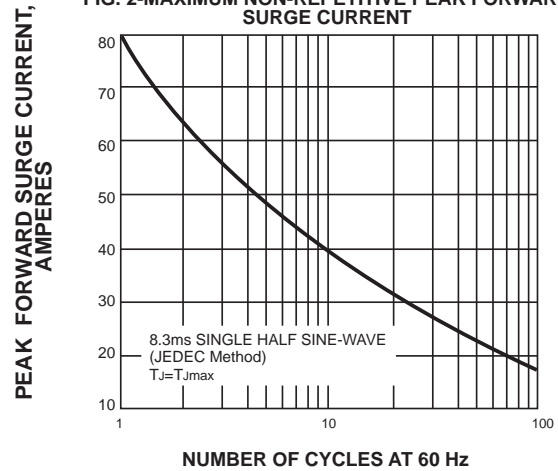


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

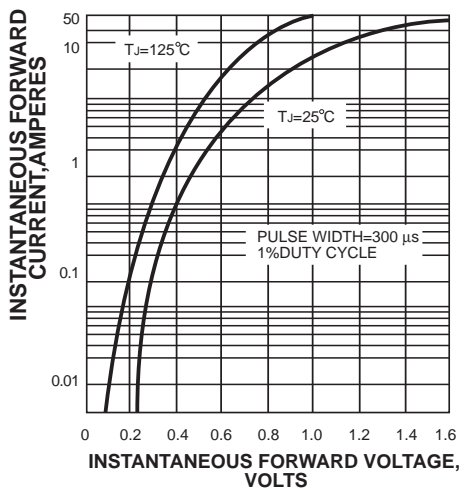


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

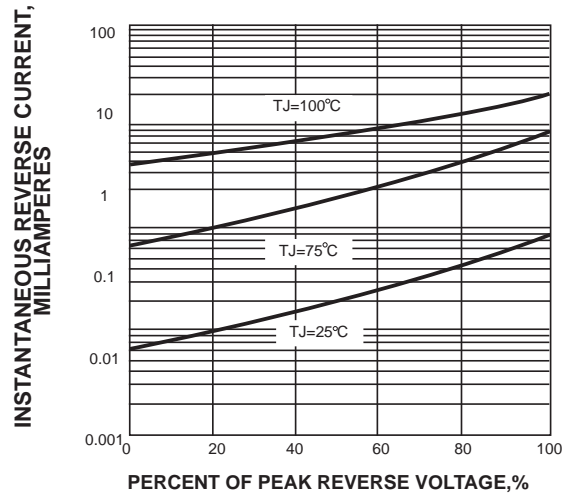


FIG. 5-TYPICAL JUNCTION CAPACITANCE

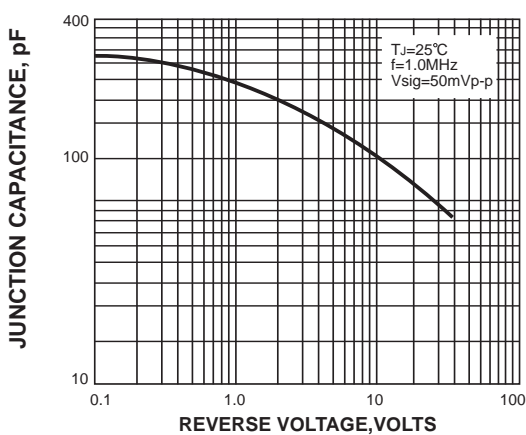
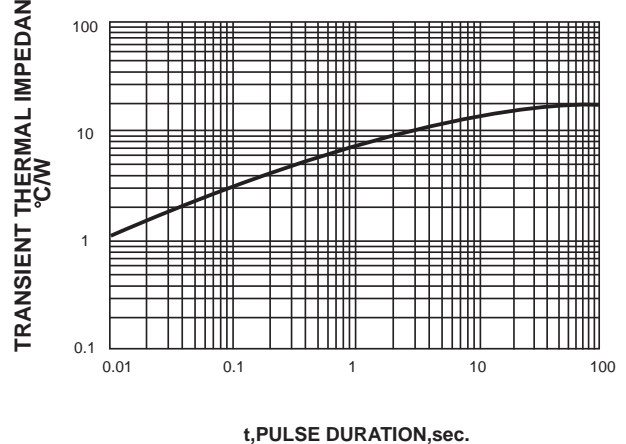


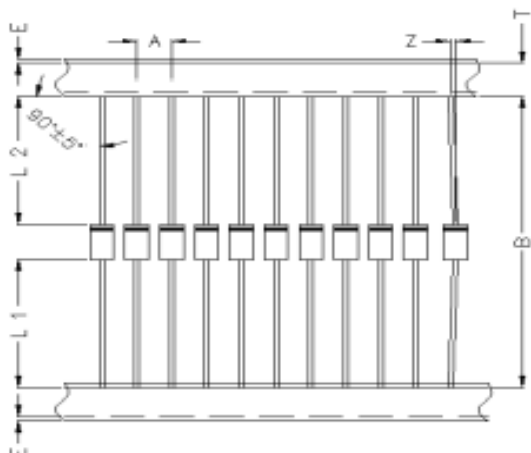
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

## Package Information

### Taping Specifications



Item	Symbol	Specifications(mm)
Component Pitch	A	10.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max

### Ammunition Package Specifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO - 201AD	255*74*145	1000	410*275*340	10000

### Bulk Package Specifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO - 201AD	198*86*21	200	460*220*250	10000

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