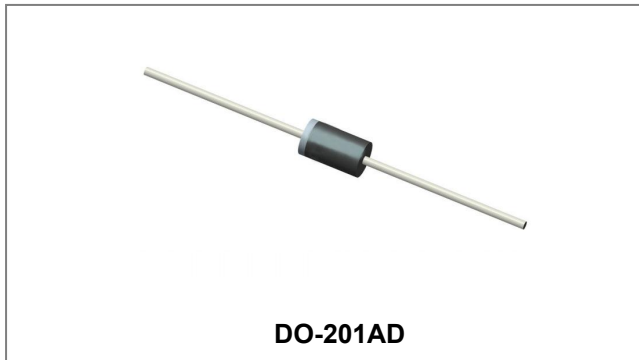


## 1N5820 THRU 1N5822 SCHOTTKY BARRIER DIODE



### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	1N5820	1N5821	1N5822	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum DC blocking voltage	$V_R$				
Maximum RMS voltage	$V_{R(RMS)}$	14	21	28	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80			A
Forward Voltage per element @ $I_F=3\text{A}$ , $T_A=25^\circ\text{C}$ @ $I_F=9.4\text{A}$ , $T_A=25^\circ\text{C}$	$V_F$	0.475 0.850	0.50 0.90	0.525 0.950	V
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 20			mA
Typical junction capacitance (Note 1)	$C_J$	250			pF
Typical thermal resistance junction to ambient	$R_{\theta JL}$	20			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150			$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

**Ratings and Characteristics Curves**

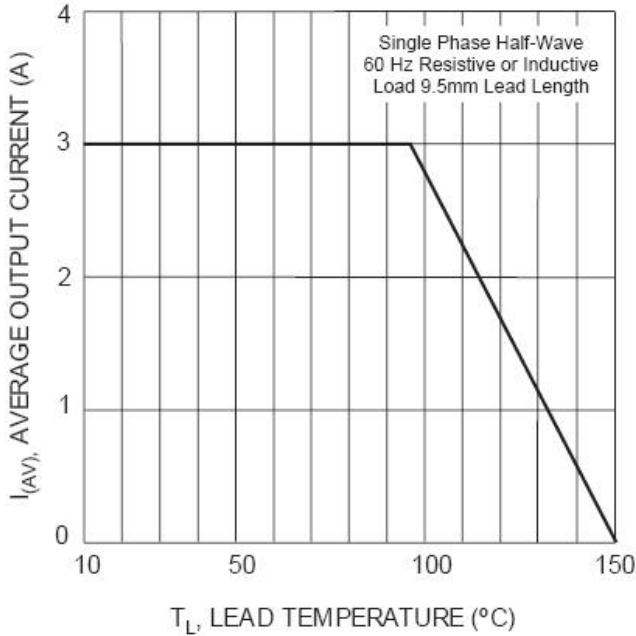


Fig. 1 Forward Current Derating Curve

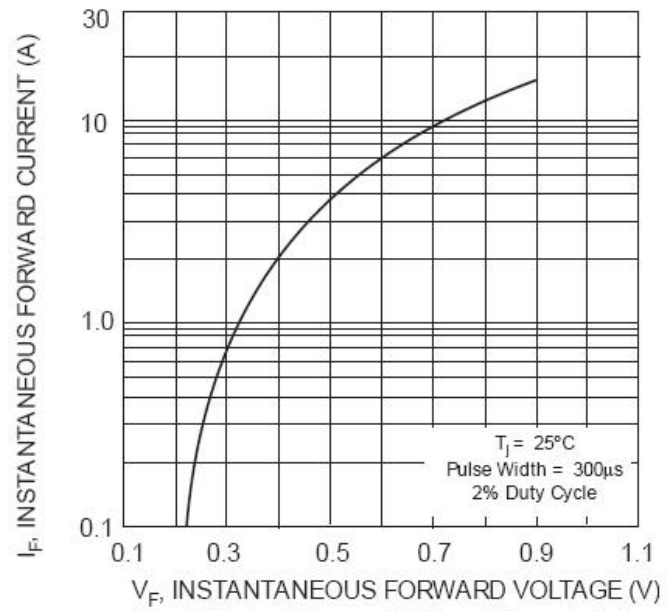


Fig. 2 Typical Forward Voltage Characteristics

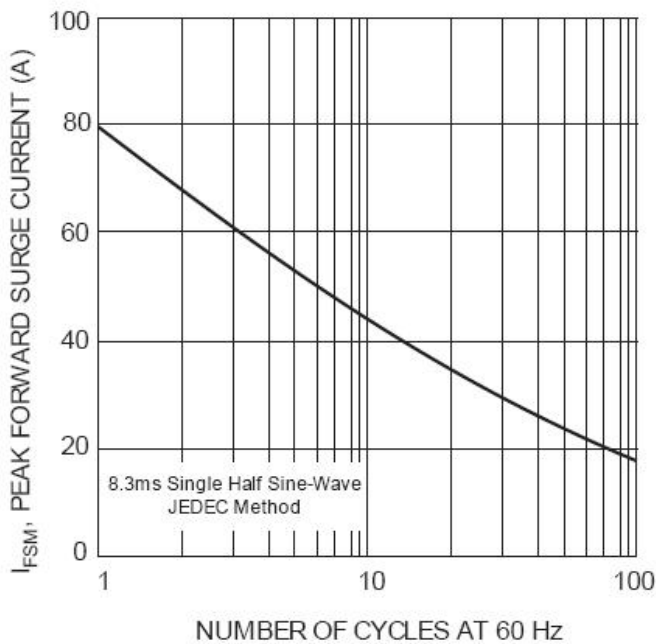


Fig. 3 Peak Forward Surge Current

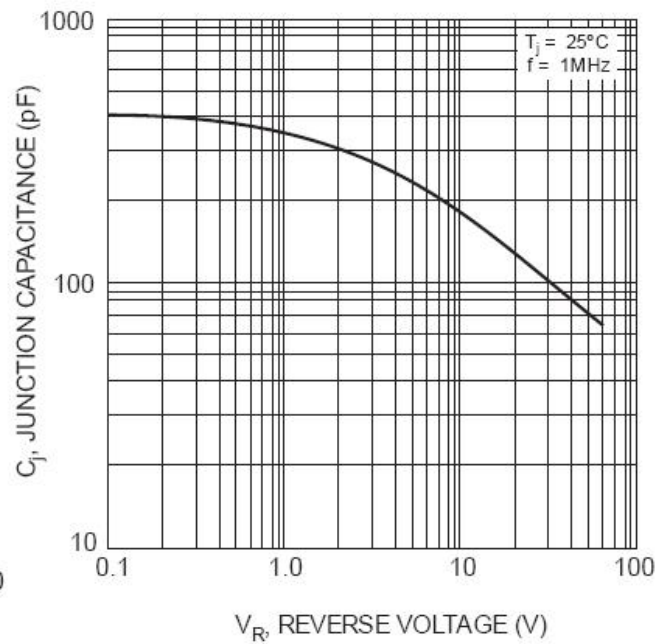
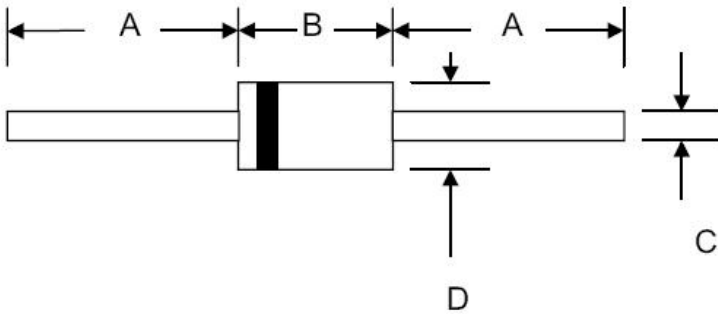


Fig. 4 Typical Junction Capacitance

## Mechanical Dimensions DO-201AD



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

## Ordering Information

Device	Package	Shipping
1N5820 THRU 1N5822	DO-201AD (Pb-Free)	1250pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

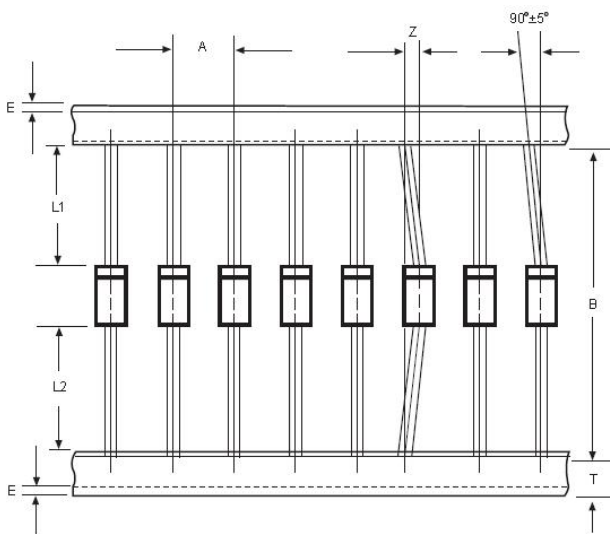


Where XXXXX is YYWWL

1N5820 = Part Name  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

Cautions: Molding resin  
Epoxy resin UL:94V-0

## Carrier Tape Specification DO-201AD



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

**Technical Data**  
**Data Sheet N0371, Rev. A**



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