

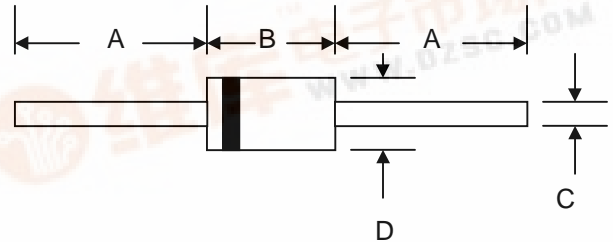


# 1N5820 – 1N5822

## 3.0A SCHOTTKY BARRIER RECTIFIER

### 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



### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

DO-201AD		
Dim	Min	Max
A	25.4	—
B	8.50	9.50
C	1.20	1.30
D	5.0	5.60
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	1N5820	1N5821	1N5822	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average Rectified Output Current (Note 1) @T <sub>L</sub> = 90°C	I <sub>O</sub>	3.0			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) @T <sub>L</sub> = 75°C	I <sub>FSM</sub>	80			A
Forward Voltage @I <sub>F</sub> = 3.0A @I <sub>F</sub> = 9.4A	V <sub>FM</sub>	0.475 0.850	0.50 0.90	0.525 0.950	V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	2.0 20			mA
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	250			pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	20			K/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150			°C

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



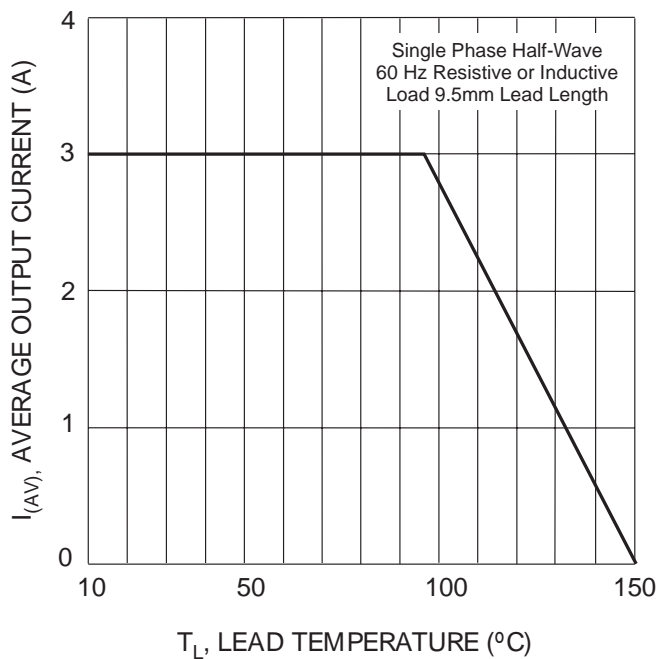


Fig. 1 Forward Current Derating Curve

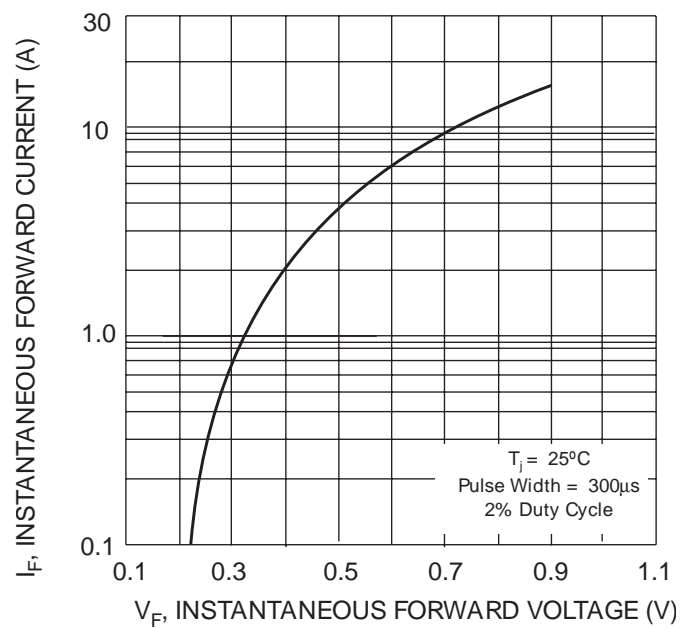


Fig. 2 Typical Forward Voltage Characteristics

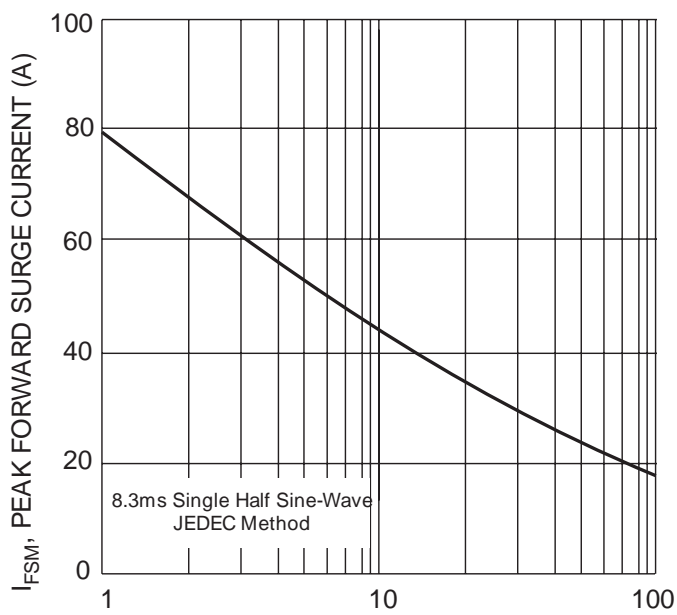


Fig. 3 Peak Forward Surge Current

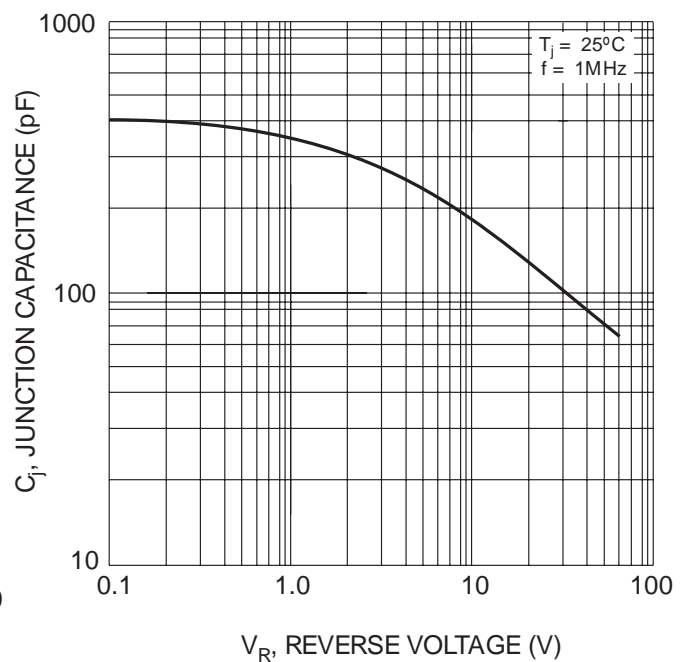


Fig. 4 Typical Junction Capacitance



## ORDERING INFORMATION

Product No.♦	Package Type	Shipping Quantity
1N5820-T3	DO-201AD	1200/Tape & Reel
<b>1N5820-TB</b>	DO-201AD	1200/Tape & Box
1N5820	DO-201AD	500 Units/Box
1N5821-T3	DO-201AD	1200/Tape & Reel
<b>1N5821-TB</b>	DO-201AD	1200/Tape & Box
1N5821	DO-201AD	500 Units/Box
1N5822-T3	DO-201AD	1200/Tape & Reel
<b>1N5822-TB</b>	DO-201AD	1200/Tape & Box
1N5822	DO-201AD	500 Units/Box

Products listed in **bold** are WTE **Preferred** devices.

♦T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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