



# 1N5820 THRU 1N5822

## 3 A Schottky Barrier Rectifiers

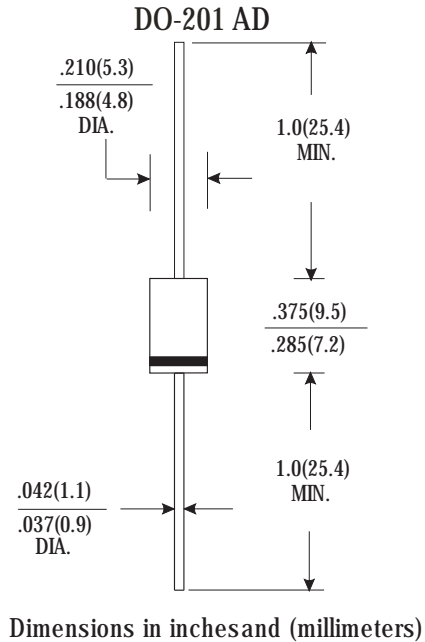
Voltage Range 20 to 40 Volts  
Current 3.0 Amperes

### Features

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### Mechanical Data

- \* Cases: molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity: color band denotes cathode end
- \* High temperature soldering guaranteed:  
250°C/10seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- \* Weight: 1.2 gram



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

Type Number	1N5820	1N5821	1N5822	Units
Maximum Recurrent Peak Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
Maximum DC Blocking Voltage	20	30	40	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ T <sub>L</sub> =90°C	3.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	80			A
Maximum Instantaneous Forward Voltage @ 3.0A	0.475	0.500	0.525	V
Maximum Instantaneous Forward Voltage @ 9.0A	0.850	0.900	0.950	V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C	2.0			mA
At Rated DC Blocking Voltage @ T <sub>A</sub> =100°C	20			mA
Typical Thermal Resistance (Note 1) R <sub>JA</sub>	40			°C/W
Typical Junction Capacitance (Note 2)	250			pF
Operating Temperature Range T <sub>J</sub>	-55 to +125			°C
Storage Temperature Range T <sub>STG</sub>	-55 to +125			°C

### Notes:

1. Thermal Resistance from Junction to Ambient Vertical PC Board Mounting, 0.375" (9.5mm) Lead Length.
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.



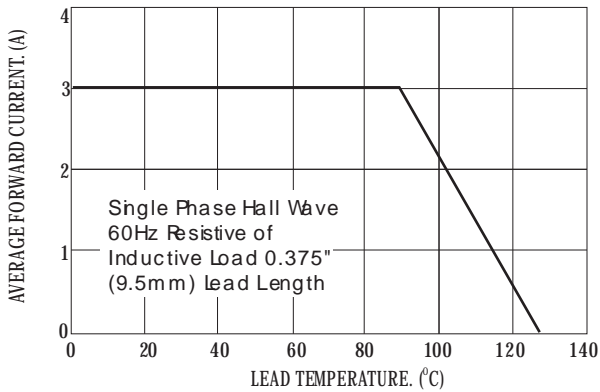
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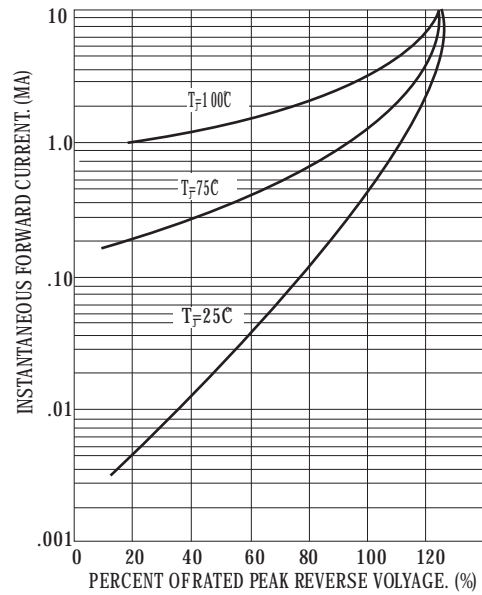
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### RATINGS AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

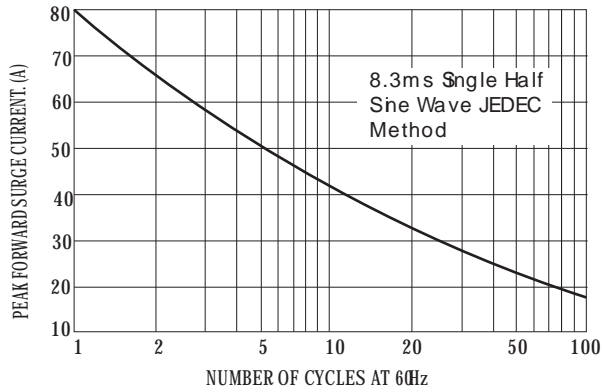
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



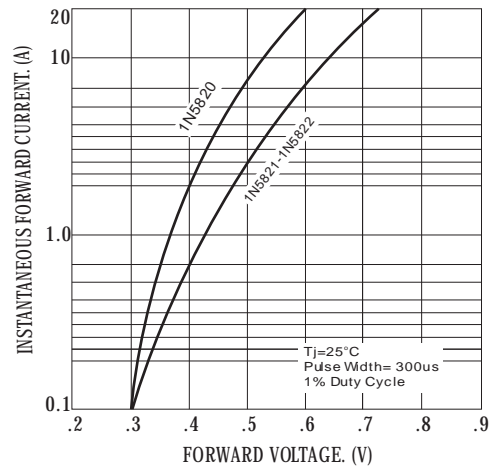
**FIG.2-TYPICAL FORWARD CHARACTERISTICS**



**FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.4- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

