



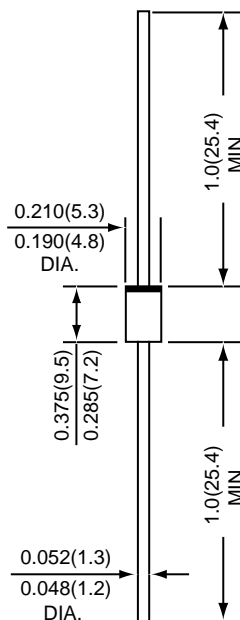
# 1N5820 THRU 1N5822

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts

Forward Current - 3.0 Amperes

DO-201AD



\*Dimensions in inches and (millimeters)



### FEATURES

- \* The plastic package carries 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 : 260°C / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case :** JEDEC DO-201AD Molded plastic body  
**Terminals :** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity :** Color band denotes cathode end  
**Mounting Position :** Any  
**Weight :** 0.04 ounce, 1.12 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.	SYMBOLS	1N5820	1N5821	1N5822	UNITS
Maximum repetitive peak reverse voltage	VRRM	20	30	40	Volts
Maximum RMS voltage	VRMS	14	21	28	Volts
Maximum DC blocking voltage	VDC	20	30	40	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at TL=95°C	I(AV)	3.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	80			Amps
Maximum instantaneous forward voltage at 3.0 A	VF	0.475	0.500	0.525	Volts
Maximum instantaneous forward voltage at 9.4 A	VF	0.850	0.900	0.950	Volts
Maximum instantaneous reverse current at rated DC reverse voltage TA=25°C TA=100°C	IR	2.0 20.0			mA
Typical junction capacitance ( NOTE 1 )	CJ	250			pF
Typical thermal resistance ( NOTE 2 )	R θJA R θJL	40 10			°C / W
Operating junction and storage temperature range	TJ,TSTG	-65 to +125			°C

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
 (2) Thermal resistance from junction to lead vertical P.C.B. mounted, 0.5" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad

# RATINGS AND CHARACTERISTIC CURVES 1N5820 THRU 1N5822

FIG.1 - FORWARD CURRENT DERATING CURVE

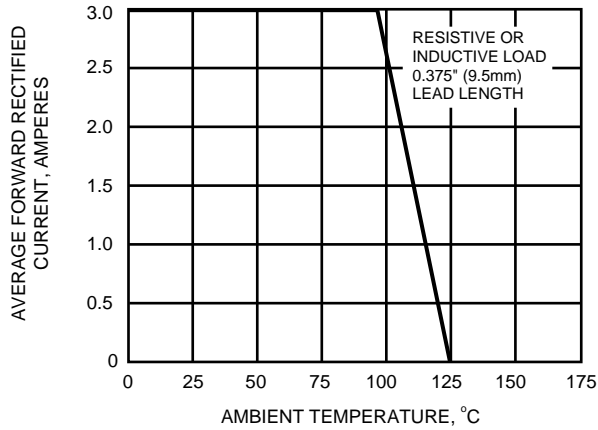


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

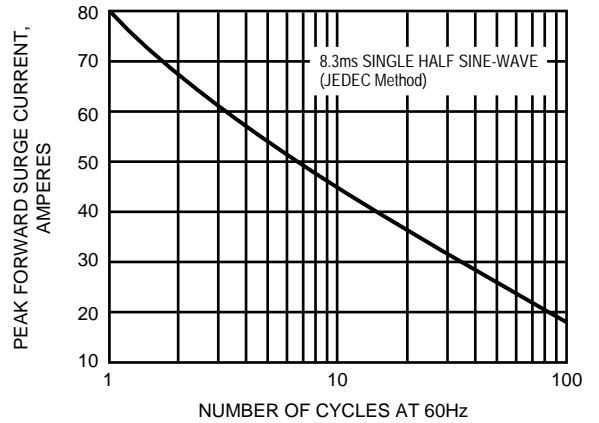


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

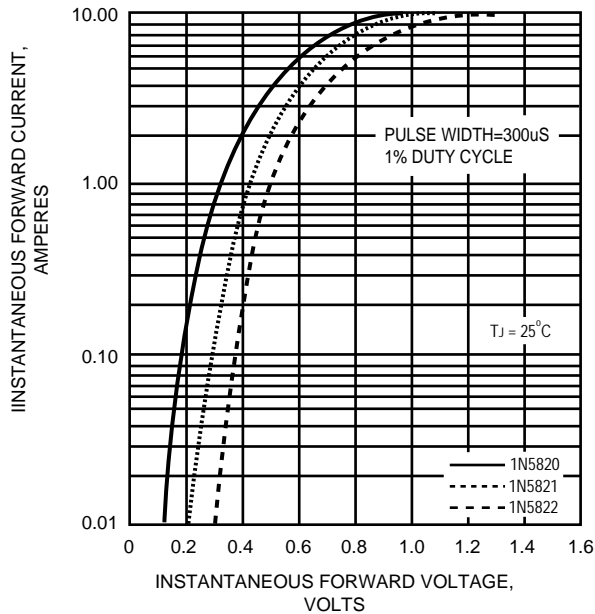


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

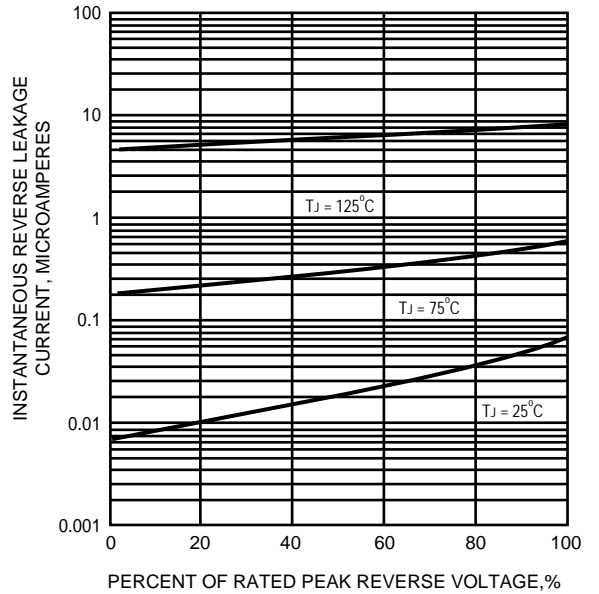


FIG.5 - TYPICAL JUNCTION CAPACITANCE

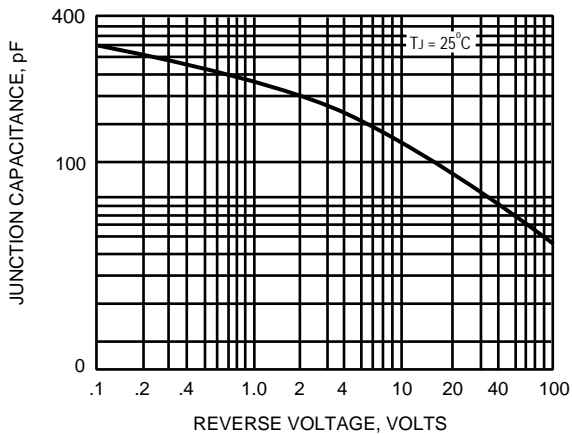


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

