



DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No.: SBDA-301-A

T.03-15

3 AMP SCHOTTKY BARRIER RECTIFIERS

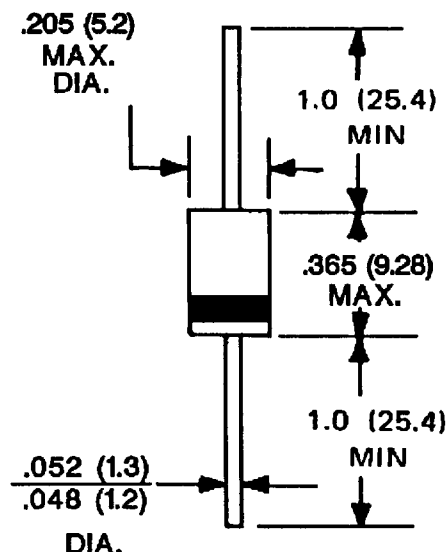
FEATURES:

- Metal semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries U/L recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, & polarity protection applications

MECHANICAL DATA

- Case: JEDEC DO-27, molded plastic
- Terminals: Axial leads, solderable per MIL-STD-202, method 208
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.04 ounces (1.12 grams)

DO-27



Dimensions in inches & (millimeters)

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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

MAXIMUM RATING @ T _A =25°C (unless otherwise specified)	SYMBOL				UNITS
Series Number		1N5820	1N5821	1N5822	
Maximum DC Blocking Voltage	V _{RM}	20	30	40	Volts
Maximum RMS Voltage	V _{RMS}	14	21	28	
Maximum Peak Recurrent Reverse Voltage	V _{RRM}	20	30	40	
Maximum Average Forward Rectified Current 1/32 in. Lead Length @ T _L =90°C	I _O	3			Amps
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load	I _{FSM}	80			Amps
Maximum Forward Voltage at 3 Amps DC	V _{FM}	0.475	0.5	0.525	Volts
Maximum Forward Voltage at 9.4 Amps DC	V _{FM}	0.85	0.9	0.95	Volts
Max. Average DC Reverse Current @ T _A =25°C Rated DC Blocking Voltage (Note 1) T _A =100°C	I _{RM}	2 20			MA
Thermal Resistance (typical) Junction to Ambient	R θ _{JC}	28			°C/W
Typical Junction Capacitance (Note 2)		250			pF
Junction Operating Temperature Range	T _J	-65 to +125			°C
Storage Temperature Range	T _{STG}	-65 to +150			°C

NOTES: (1) Measured at pulse width 300μS & 2% duty cycle.
(2) Measured at 1MHz & applied reverse voltage of 4 volts.



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RATING & CHARACTERISTIC CURVES (1N5820-5822)

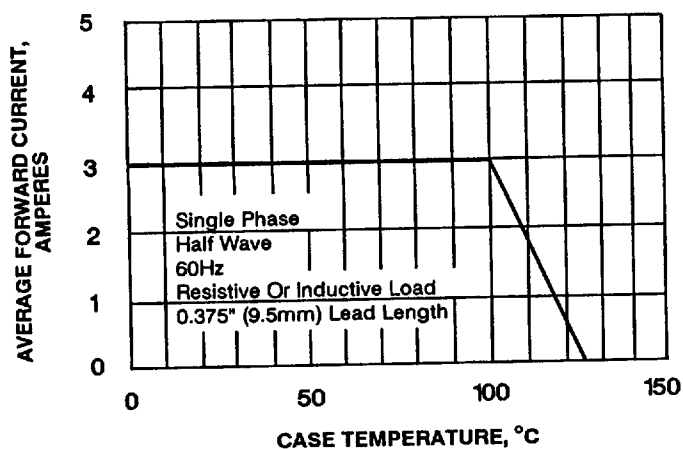


Fig. 1: Forward current derating curve.

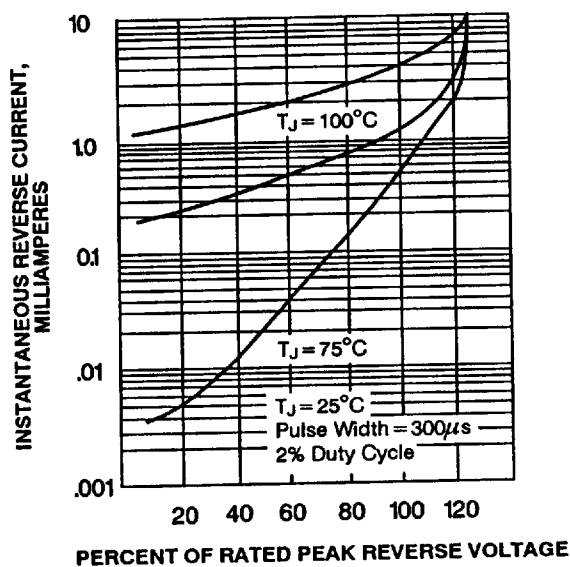


Fig. 3: Typical reverse characteristics.

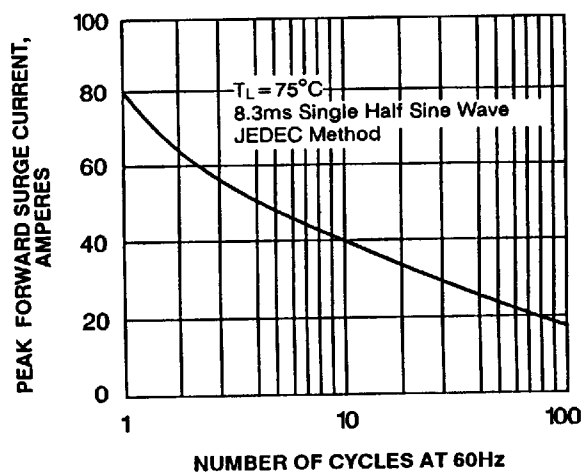


Fig. 2: Maximum non-repetitive surge current.

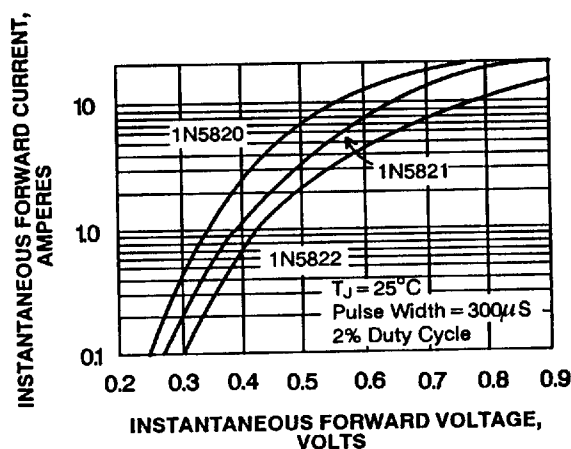


Fig. 4: Typical instantaneous forward characteristics.

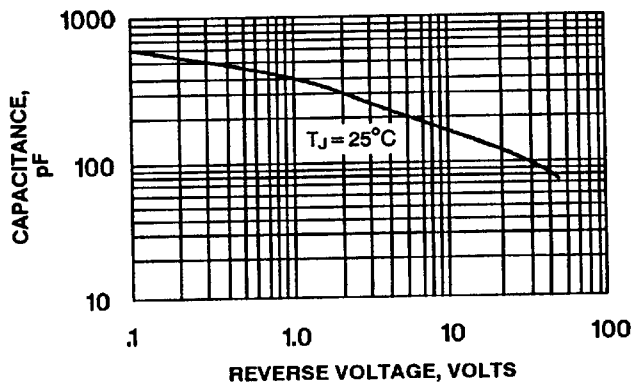


Fig. 5: Typical junction capacitance.