



# SR502 THRU SR510

## 5.0 AMPS. SCHOTTKY BARRIER RECTIFIERS



**VOLTAGE RANGE**  
20 to 100 Volts  
**CURRENT**  
5.0 Amperes

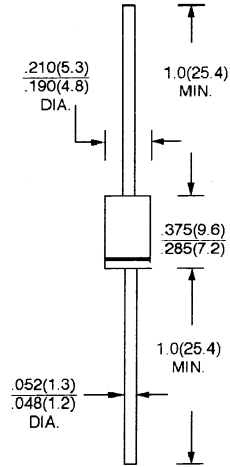
### FEATURES

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

### MECHANICAL DATA

- \* Case: DO-201 AD 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
- \* Weight: 1.1 grams

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

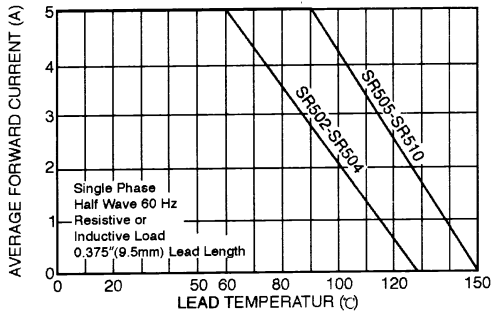
Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	SR502	SR503	SR504	SR505	SR506	SR508	SR510	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current. (8.3 ms, half sine)	$I_{FSM}$	120							A
Maximum Instantaneous Forward Voltage @ 5.0A (Note 1)	$V_F$	0.570		0.700		0.850			V
Maximum D. C. Reverse Current at Rated D. C. Blocking Voltage	$I_R$	1.0 50							mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	15			10				°C/W
Typical Junction Capacitance (Note 3)	$C_J$	500			380				pF
Operating and Storage Temperature Range	$T_J$	- 65 to + 125 / - 65 to + 150							°C

**NOTE:** (1) Pulse test: 300 $\mu$ s pulse width, 1% duty cycle  
(2) Thermal Resistance Junction to Ambient Vertical PC Board Mounted, .0.500" (12.7mm) Lead Length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad.  
(3) Measured at 1 MHz and applied reverse voltage of 4.0V D. C.

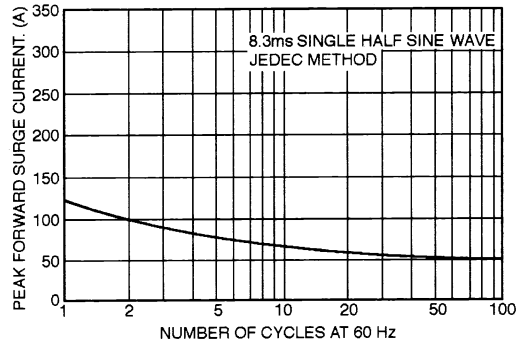
## RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR510)

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

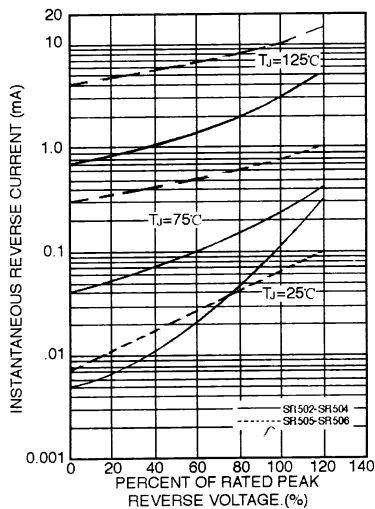


**FIG. 2**

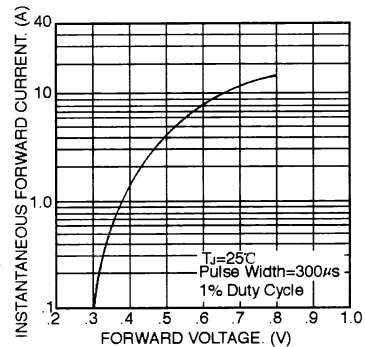
**MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

