



## SCHOTTKY BARRIER RECTIFIER

# SR502 THRU SR510

VOLTAGE RANGE  
CURRENT

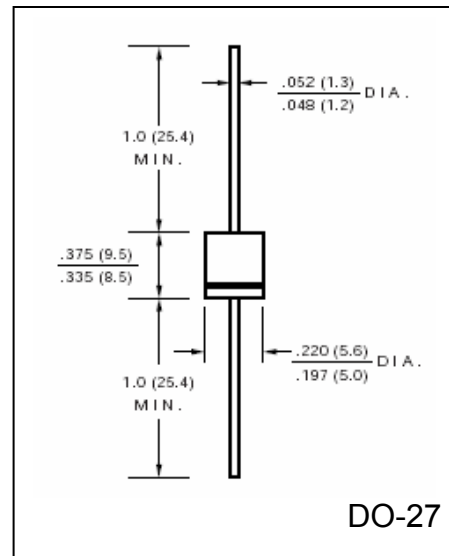
20 to 100Volts  
5.0 Ampere

### FEATURES

- Fast switching
- Low forward voltage
- Low power loss for high efficiency
- High Surge capability
- High temperature Soldering guaranteed:  
250°C/10 seconds, 0.373" (9.5mm) lead length

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202E method 208C
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.042 ounce, 1.19 gram



### MAXIMUM RATINGS AND 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%

	SYMBOLS	SR502	SR503	SR504	SR505	SR506	SR508	SR510	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length, (Note 1), see Fig. 1	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150							Amps
Maximum Instantaneous Forward Voltage @ 5.0A	$V_F$	0.57			0.75		0.85		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element (Note 1)	$I_R$	0.5							mA
$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$		50							
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	550			450		350		pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	25							$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	(-55 to +150)							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-55 to +150)							$^\circ\text{C}$

### Notes:

1. Pulse test: 300µS pulse width, 1% duty cycle
2. Thermal resistance from junction to ambient PCB mounted with 0.375" (9.5mm) lead length with 2.5" x 2.5" (63.5cm x 63.5cm) copper pads



# RATINGS AND CHARACTERISTIC CURVES SR502 THRU SR510

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

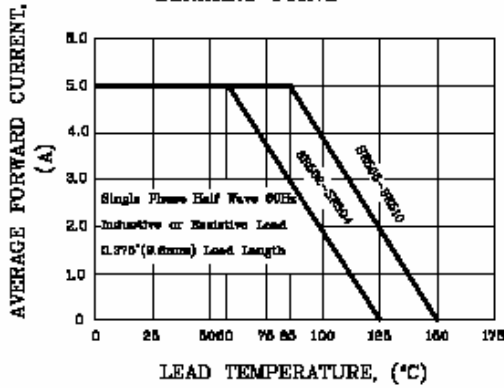


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

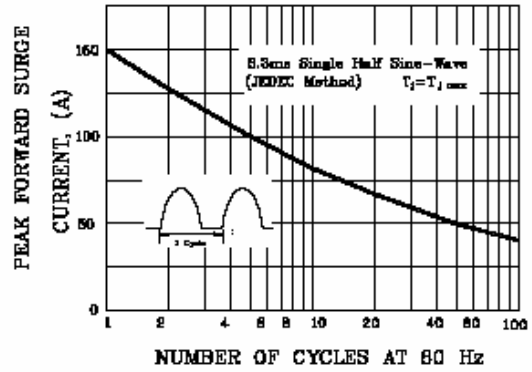


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

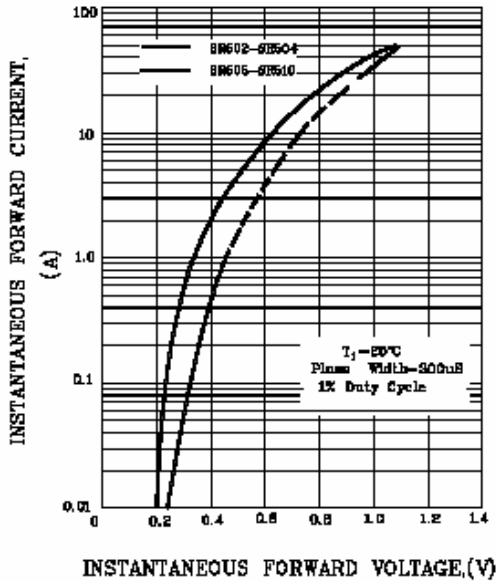


FIG.4-TYPICAL REVERSE CHARACTERISTICS

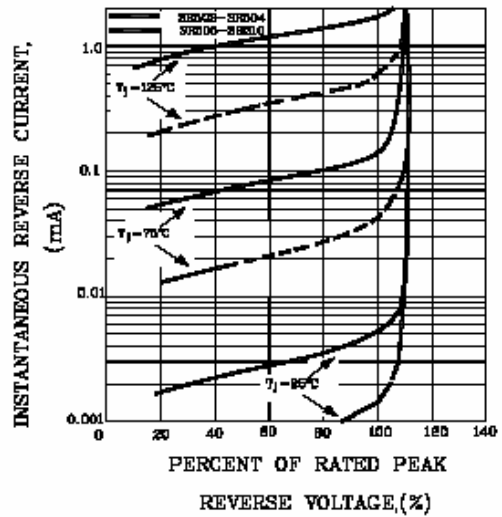


FIG.5-TYPICAL JUNCTION CAPACITANCE

