



SCHOTTKY BARRIER RECTIFIER

SR502
THRU
SR508

FEATURES

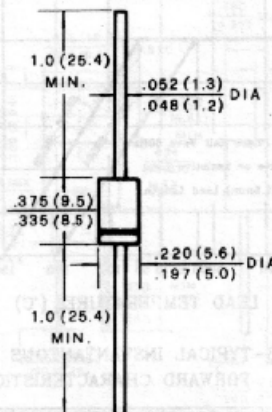
- Fast switching.
- Low forward voltage, high current capability.
- Low power loss, high efficiency.
- High current surge capability.
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length
at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL-STD-202E
method 208C
- Mounting position: Any
- Weight: 0.042 ounce, 1.19 grams

VOLTAGE RANGE 20 to 80 Volts
CURRENT 5.0 Amperes

DO-27



Dimensions in inches and (millimeters)

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	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	50	60	80	Volts
Maximum RMS Voltage		V_{RMS}	14	21	28	35	42	57	Volts
Maximum DC Blocking Voltage		V_{DC}	20	30	40	50	60	80	Volts
Maximum Average Forward Rectified Current 0.375" (9.5mm) lead length at	$T_L = 60^{\circ}\text{C}$ (SR502—504)	$I_{(AV)}$	5.0						Amps
	$T_L = 85^{\circ}\text{C}$ (SR505—508)								
Peak Forward Surge Current 8.3ms single half sine— wave superimposed on rated load (JEDEC Method)		I_{FSM}	150						Amps
Maximum Instantaneous Forward Voltage at 5.0A		V_F	0.57			0.70		0.80	Volts
Maximum DC Reverse Current at rated DC blocking voltage(Note 1)	$T_A = 25^{\circ}\text{C}$	I_R	5.0						mAmps
	$T_A = 100^{\circ}\text{C}$		50						
Typical Junction Capacitance(Note 2)		C_j	550			450			pF
Typical Thermal Resistance(Note 3)		$R_{\theta JA}$	25						$^{\circ}\text{C/W}$
Operating Temperature Range		T_J	—65 to +125			—65 to +150			$^{\circ}\text{C}$
Storage Temperature Range		T_{STG}	—65 to +150						$^{\circ}\text{C}$

NOTES:

1. Pulse test; 300µs pulse width, 1% duty cycle.
2. Measured at 1MHz and applied reverse voltage of 4.0volts.
3. Thermal resistance from junction to ambient P. C. B mounted with 0.375" (9.5mm) lead length with 2.5" × 2.5" (63.5 × 63.5mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES SR502 THRU SR508

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

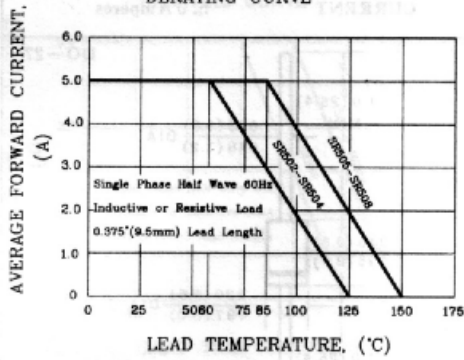


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

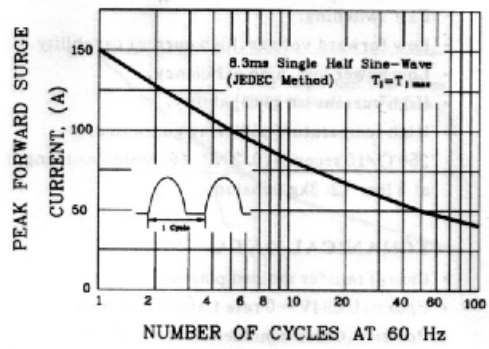


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

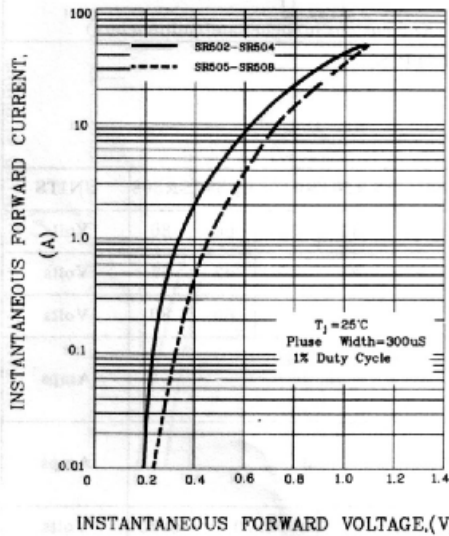


FIG.4-TYPICAL REVERSE CHARACTERISTICS

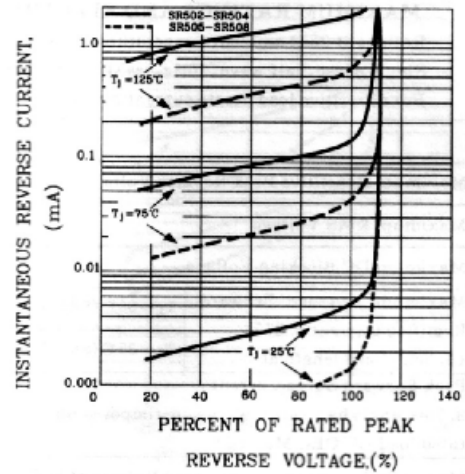


FIG.5-TYPICAL JUNCTION CAPACITANCE

