

## SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 20 --- 100 V  
CURRENT: 1.0A

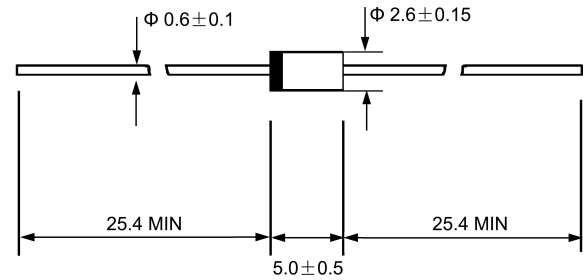
### FEATURES

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

### MECHANICAL DATA

- ◇ Case: JEDEC A-405, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.008 ounces, 0.23 grams
- ◇ Mounting position: Any

### A - 405



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

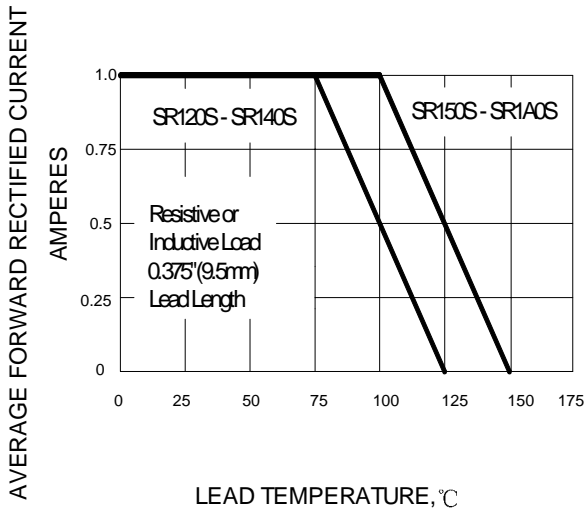
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

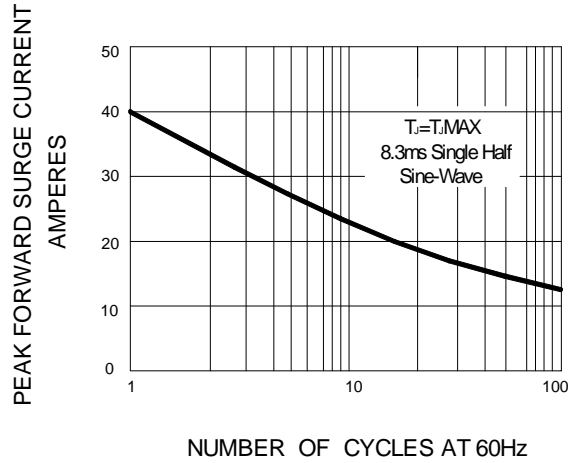
		SR120S	SR130S	SR140S	SR150S	SR160S	SR180S	SR1A0S	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum average forward rectified current 9.5mm lead length, (see fig.1)	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	40.0							A
Maximum instantaneous forward voltage @ 1.0A (Note 1)	$V_F$	0.55		0.7		0.85		V	
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.5 10.0							mA
Typical junction capacitance (Note2)	$C_J$	110							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50							°C/W
Operating junction temperature range	$T_J$	- 55 ---- + 125			- 55 ---- + 150				°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150							°C

NOTE: 1. Pulse test : 300  $\mu$ s pulse width, 1% duty cycle.  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
3. Thermal resistance junction to ambient

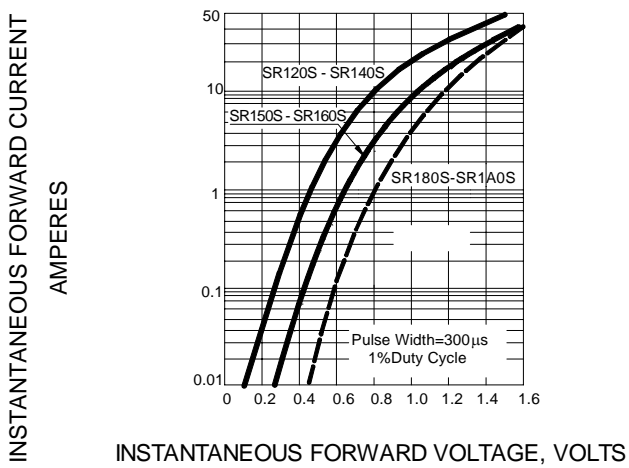
**FIG.1 – FORWARD DERATING CURVE**



**FIG.2 – PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

