# **SR1020 THRU SR10200**

## SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 20 to 200 VOLTS FORWARD CURRENT: 10.0 AMPERE

#### **FEATURES**

- · Plastic package has UL flammability classification 94V-0
- · Metal of silicon rectifier, majority carrier conduction
- · Guard ring for transient protection
- · High capability
- · Low power loss, high efficiency
- $\cdot$  High current capability, low  $V_{\text{F}}$
- · High surge capacity
- · For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

#### **MECHANICAL DATA**

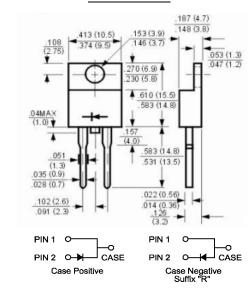
Case: Molded plastic, TO-220A

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202

method 208 guaranteed Polarity: As marked Mounting position: Any Weight: 0.08ounce, 2.24gram

#### TO-220A



**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	SR1020	SR1030	SR1040	SR1050	SR1060	SR1080	SR10100	SR10150	SR10200	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current	T	10.0									A
See Fig. 1	$I_{(AV)}$										Amp
Peak Forward Surge Current,											
8.3ms single half-sine-wave	$I_{FSM}$	200				150				Amp	
superimposed on rated load (JEDEC method)											
Maximum Forward Voltage	$V_{\rm F}$	0.55			0	0.7		0.85		0.95	
at 10.0A DC and 25°C	V F				0.7		0.83		0.93		Volts
Maximum Reverse Current at T <sub>C</sub> =25℃	$I_R$		1.0								A
at Rated DC Blocking Voltage T <sub>C</sub> =125℃	1 <sub>R</sub>	50			25						mAmp
Typical Junction Capacitance (Note 1)	$C_{J}$	600			400						pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.5									°C/W
Operating Temperature Range	$T_{J}$	-55 to +125				-55 to +150					°C
Storage Temperature Range	Tstg	-55 to +150									${\mathfrak C}$

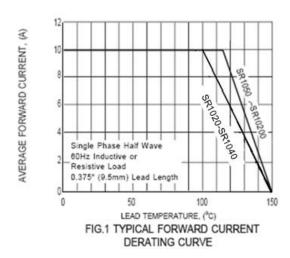
#### NOTES:

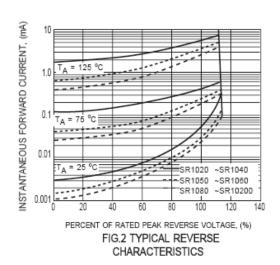
- 1- Measured at 1 MH<sub>Z</sub> and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance from Junction to Case Per Leg

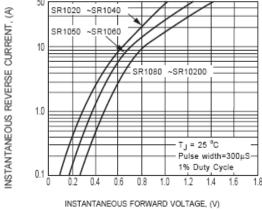




### RATINGS AND CHARACTERISTIC CURVES







T<sub>J</sub> = 25 b<sub>C</sub> - T<sub>J</sub> =

FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

FIG.4 TYPICAL JUNCTION CAPACITANCE

