

SR820 THRU SR8200

SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 20 to 200 VOLTS

FORWARD CURRENT: 8.0 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
- High current capability, low V_F
- High surge capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

Case: Molded plastic, TO-220A

Epoxy: UL 94V-0 rate flame retardant

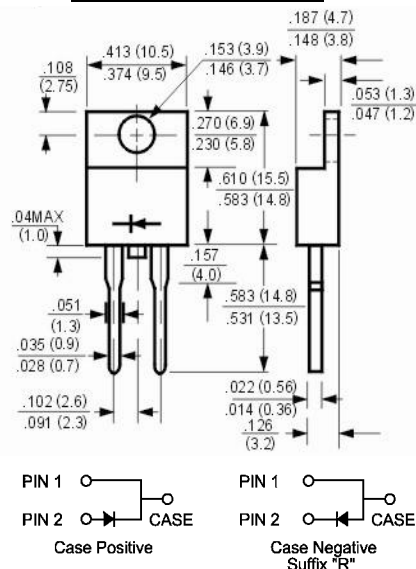
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

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	SR820	SR830	SR840	SR850	SR860	SR880	SR8100	SR8150	SR8200	Units	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	V _{RMS}	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 See Fig. 1	I _(AV)	8.0									Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150									Amp	
Maximum Forward Voltage at 8.0A DC and 25°C	V _F	0.55			0.7		0.85		0.95		Volts	
Maximum Reverse Current at T _C =25°C at Rated DC Blocking Voltage T _C =125°C	I _R	0.5							0.2		mA	
		50										
Typical Junction Capacitance (Note 1)	C _J	700			460							pF
Typical Thermal Resistance (Note 2)	R _{θJC}	2.5									°C/W	
Operating Temperature Range	T _J	-55 to +125			-55 to +150						°C	
Storage Temperature Range	T _{stg}	-55 to +150									°C	

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Case Per Leg

SR820 THRU SR8200
SCHOTTKY BARRIER RECTIFIER



RATINGS AND CHARACTERISTIC CURVES

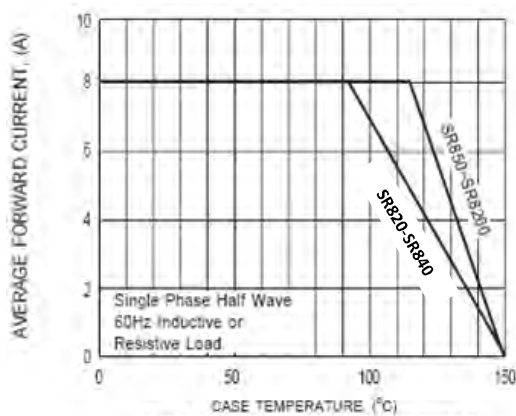


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

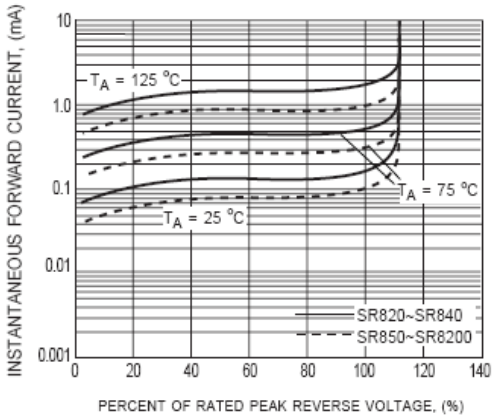


FIG.2 TYPICAL REVERSE CHARACTERISTICS

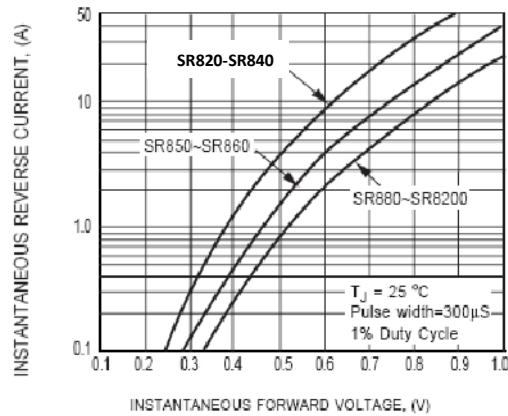


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

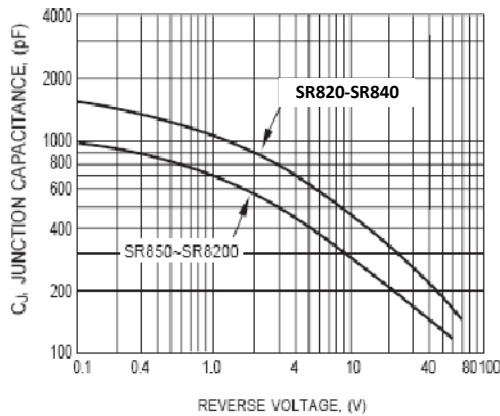


FIG.4 TYPICAL JUNCTION CAPACITANCE

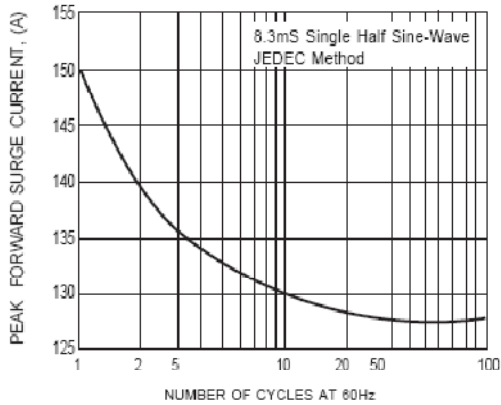


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT