

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 whelling, and polarity protection applications

MECHANICAL DATA

Case: Molded plastic, TO-220A

Epoxy: UL 94V-0 rate flame retardant

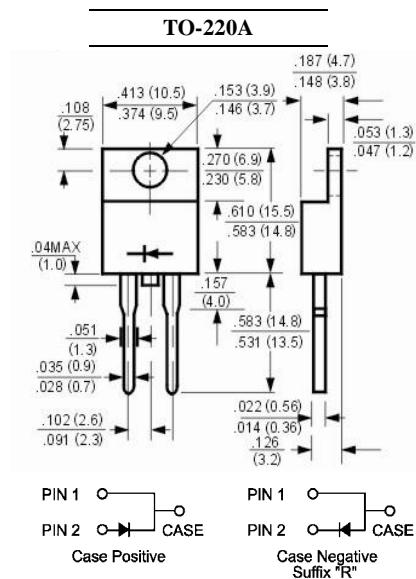
Terminals: Leads solderable per MIL-STD-202

method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram



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 Rated DC Blocking Voltage at $T_C=25^\circ\text{C}$ $T_C=125^\circ\text{C}$	I_R	1.0				25					mAmp
Typical Junction Capacitance (Note 1)	C_J	700				460					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	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

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RATINGS AND CHARACTERISTIC CURVES

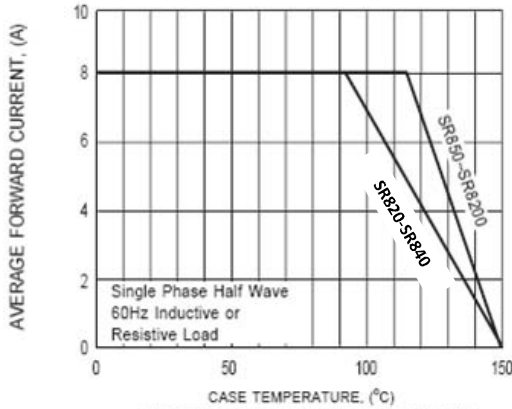


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

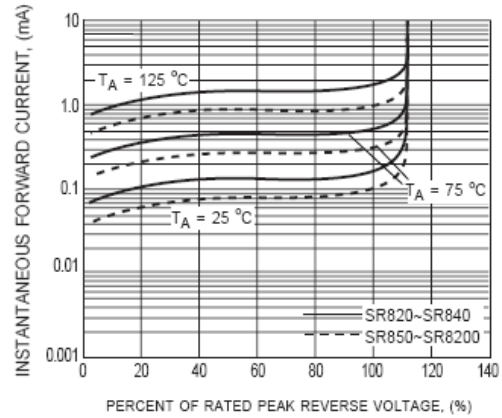


FIG.2 TYPICAL REVERSE CHARACTERISTICS

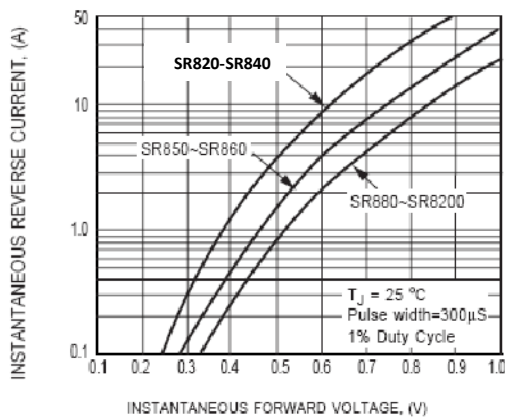


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

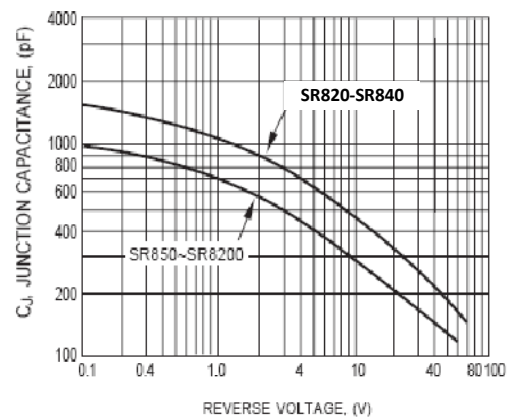


FIG.4 TYPICAL JUNCTION CAPACITANCE

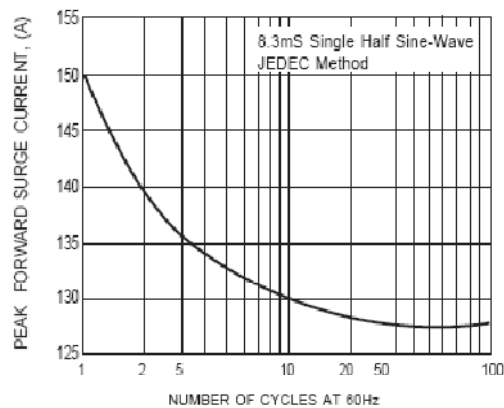


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT