

# SRS820 THRU SRS860

## SCHOTTKY BARRIER RECTIFIER



**REVERSE VOLTAGE:** 20 to 60 VOLTS  
**FORWARD CURRENT:** 8.0 AMPERE

### FEATURES

- For surface mounted application
- 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, D<sup>2</sup>PAK

Epoxy: UL 94V-O rate flame retardant

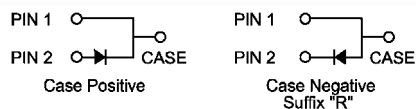
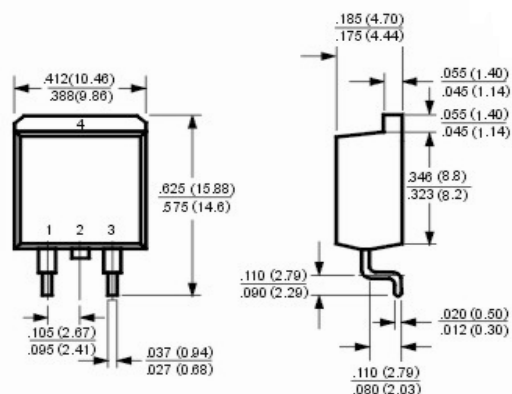
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.06ounce, 1.70gram

### D<sup>2</sup>PAK



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	SRS820	SRS830	SRS840	SRS850	SRS860	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	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			0.70		Volts
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$	0.5			50		mAmp
Typical Junction Capacitance (Note 1)	$C_J$	700			460		pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	3					°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- MAXIMUM FORWARD CURRENT DERATING CURVE

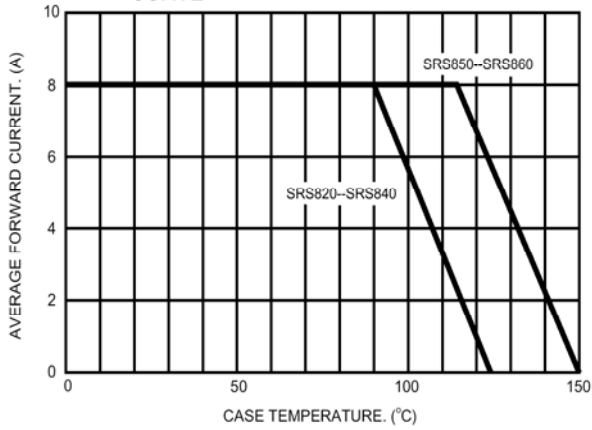


FIG.2- TYPICAL REVERSE CHARACTERISTICS

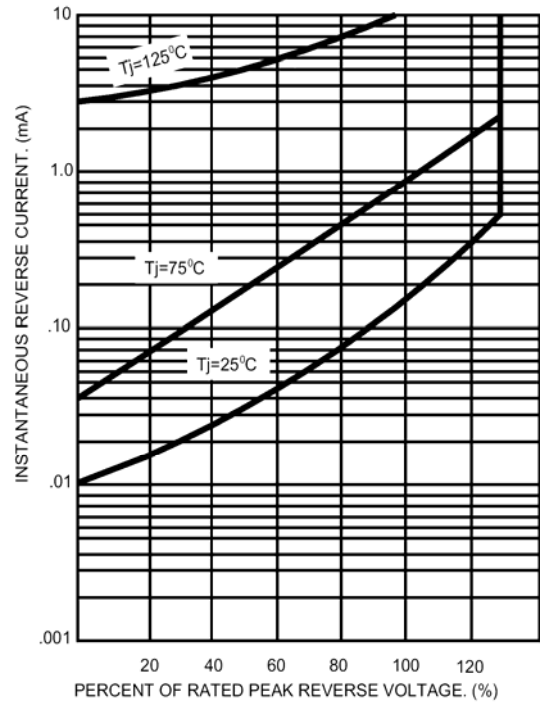


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

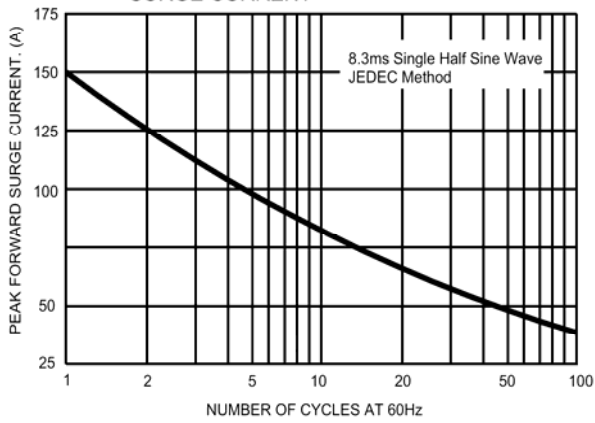


FIG.5- TYPICAL FORWARD CHARACTERISTICS

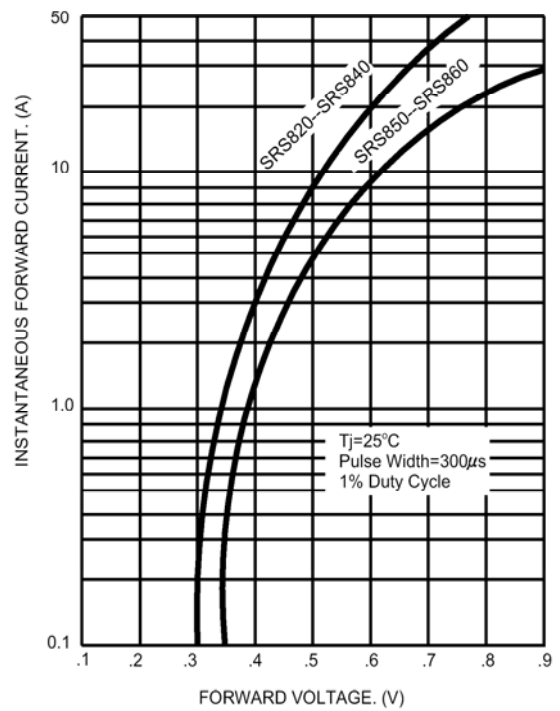


FIG.4- TYPICAL JUNCTION CAPACITANCE

