# SB820 THRU SB860

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE: 20 TO 60V** **CURRENT: 8.0A**

GULF SEMI

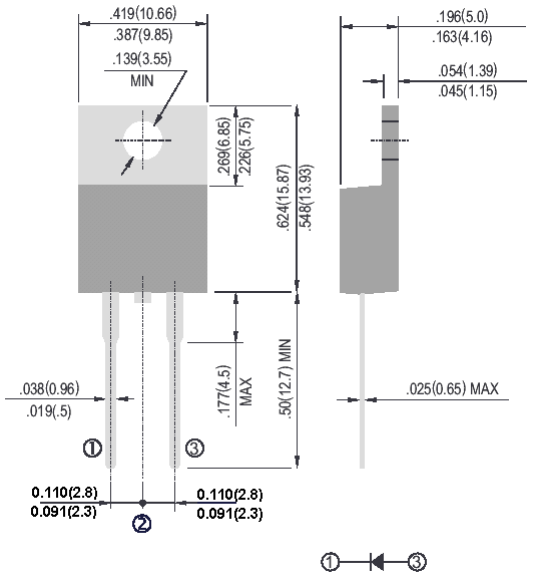
## FEATURE

High current capability, Low forward voltage drop
Low power loss, high efficiency
High surge capability

## MECHANICAL DATA

Terminal: Plated axial leads solderable per
MIL-STD 202E, method 208C
Case: Molded with UL-94 Class V-0 recognized Flame
Retardant Epoxy
Polarity: AS MARKED
Mounting position: any

**TO-220AC**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25℃, unless otherwise stated)

| | SYMBOL | SB 820 | SB 830 | SB 835 | SB 840 | SB 845 | SB 850 | SB 860 | units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | Vrrm | 20 | 30 | 35 | 40 | 45 | 50 | 60 | V |
| Maximum RMS Voltage | Vrms | 14 | 21 | 25 | 28 | 32 | 35 | 42 | V |
| Maximum DC blocking Voltage | Vdc | 20 | 30 | 35 | 40 | 45 | 50 | 60 | V |
| Maximum Average Forward Rectified Current | If(av) | 8.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | Ifsm | 150.0 | | | | | | | A |
| Maximum Forward Voltage at 8.0A DC | Vf | 0.65 | | | | | 0.75 | | V |
| Maximum DC Reverse Current Ta =25℃ | Ir | 1.0 | | | | | | | mA |
| at rated DC blocking voltage Ta =100℃ | | 15.0 | | | | | 50.0 | | mA |
| Typical Junction Capacitance (Note 1) | Cj | 700 | | | | | 450 | | pF |
| Typical Thermal Resistance (Note 2) | R(jc) | 2.5 | | | | | | | ℃/W |
| Storage and Operating Junction Temperature | Tstg,Tj | -65 to +125 | | | | | -65 to +150 | | ℃ |

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to CASE

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

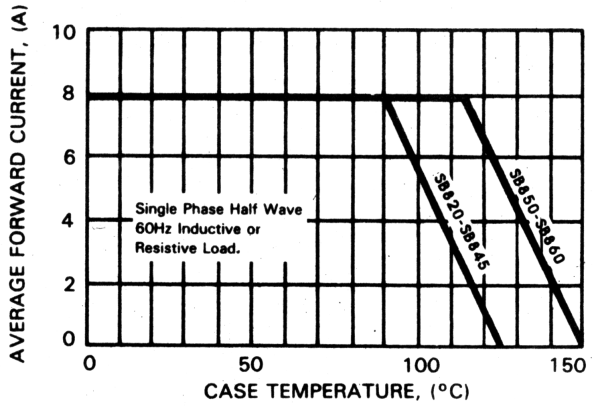



FIG. 2 – TYPICAL REVERSE CHARACTERISTICS

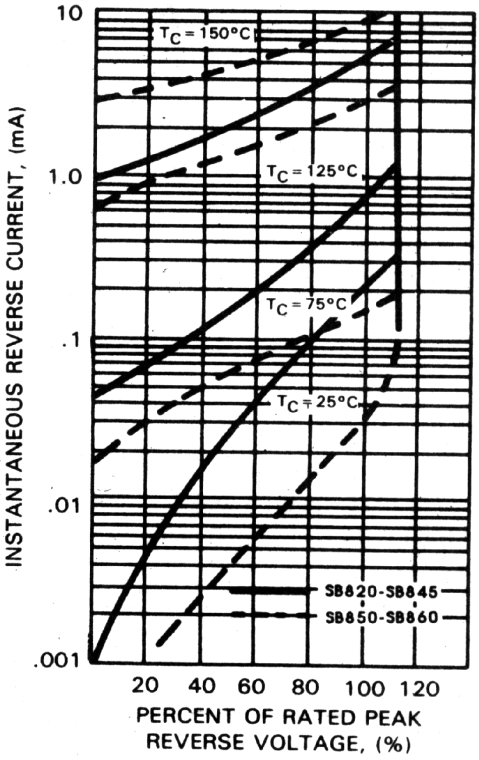
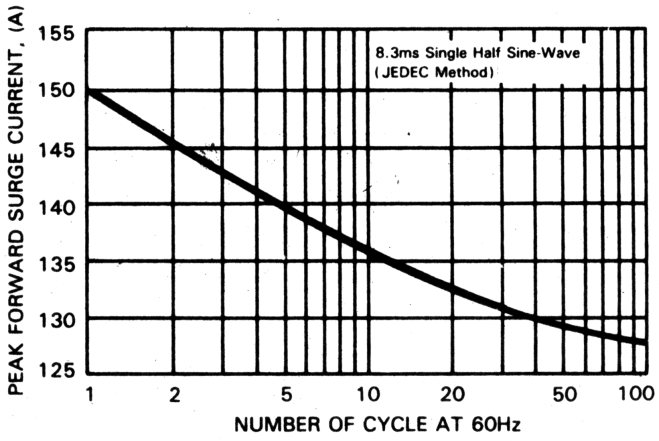



FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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