

SR820R THRU SR860R

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage – 20 to 60 V

Forward Current – 8 A

Features

- High current capability, low V_F
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- Plastic package has UL flammability classification 94V-0
- Guard ring for transient protection
- High surge capacity
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

Mechanical Data

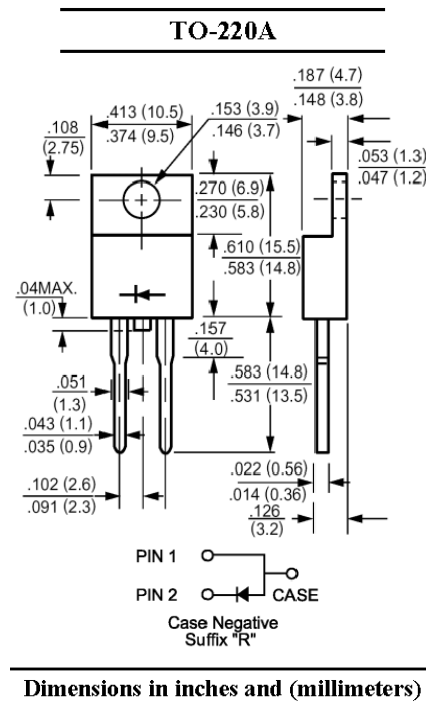
Case: Molded plastic, TO-220A

Epoxy: UL 94V-0 rate flame retardant

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

Polarity: As marked

Mounting Position: Any



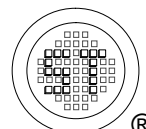
Absolute Maximum Ratings and Characteristics

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%

| Parameter | Symbols | SR820R | SR830R | SR840R | SR850R | SR860R | Units |
|--------------------------------------------------------------------------------------------------------|-------------------|---------------|--------|--------|---------------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | V |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | V |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | V |
| Maximum Average Forward Rectified Current | I _(AV) | 8 | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 150 | | | | | A |
| Maximum Forward Voltage at 8 A DC and 25 °C | V _F | 0.55 | | | 0.7 | | V |
| Maximum Reverse Current at T _C = 25 °C Rated DC Blocking Voltage T _C = 125 °C | I _R | 0.5 50 | | | | | mA |
| Typical Junction Capacitance ¹⁾ | C _J | 700 | | | 460 | | pF |
| Typical Thermal Resistance ²⁾ | R _{θJC} | 3 | | | | | °C/W |
| Operating Temperature Range | T _{opr} | - 55 to + 125 | | | - 55 to + 150 | | °C |
| Storage Temperature Range | T _{stg} | - 55 to + 150 | | | | | °C |

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V.

²⁾ Thermal Resistance from Junction to case per leg.



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RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

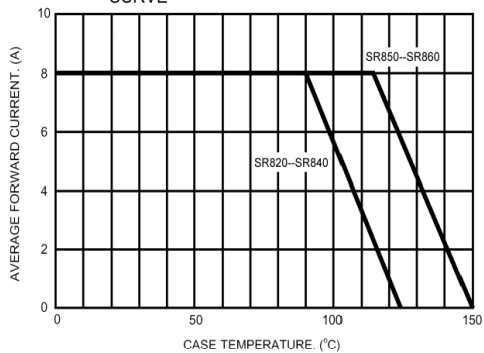


FIG.2- TYPICAL REVERSE CHARACTERISTICS

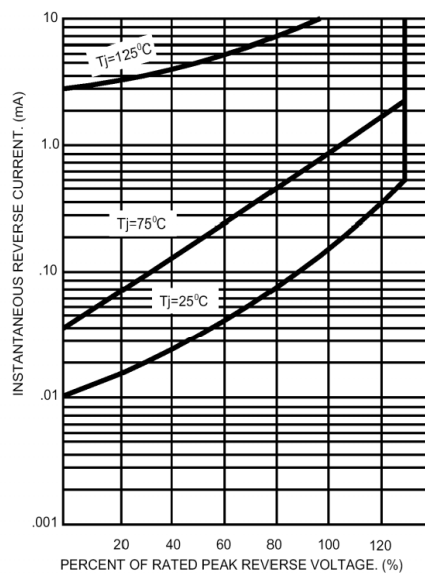


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

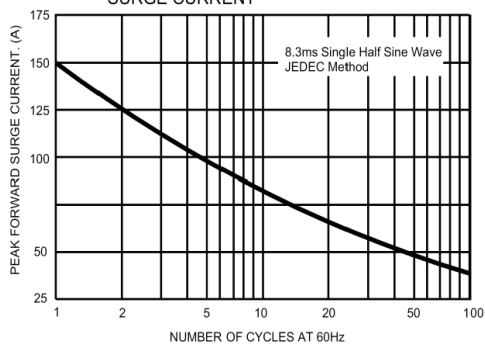


FIG.5- TYPICAL FORWARD CHARACTERISTICS

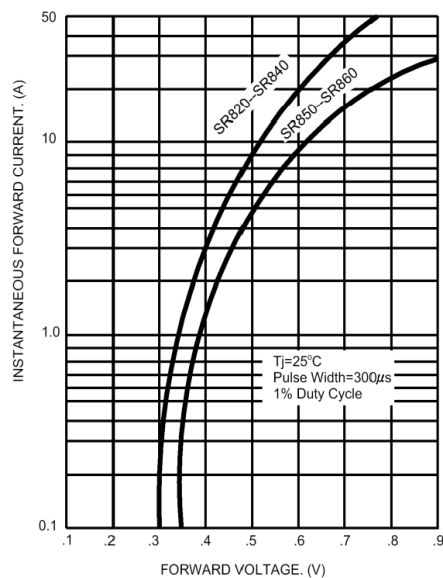


FIG.4- TYPICAL JUNCTION CAPACITANCE

