

**SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 200 Volts CURRENT 8.0 Amperes**

**FEATURES**

- \* High reliability
- \* Low switching loss
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability

**MECHANICAL DATA**

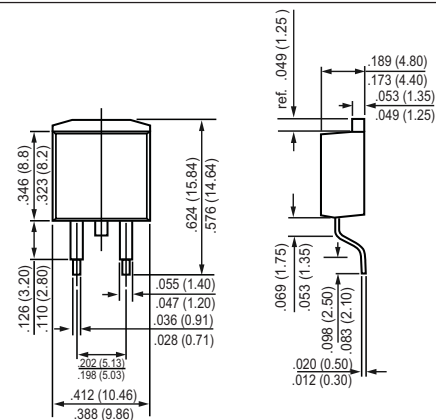
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Case: Molded plastic
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting: position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**D2-PAK**



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

| RATINGS   | SYMBOL           | SR820S       | SR830S | SR835S | SR840S | SR845S | SR850S | SR860S | SR880S | SR8100S | SR8150S | SR8200S | UNITS            |
|---|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub> | 20           | 30     | 35     | 40     | 45     | 50     | 60     | 80     | 100     | 150     | 200     | Volts            |
| Maximum RMS Voltage   | V <sub>RMS</sub> | 14           | 21     | 25     | 28     | 32     | 35     | 42     | 56     | 70      | 105     | 140     | Volts            |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>  | 20           | 30     | 35     | 40     | 45     | 50     | 60     | 80     | 100     | 150     | 200     | Volts            |
| Maximum Average Forward Rectified Current at Derating Case Temperature                            | I <sub>O</sub>   | 8.0          |        |        |        |        |        |        |        |         |         |         | Amps             |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 150          |        |        |        |        |        |        |        |         |         |         | Amps             |
| Typical Current Squared Time  | I <sup>2</sup> T | 93.37        |        |        |        |        |        |        |        |         |         |         | A <sup>2</sup> S |
| Typical Thermal Resistance (Note 1)   | R <sub>θJA</sub> | 60           |        |        |        |        |        |        |        |         |         |         | °C/W             |
|   | R <sub>θJC</sub> | 3            |        |        |        |        |        |        |        |         |         |         |                  |
| Typical Junction Capacitance (Note 2)   | C <sub>J</sub>   | 700          |        |        |        |        | 450    |        |        |         |         | pF      |                  |
| Operating Temperature Range   | T <sub>J</sub>   | 150          |        |        |        |        |        |        |        |         |         |         | °C               |
| Storage Temperature Range   | T <sub>STG</sub> | -55 to + 150 |        |        |        |        |        |        |        |         |         |         | °C               |

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

| CHARACTERISTICS                                  |                         | SYMBOL         | SR820S | SR830S | SR835S | SR840S | SR845S | SR850S | SR860S | SR880S | SR8100S | SR8150S | SR8200S | UNITS |
|--|-------------------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 8.0A DC |                         | V <sub>F</sub> | .65    |        |        |        |        |        | .75    |        | .85     |         |         | Volts |
| Maximum Average Reverse Current                  | @T <sub>A</sub> = 25°C  | I <sub>R</sub> | 0.2    |        |        |        |        |        |        |        |         |         |         | mA    |
| at Rated DC Blocking Voltage                     | @T <sub>A</sub> = 100°C |                | 2      |        |        |        |        |        |        |        |         |         |         | mA    |

- NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
4. Suffix "R" for Reverse Polarity.  
5. Suffix "K" for D-PAK Pkg.

2015-12  
REV: B7

## RATING AND CHARACTERISTICS CURVES ( SR820S THRU SR8200S )

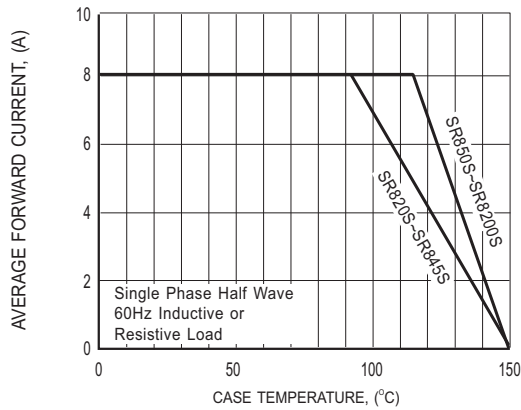


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

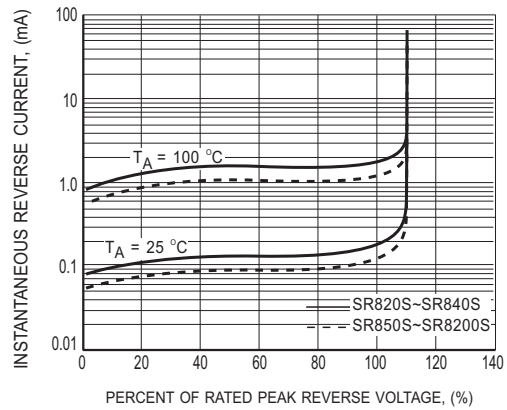


FIG.2 TYPICAL REVERSE CHARACTERISTICS

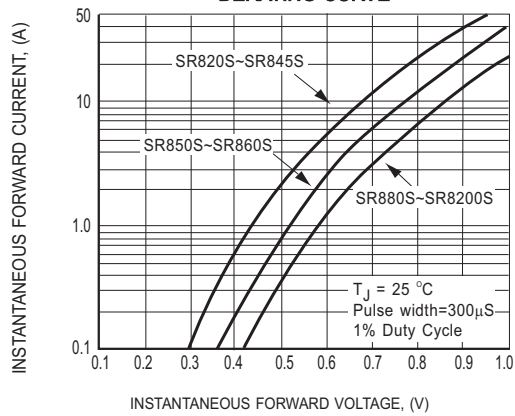


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

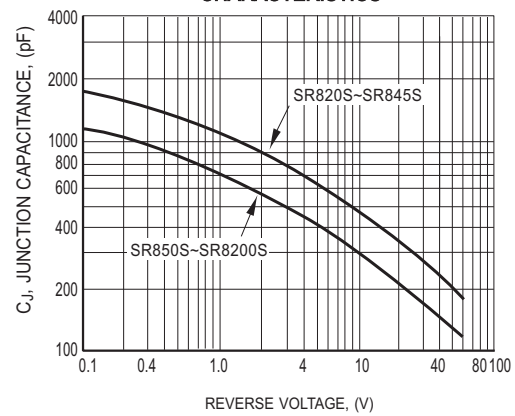


FIG.4 TYPICAL JUNCTION CAPACITANCE

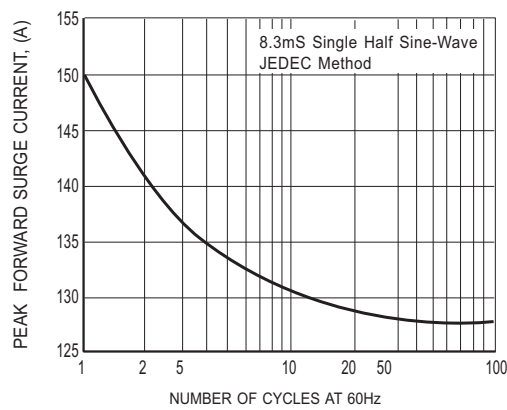


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT





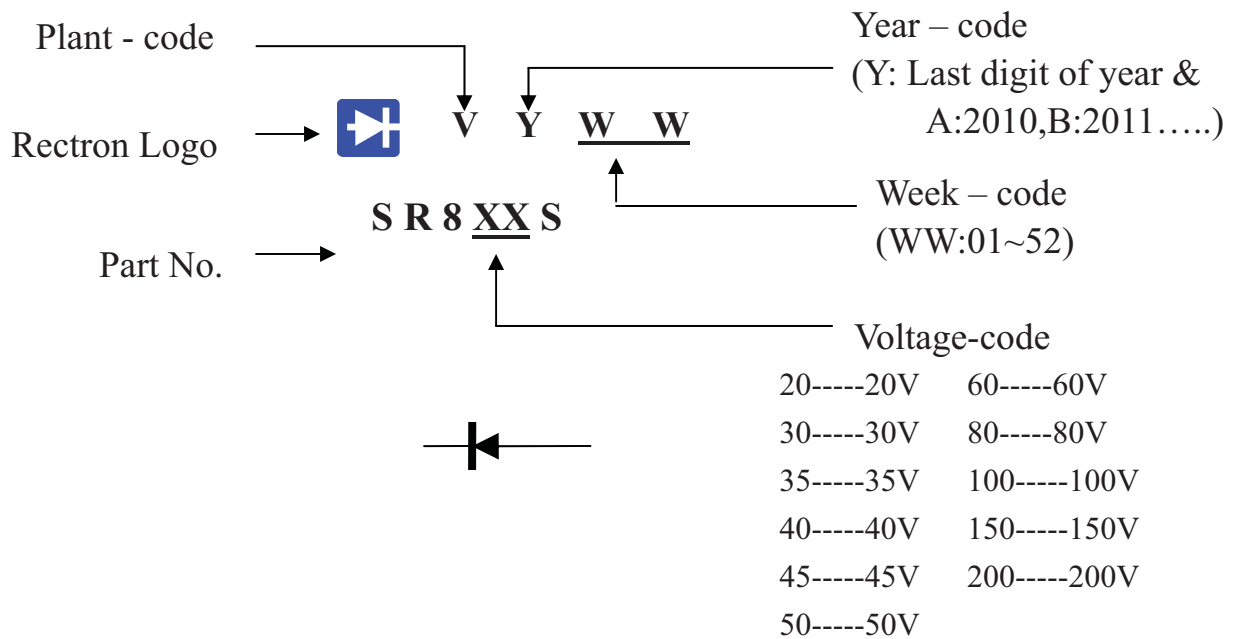
# RECTRON

## Attachment information about SR8XXS

### 1. Internal Circuit



### 2. Marking on the body



# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

## TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE<br>(mm) | CARTON SIZE<br>(mm) | EA PER CARTON | WEIGHT(Kg) |
|---------|--------------|------------|------------------------|---------------------|---------------|------------|
| D2PAK   | -C           | 2,000      | 550*140*92             | 572*308*120         | 4,000         | 10.20      |

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