

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 200 Volts CURRENT 8.0 Ampere

FEATURES

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

MECHANICAL DATA

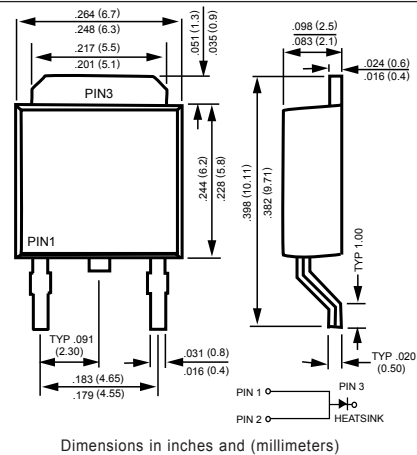
- * Epoxy: Device has UL flammability classification 94V-0
- * Case: Molded plastic
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting: position: Any
- * Weight: 0.33 grams

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%.



D-PAK



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

| RATINGS | SYMBOL | SR820K | SR830K | SR835K | SR840K | SR845K | SR850K | SR860K | SR880K | SR8100K | SR8150K | SR8200K | UNITS |
|---------------------------------------------------------------------------------------------------|------------------|--------|--------|--------|--------|--------|--------------|--------|--------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 25 | 28 | 32 | 35 | 42 | 56 | 70 | 105 | 140 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum Average Forward Rectified Current at Derating Case Temperature | I _O | 8.0 | | | | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 150 | | | | | | | | | | | Amps |
| Typical Thermal Resistance (Note 1) | R _{θJA} | 60 | | | | | | | | | | | °C/W |
| | R _{θJC} | 3 | | | | | | | | | | | |
| Typical Junction Capacitance (Note 2) | C _J | 700 | | | | | 450 | | | | | pF | |
| Operating Temperature Range | T _J | | | | | | 150 | | | | | °C | |
| Storage Temperature Range | T _{STG} | | | | | | -55 to + 150 | | | | | °C | |

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

| CHARACTERISTICS | SYMBOL | SR820K | SR830K | SR835K | SR840K | SR845K | SR850K | SR860K | SR880K | SR8100K | SR8150K | SR8200K | UNITS |
|------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 8.0A DC | V_F | .65 | | | | | .75 | | | .85 | | | Volts |
| Maximum Average Reverse Current @ $T_A = 25^\circ\text{C}$ | I_R | 0.2 | | | | | | | | | | | mA |
| at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$ | | 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 "S" for D2-PAK Pkg.

RATING AND CHARACTERISTICS CURVES (SR820K THRU SR8200K)

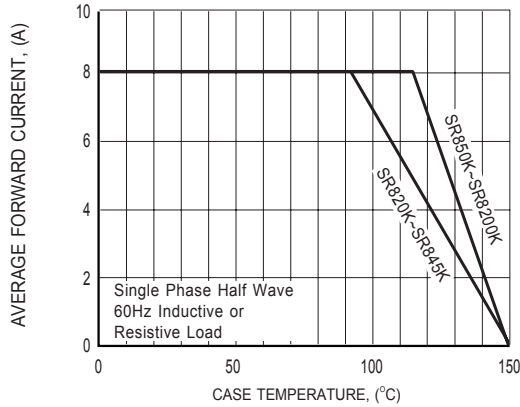


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

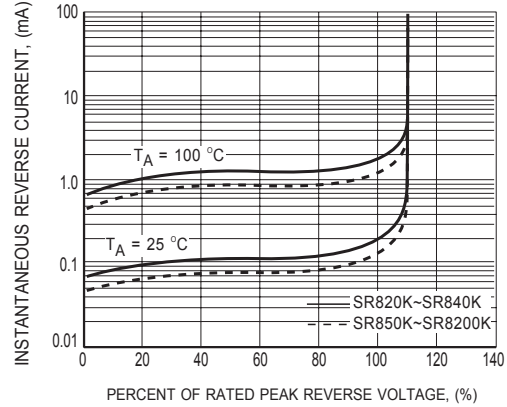


FIG.2 TYPICAL REVERSE CHARACTERISTICS

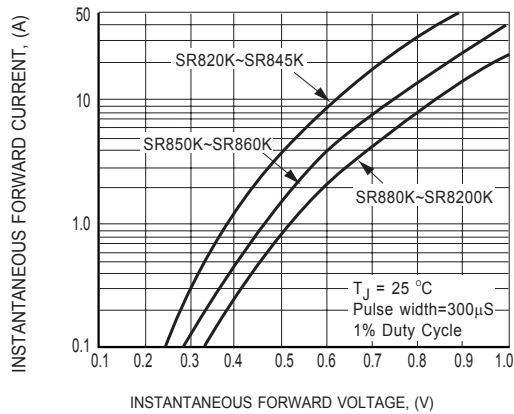


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

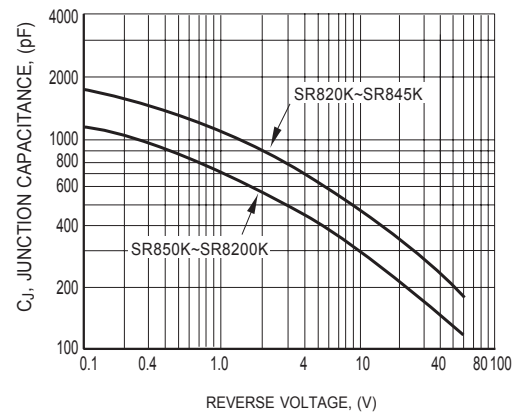


FIG.4 TYPICAL JUNCTION CAPACITANCE

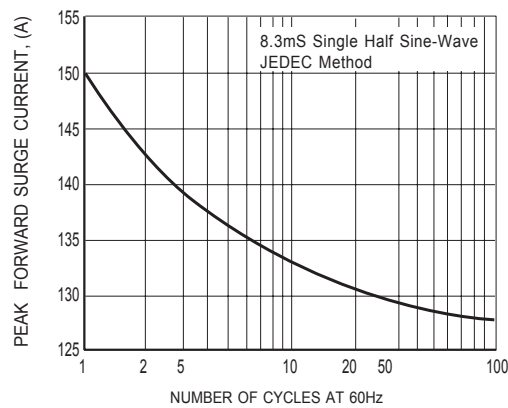


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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