

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 50 Volts CURRENT 50 Ampere

FEATURES

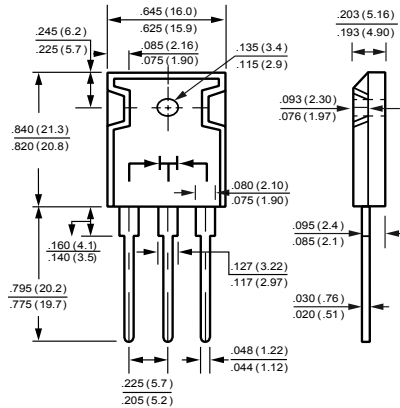
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High switching capability
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: To-247 molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 6.10 grams



TO-247



Dimensions in inches and (millimeters)

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%.

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

| RATINGS | SYMBOL | SR5020C | SR5030C | SR5035C | SR5040C | SR5045C | SR5050C | UNITS |
|---|-----------------|--------------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 35 | 40 | 45 | 50 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 25 | 28 | 32 | 35 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 35 | 40 | 45 | 50 | Volts |
| Maximum Average Forward Rectified Current at Derating Case Temperature | I_O | 50 | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 400 | | | | | | Amps |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 1.2 | | | | | | °C/W |
| | $R_{\theta JA}$ | 24 | | | | | | |
| 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 | SR5020C | SR5030C | SR5035C | SR5040C | SR5045C | SR5050C | UNITS | |
|--|--------|-----------------------|---------|---------|---------|---------|---------|-------|-------|
| Maximum Instantaneous Forward Voltage at 25.0A DC | V_F | .65 | | | | | | .75 | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | I_R | @ $T_A = 25^\circ C$ | | | | | | 1.0 | mA |
| | | @ $T_A = 100^\circ C$ | | | | | | 10 | mA |

- NOTES : 1. Thermal Resistance : Heat-sink mounted.
2. Suffix "A" = Common Anode.
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTICS CURVES (SR5020C THRU SR5050C)

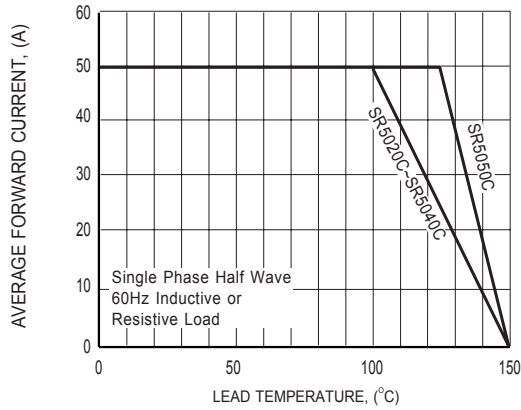


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

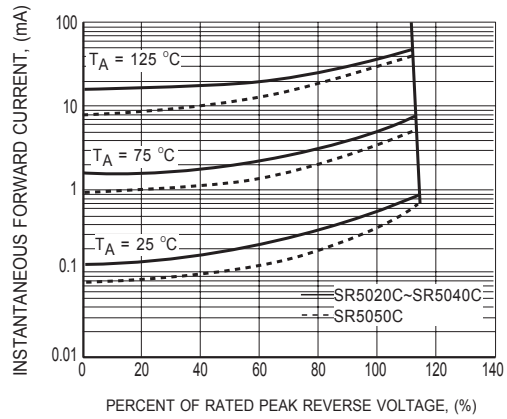


FIG.2 TYPICAL REVERSE CHARACTERISTICS

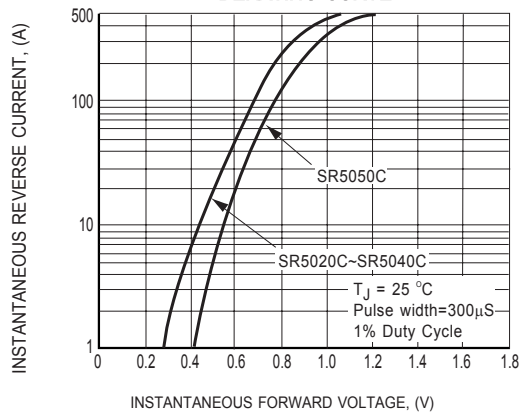


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

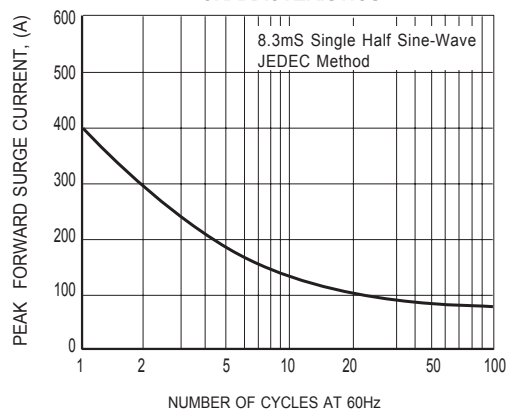


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT