

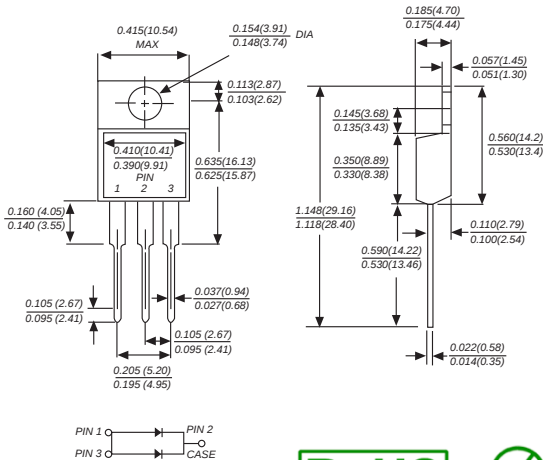


# SR2020C THRU SR20A0C

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 20.0 Amperes

### TO-220AB



Dimensions in inches and (millimeters)



### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds

### MECHANICAL DATA

**Case:** TO-220AB molded plastic body  
**Terminals:** Leads solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Mounting Position:** Any  
**Weight:** 0.08 ounce, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| MDD Catalog Number                                                                                  | SYMBOLS           | SR 2020C    | SR 2030C | SR 2040C | SR 2045C | SR 2050C    | SR 2060C | SR 2070C | SR 2080C | SR 2090C | SR 20A0C | UNITS |
|-----------------------------------------------------------------------------------------------------|-------------------|-------------|----------|----------|----------|-------------|----------|----------|----------|----------|----------|-------|
| Maximum repetitive peak reverse voltage                                                             | V <sub>RRM</sub>  | 20          | 30       | 40       | 45       | 50          | 60       | 70       | 80       | 90       | 100      | VOLTS |
| Maximum RMS voltage                                                                                 | V <sub>RMS</sub>  | 14          | 21       | 28       | 32       | 35          | 42       | 49       | 56       | 63       | 70       | VOLTS |
| Maximum DC blocking voltage                                                                         | V <sub>DC</sub>   | 20          | 30       | 40       | 45       | 50          | 60       | 70       | 80       | 90       | 100      | VOLTS |
| Maximum average forward rectified current at Tc(see fig.1)                                          | I <sub>(AV)</sub> | 20.0        |          |          |          |             |          |          |          |          |          | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>  | 150.0       |          |          |          |             |          |          |          |          |          | Amps  |
| Maximum instantaneous forward voltage at 10.0A                                                      | V <sub>F</sub>    | 0.55        |          |          |          | 0.75        |          | 0.85     |          |          |          | Volts |
| Maximum DC reverse current<br>at rated DC blocking voltage                                          | I <sub>R</sub>    | 1.0         |          |          |          |             |          |          |          |          |          | mA    |
| TA=25°C<br>TA=100°C                                                                                 |                   | 15.0        |          |          |          | 50.0        |          |          |          |          |          |       |
| Typical junction capacitance (NOTE 1)                                                               | C <sub>J</sub>    | 550         |          |          |          | 450         |          |          |          | pF       |          |       |
| Typical thermal resistance (NOTE 2)                                                                 | RθJC              | 2.0         |          |          |          |             |          |          |          |          |          | °C/W  |
| Operating junction temperature range                                                                | T <sub>J</sub>    | -65 to +125 |          |          |          | -65 to +150 |          |          |          | °C       |          |       |
| Storage temperature range                                                                           | T <sub>STG</sub>  | -65 to +150 |          |          |          |             |          |          |          |          |          | °C    |

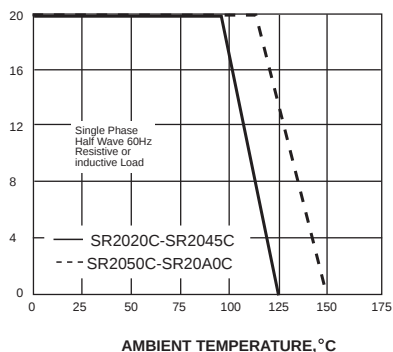
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case

# RATINGS AND CHARACTERISTIC CURVES SR2020C THRU SR20A0C

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

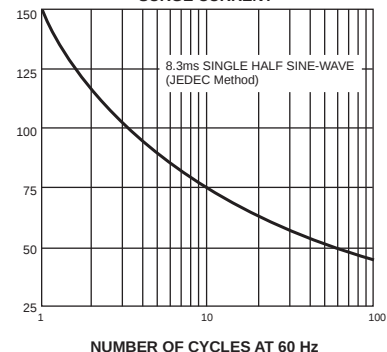
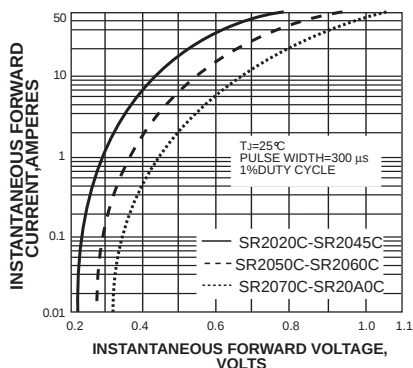


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

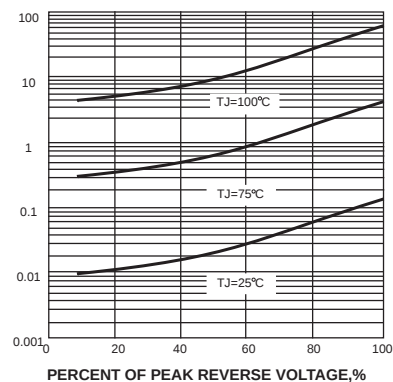
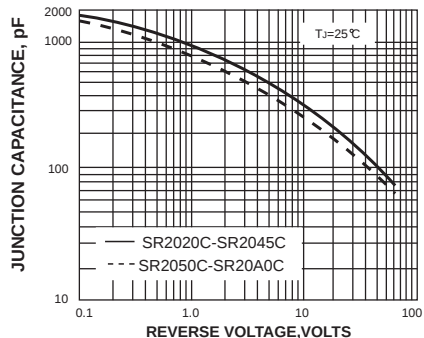


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

