

# SR2020CT THRU SR20200CT

## SCHOTTKY BARRIER RECTIFIER



康比電子  
HORNBY ELECTRONIC

**REVERSE VOLTAGE:** 20 to 200 VOLTS

**FORWARD CURRENT:** 20.0 AMPERE

### FEATURES

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

### MECHANICAL DATA

Case: Molded plastic, TO-220

Epoxy: UL 94V-0 rate flame retardant

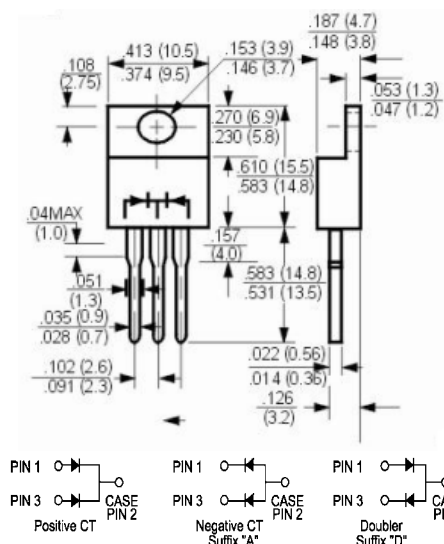
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram

### TO-220



Dimensions in inches and (millimeters)

### 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, derate current by 20%.

|                                                                                                                     | Symbols           | SR2020CT    | SR2030CT | SR2040CT | SR2050CT    | SR2060CT | SR2080CT | SR20100CT | SR20150CT | SR20200CT | Units |     |
|---------------------------------------------------------------------------------------------------------------------|-------------------|-------------|----------|----------|-------------|----------|----------|-----------|-----------|-----------|-------|-----|
| Maximum Recurrent Peak Reverse Voltage                                                                              | V <sub>RRM</sub>  | 20          | 30       | 40       | 50          | 60       | 80       | 100       | 150       | 200       | Volts |     |
| Maximum RMS Voltage                                                                                                 | V <sub>RMS</sub>  | 14          | 21       | 28       | 35          | 42       | 56       | 80        | 105       | 140       | Volts |     |
| Maximum DC Blocking Voltage                                                                                         | V <sub>DC</sub>   | 20          | 30       | 40       | 50          | 60       | 80       | 100       | 150       | 200       | Volts |     |
| Maximum Average Forward Rectified Current<br>See Fig. 1                                                             | I <sub>(AV)</sub> | 20.0        |          |          |             |          |          |           |           |           | Amp   |     |
| Peak Forward Surge Current,<br>8.3ms single half-sine-wave<br>superimposed on rated load (JEDEC method)             | I <sub>FSM</sub>  | 200         |          |          |             |          |          |           |           |           | Amp   |     |
| Maximum Forward Voltage<br>at 10.0A DC and 25℃                                                                      | V <sub>F</sub>    | 0.55        |          |          | 0.70        |          | 0.85     |           | 0.95      |           | Volts |     |
| Maximum Reverse Current           at T <sub>C</sub> =25℃<br>at Rated DC Blocking Voltage       T <sub>C</sub> =100℃ | I <sub>R</sub>    | 1.0         |          |          |             |          |          |           | 0.2       |           | mA    |     |
|                                                                                                                     |                   | 50          |          |          |             |          |          |           |           |           |       |     |
| Typical Junction Capacitance (Note 1)                                                                               | C <sub>J</sub>    | 700         |          |          | 500         |          |          |           |           |           |       | pF  |
| Typical Thermal Resistance (Note 2)                                                                                 | R <sub>θJC</sub>  | 2           |          |          |             |          |          |           |           |           |       | ℃/W |
| Operating Temperature Range                                                                                         | T <sub>J</sub>    | -55 to +125 |          |          | -55 to +150 |          |          |           |           |           |       | ℃   |
| Storage Temperature Range                                                                                           | T <sub>stg</sub>  | -55 to +150 |          |          |             |          |          |           |           |           | ℃     |     |

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Case Per Leg

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### RATINGS AND CHARACTERISTIC CURVES

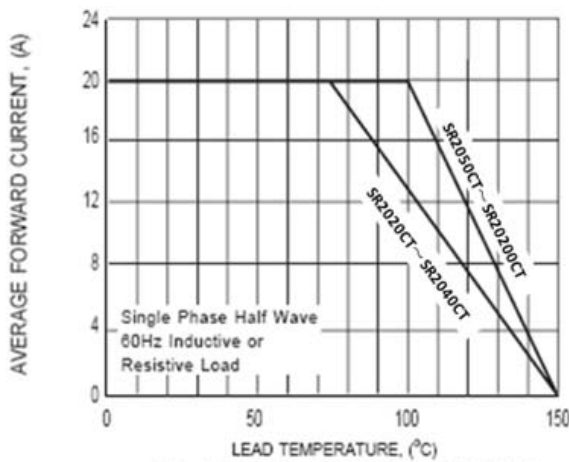


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

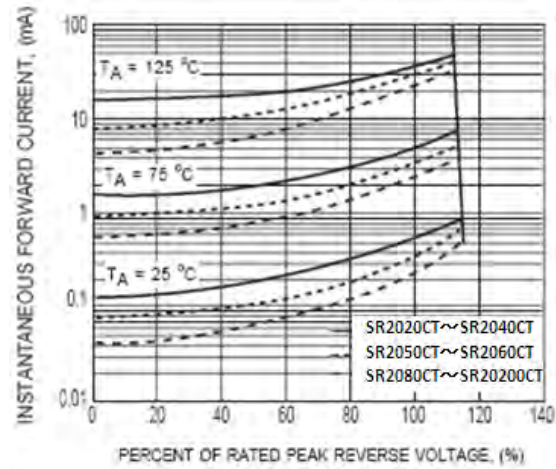


FIG.2 TYPICAL REVERSE CHARACTERISTICS

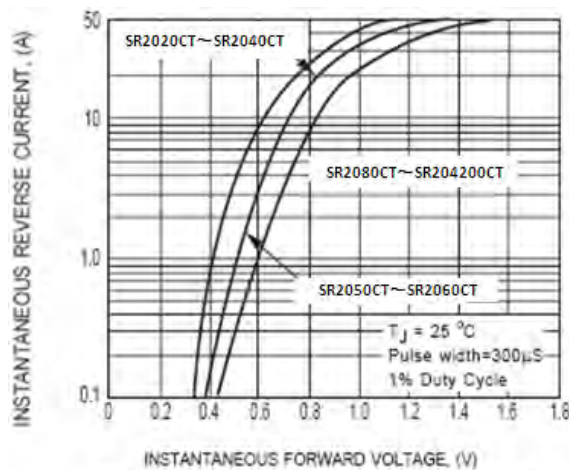


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

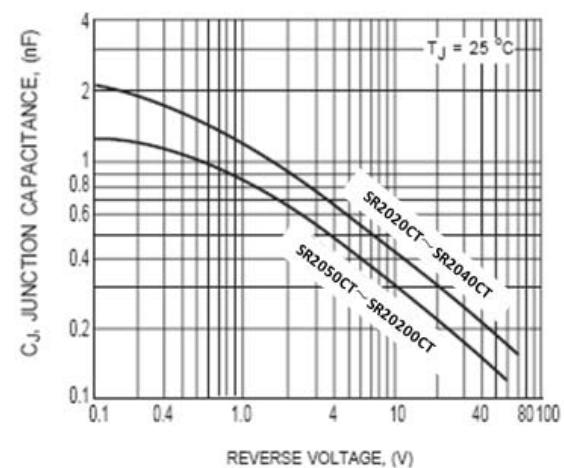


FIG.4 TYPICAL JUNCTION CAPACITANCE

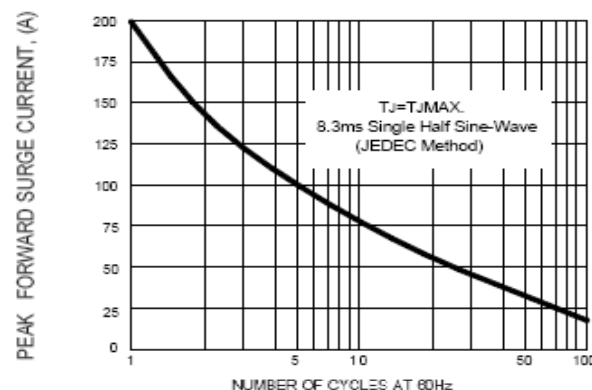


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT