# SR2020CT THRU SR20200CT

## *SCHOTTKY BARRIER RECTIFIER*

康 比 電 子
HORNBY ELECTRONIC

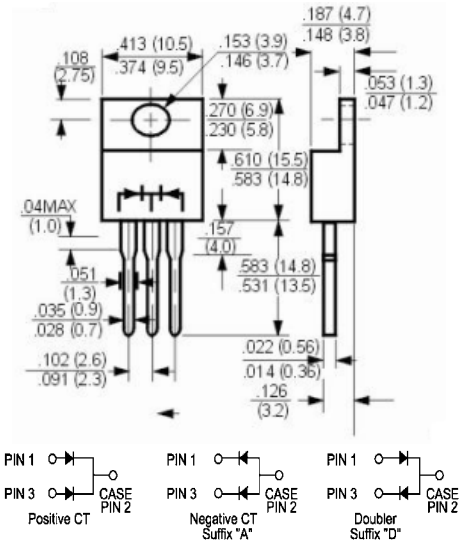
***REVERSE VOLTAGE:*** **20 to 200 VOLTS**

***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 whelling,and polarity protection applications

**TO-220**




**Dimensions in inches and (millimeters)**

### *MECHANICAL DATA*

Case: Molded plastic, TO-220
Epoxy: UL 94V-O rate flame retardant
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
Polarity: As marked
Mounting position: Any
Weight: 0.08ounce, 2.24gram

## *Maximum Ratings and Electrical Characteristics*

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60$H_Z$, 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** | $V_{RRM}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | **Volts** |
| **Maximum RMS Voltage** | $V_{RMS}$ | 14 | 21 | 28 | 35 | 42 | 56 | 80 | 105 | 140 | **Volts** |
| **Maximum DC Blocking Voltage** | $V_{DC}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | **Volts** |
| **Maximum Average Forward Rectified Current See Fig. 1** | $I_{(AV)}$ | 20.0 | | | | | | | | | **Amp** |
| **Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)** | $I_{FSM}$ | 200 | | | | | | | | | **Amp** |
| **Maximum Forward Voltage at 10.0A DC and 25℃** | $V_F$ | 0.55 | | | 0.70 | | 0.85 | | 0.95 | | **Volts** |
| **Maximum Reverse Current at $T_C$=25℃** | $I_R$ | 1.0 | | | | | | | 0.2 | | **mAmp** |
| **at Rated DC Blocking Voltage $T_C$=100℃** | | 50 | | | | | | | | | |
| **Typical Junction Capacitance (Note 1)** | $C_J$ | 700 | | | 500 | | | | | | **pF** |
| **Typical Thermal Resistance (Note 2)** | $R_{\theta JC}$ | 2 | | | | | | | | | **℃/W** |
| **Operating Temperature Range** | $T_J$ | -55 to +125 | | | -55 to +150 | | | | | | **℃** |
| **Storage Temperature Range** | Tstg | -55 to +150 | | | | | | | | | **℃** |

**NOTES:**

1- Measured at 1 $MH_Z$ 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*

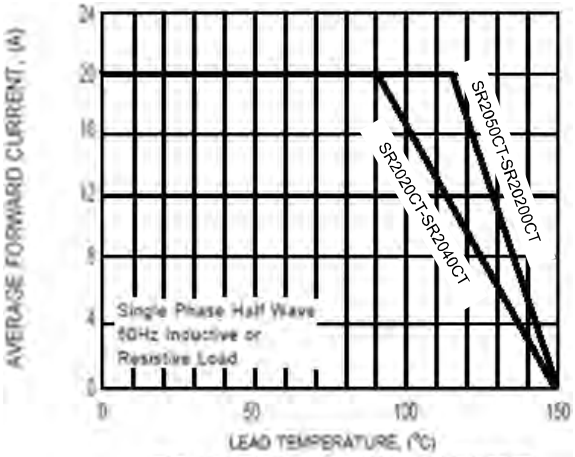


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

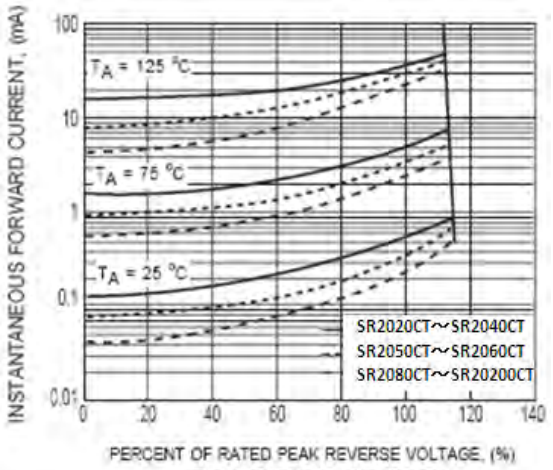


FIG.2 TYPICAL REVERSE CHARACTERISTICS

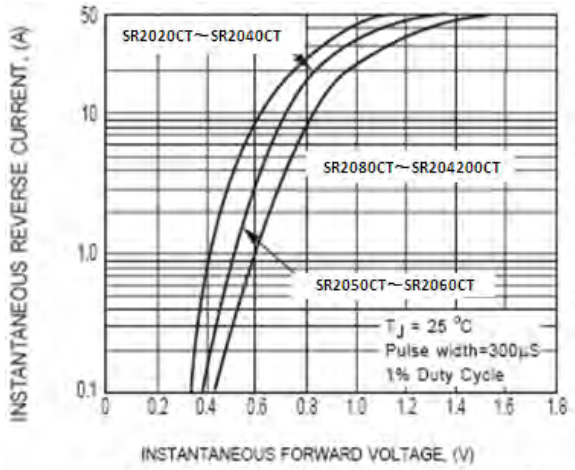


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

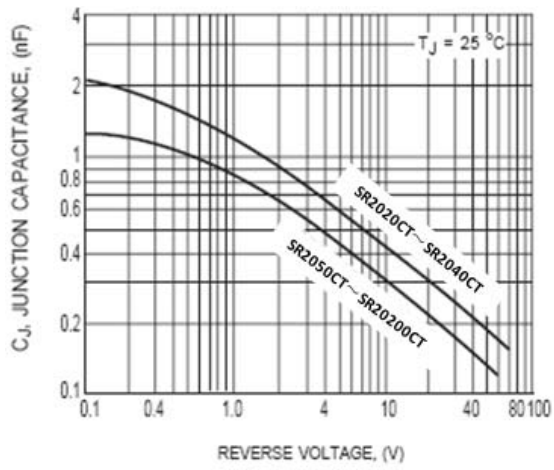


FIG.4 TYPICAL JUNCTION CAPACITANCE

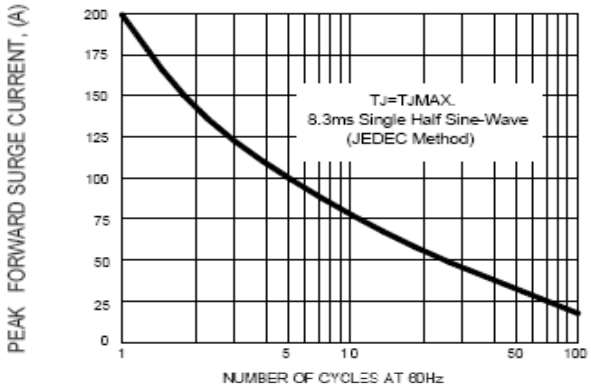


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT