

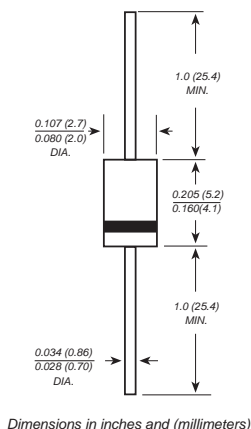


# SR120 THRU SR1200

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

### DO-41



### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-41 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounce, 0.33 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%.

| YXW Catalog Number  | SYMBOLS         | SR 120      | SR 130 | SR 140 | SR 150 | SR 160 | SR 170      | SR 180 | SR 190 | SR 1100 | SR 1150 | SR 1200 | UNITS |
|---|-----------------|-------------|--------|--------|--------|--------|-------------|--------|--------|---------|---------|---------|-------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 20          | 30     | 40     | 50     | 60     | 70          | 80     | 90     | 100     | 150     | 200     | VOLTS |
| Maximum RMS voltage   | $V_{RMS}$       | 14          | 21     | 28     | 35     | 42     | 49          | 56     | 63     | 70      | 105     | 140     | VOLTS |
| Maximum DC blocking voltage   | $V_{DC}$        | 20          | 30     | 40     | 50     | 60     | 70          | 80     | 90     | 100     | 150     | 200     | VOLTS |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length(see fig.1)                        | $I_{(AV)}$      | 1.0         |        |        |        |        |             |        |        |         |         |         | Amp   |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)    | $I_{FSM}$       | 40.0        |        |        |        |        |             |        |        |         |         |         | Amps  |
| Maximum instantaneous forward voltage at 1.0A   | $V_F$           | 0.55        |        | 0.70   |        | 0.85   |             |        | 0.95   |         |         | Volts   |       |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 0.5         |        |        |        |        |             |        |        | 0.2     |         | mA      |       |
|   |                 | 10.0        |        |        |        | 5.0    |             |        |        | 2.0     |         |         |       |
| Typical junction capacitance (NOTE 1)   | $C_J$           | 110         |        |        |        | 80     |             |        |        |         |         |         | pF    |
| Typical thermal resistance (NOTE 2)   | $R_{\theta JA}$ | 50.0        |        |        |        |        |             |        |        |         |         |         | °C/W  |
| Operating junction temperature range  | $T_J$           | -50 to +125 |        |        |        |        | -50 to +150 |        |        |         |         |         | °C    |
| Storage temperature range   | $T_{STG}$       | -50 to +150 |        |        |        |        |             |        |        |         |         |         | °C    |

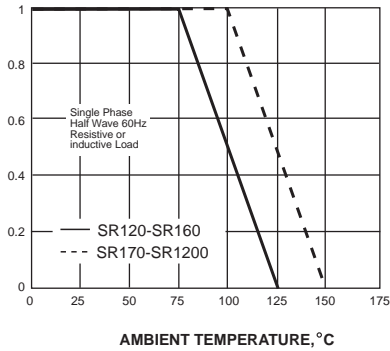
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES SR120 THRU SR1200

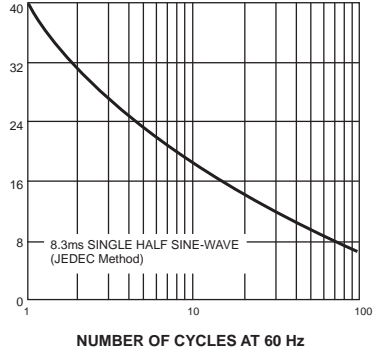
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



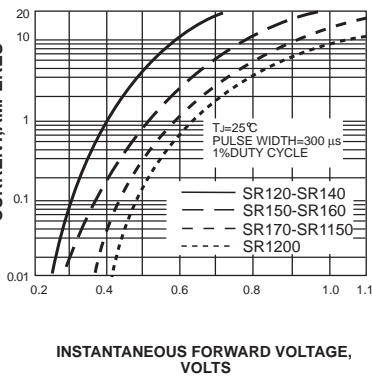
PEAK FORWARD SURGE CURRENT, AMPERES

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



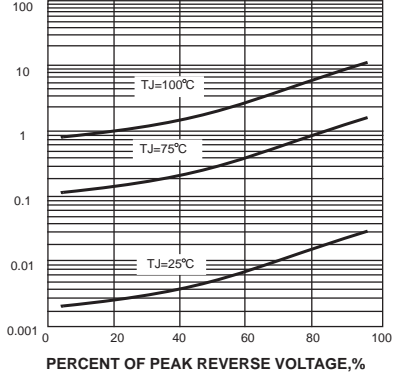
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



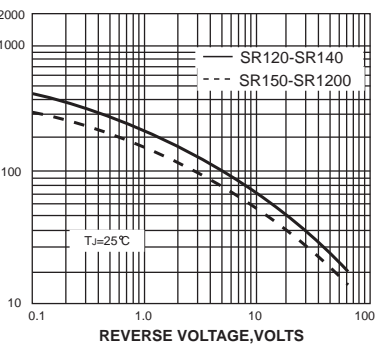
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



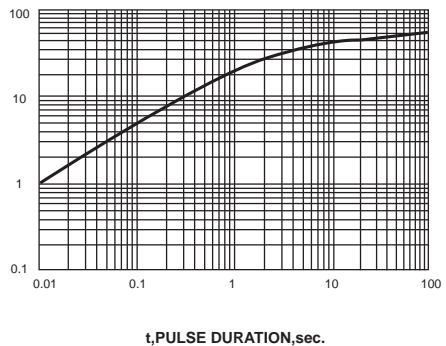
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!