# SR1620 THRU SR16200

## *SCHOTTKY BARRIER RECTIFIER*

康 比 電 子
HORNBY ELECTRONIC

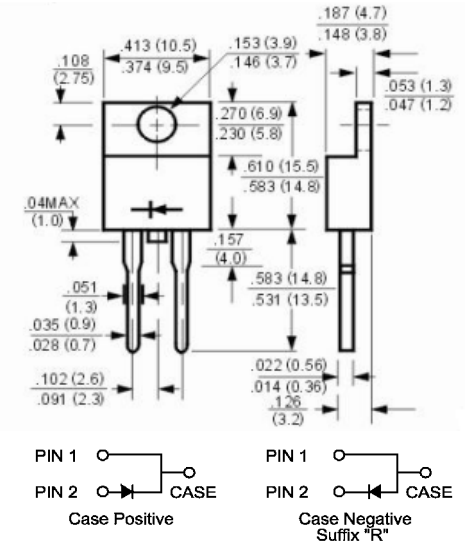
***REVERSE VOLTAGE:*** **20 to 200 VOLTS**

***FORWARD CURRENT:*** **16.0 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-220A**




**Dimensions in inches and (millimeters)**

### *MECHANICAL DATA*

Case: Molded plastic, TO-220A

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 | *SR1620* | *SR1630* | *SR1640* | *SR1650* | *SR1660* | *SR1680* | *SR16100* | *SR16150* | *SR16200* | 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 | 70 | 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** | $I_{(AV)}$ | 16.0 | | | | | | | | | **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 16.0A DC and 25℃** | $V_F$ | 0.55 | | | 0.70 | | 0.85 | | 0.95 | | **Volts** |
| **Maximum Reverse Current at $T_C$=25℃** / **at Rated DC Blocking Voltage $T_C$=125℃** | $I_R$ | 1.0 / 50 | | | | | | | | | **mAmp** |
| **Typical Junction Capacitance (Note 1)** | $C_J$ | 750 | | | 500 | | | | | | **pF** |
| **Typical Thermal Resistance (Note 2)** | $R_{\theta JC}$ | 2.0 | | | | | | | | | **℃/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*

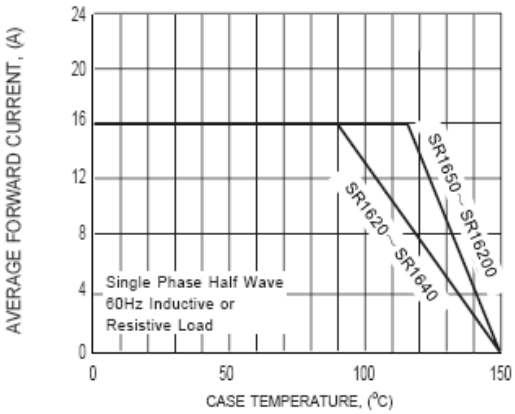



FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

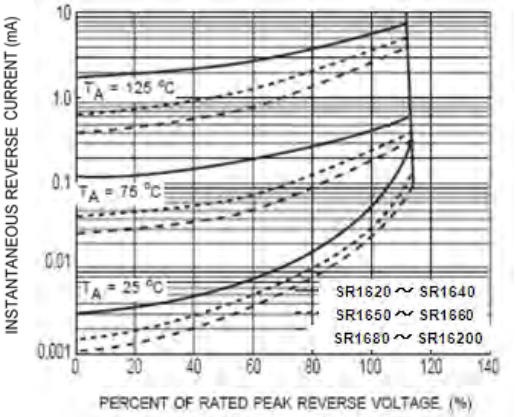



FIG.2 TYPICAL REVERSE CHARACTERISTICS

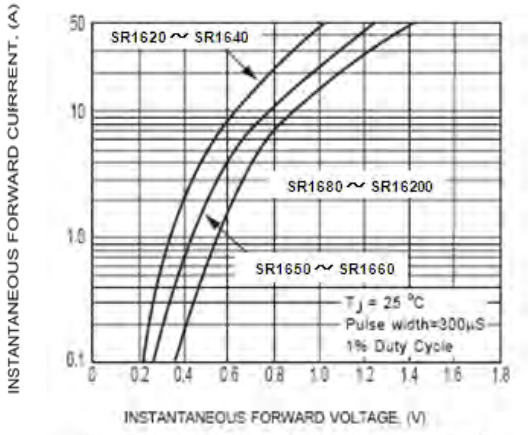



FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

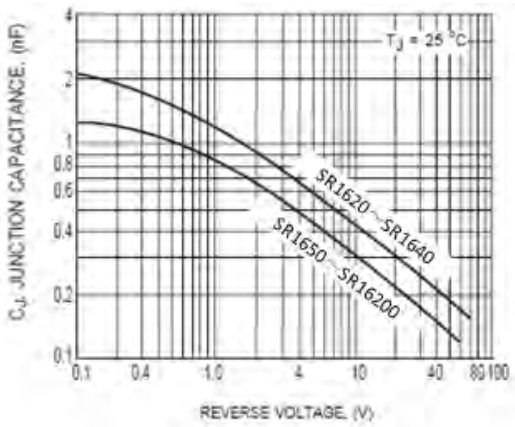



FIG.4 TYPICAL JUNCTION CAPACITANCE

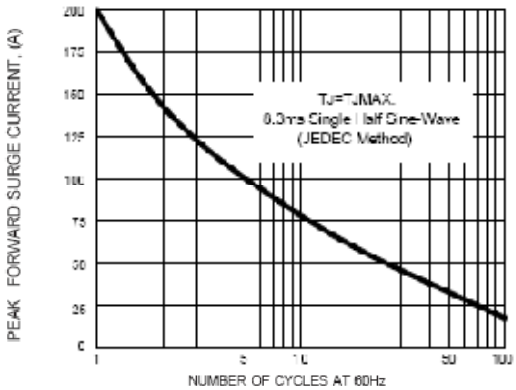



FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT