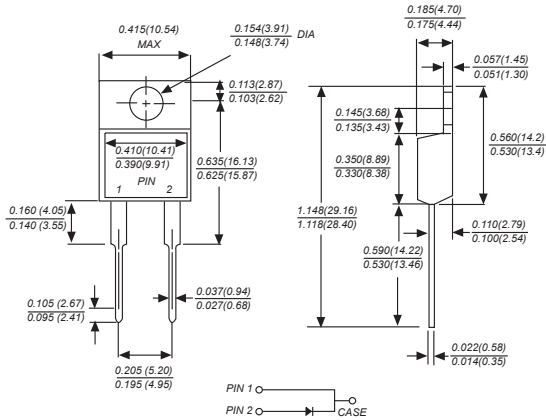


SR1620 THRU SR16A0

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 16.0 Amperes

TO-220AC



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-220AC molded plastic body
Terminals: Leads solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.064 ounce, 1.81 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%.

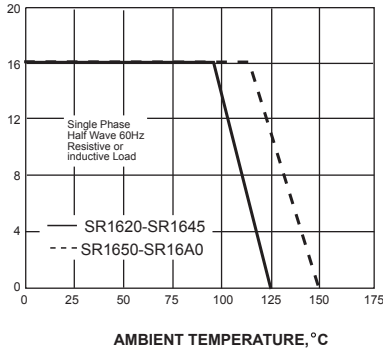
| | SYMBOLS | SR 1620 | SR 1630 | SR 1640 | SR 1645 | SR 1650 | SR 1660 | SR 1670 | SR 1680 | SR 1690 | SR 16A0 | UNITS |
|---|-----------------|-------------|---------|---------|---------|---------|-------------|---------|---------|---------|---------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 32 | 35 | 42 | 49 | 56 | 63 | 70 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | VOLTS |
| Maximum average forward rectified current (see fig.1) | $I_{(AV)}$ | 16.0 | | | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150.0 | | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 16.0A | V_F | 0.65 | | | 0.75 | | 0.85 | | | | | Volts |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ | I_R | 1.0 | | | | | 15.0 | | | | | mA |
| Typical junction capacitance (NOTE 1) | C_J | 800 | | | | | 600 | | | | | |
| Typical thermal resistance (NOTE 2) | $R_{\theta JC}$ | 3.0 | | | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -65 to +125 | | | | | -65 to +150 | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -65 to +150 | | | | | | | | | | $^\circ\text{C}$ |

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 SR1620 THRU SR16A0

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

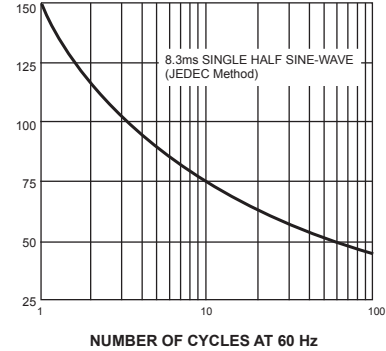
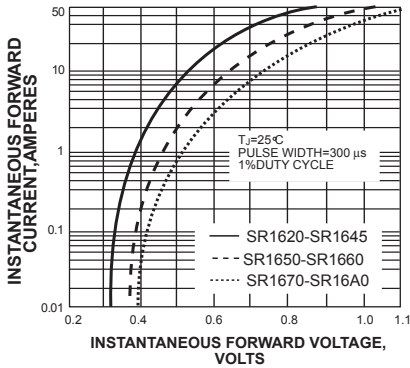
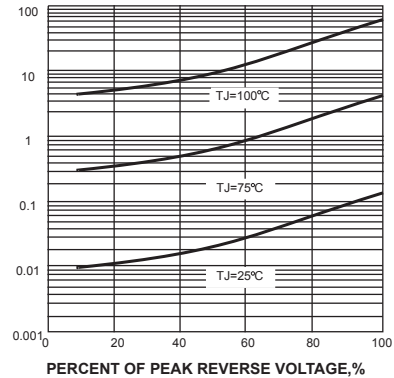


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



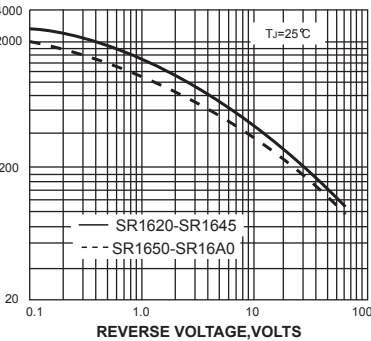
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, $^\circ\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

