

SRS1620 THRU SRS1660

SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 20 to 60 VOLTS
FORWARD CURRENT: 16.0 AMPERE

FEATURES

- For surface mounted application
- 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

MECHANICAL DATA

Case: Molded plastic, D²PAK

Epoxy: UL 94V-O rate flame retardant

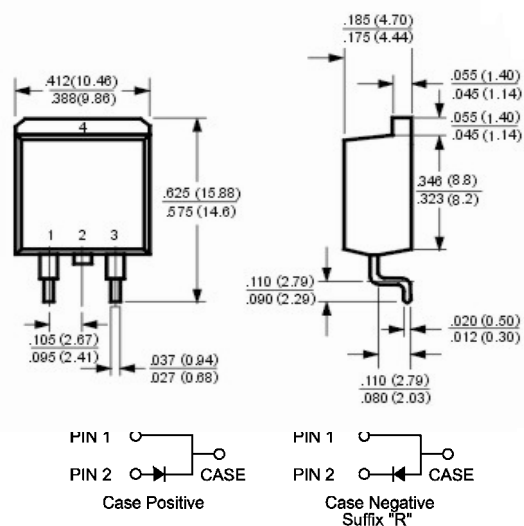
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.06ounce, 1.70gram

D²PAK



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 | SRS1620 | SRS1630 | SRS1640 | SRS1650 | SRS1660 | Units |
|---|-----------------|---------------------------------|---------|---------|-----------------------------------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 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} | 275 | | | | | Amp |
| Maximum Forward Voltage at 16.0A DC and 25°C | V_F | 0.55 | | | 0.70 | | Volts |
| Maximum Reverse Current at Rated DC Blocking Voltage | I_R | at $T_C=25^\circ\text{C}$ 50 | | | at $T_C=125^\circ\text{C}$ 1.0 | | mAmp |
| Typical Junction Capacitance (Note 1) | C_J | 750 | | | 500 | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JC}$ | 1.5 | | | | | °C/W |
| Operating Temperature Range | T_J | -55 to +125 | | | -55 to +150 | | °C |
| Storage Temperature Range | T_{stg} | -55 to +150 | | | | | °C |

NOTES:

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

2- Thermal Resistance from Junction to Case Per Leg

SRS1620 THRU SRS1660 SCHOTTKY BARRIER RECTIFIER

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

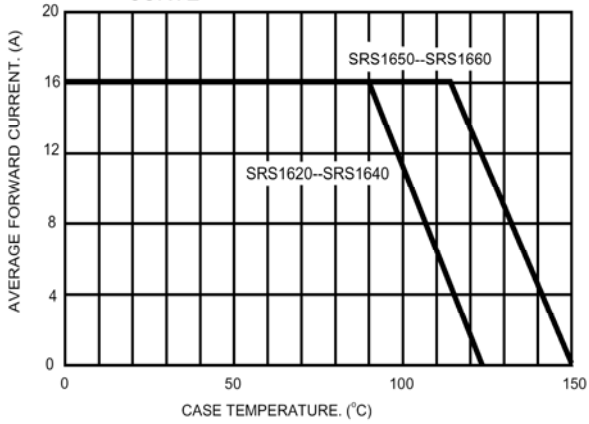


FIG.2- TYPICAL REVERSE CHARACTERISTICS

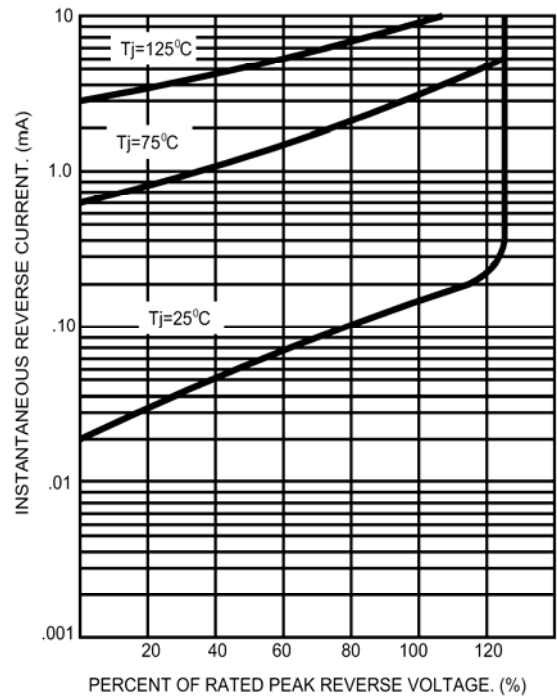


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

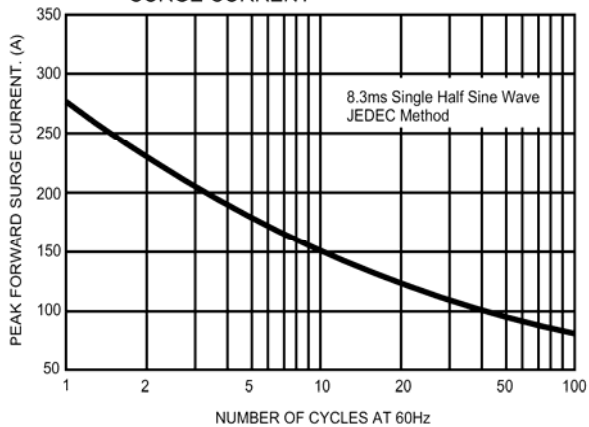


FIG.5- TYPICAL FORWARD CHARACTERISTICS

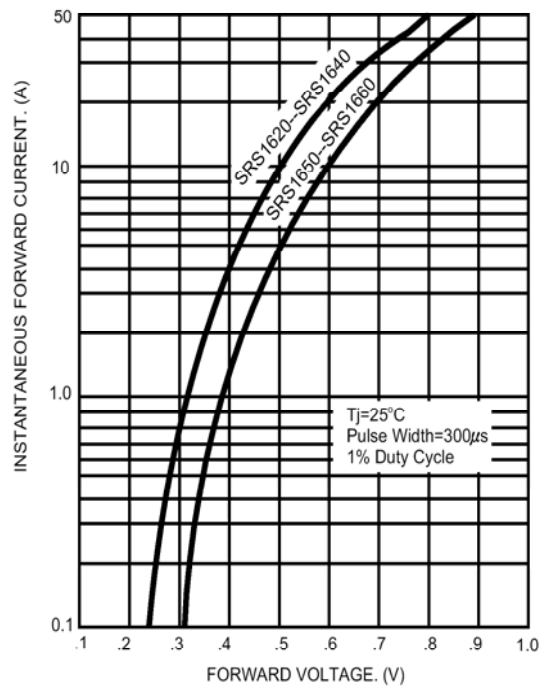


FIG.4- TYPICAL JUNCTION CAPACITANCE

