PRELIMINARY

# SSR1645/59

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

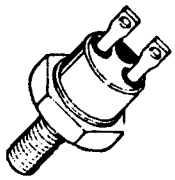
## Designer's Data Sheet

**20 AMP**
**45 VOLTS**
**SCHOTTKY**
**RECTIFIER**

**FEATURES:**

- Low Reverse Leakage
- Low Forward Voltage Drop
- Guard Ring for Overvoltage protection
- Isolated Hermetically Sealed Power Package
- Eutectic Die Attach
- 175°C Operating Temperature
- TX, TXV and Space Level Screening Available

**TO-59**



## MAXIMUM RATINGS

| RATING | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| **Peak Repetitive Reverse and DC Blocking Voltage** | $V_{RRM}$ $V_{RWM}$ $V_R$ | 45 | **Volts** |
| **Average Rectified Forward Current** (Resistive Load, 60Hz, Sine Wave, TA=25°C) | **Io** | 20 | **Amps** |
| **Peak Surge Current** (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, TA=25°C) | **$I_{FSM}$** | 300 | **Amps** |
| **Operating and storage temperature** | **Top & Tstg** | -65 to +175 | **°C** |
| **Maximum Thermal Resistance** Junction to Case | **$R_{\theta JC}$** | 1.0 | **°C/W** |

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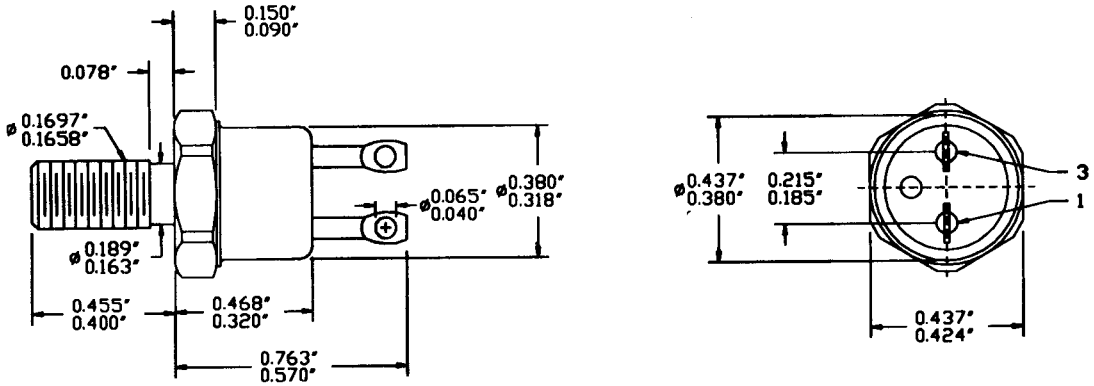
## ELECTRICAL CHARACTERISTICS

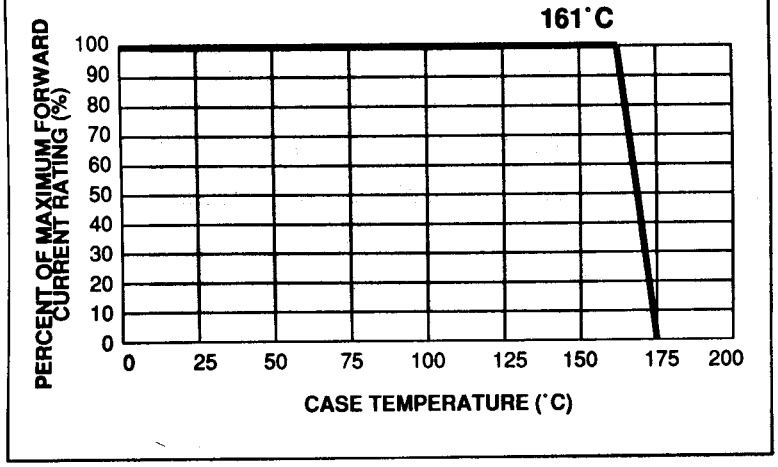
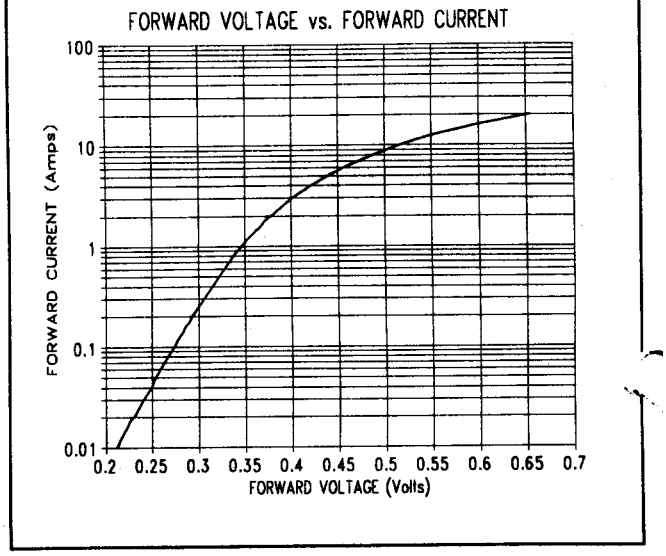
| CHARACTERISTICS | SYMBOL | MAXIMUM | UNIT |
|---|---|---|---|
| **Instantaneous Forward Voltage Drop**<br>($I_F$ = 5 Adc, $T_A$=25°C, 300µs Pulse)<br>($I_F$ = 10 Adc, $T_A$=25°C, 300µs Pulse)<br>($I_F$ = 20 Adc, $T_A$=25°C, 300µs Pulse) | $V_{F1}$ | 0.50<br>0.55<br>0.70 | Vdc |
| **Instantaneous Forward Voltage Drop**<br>($I_F$ = 10 Adc, $T_A$= - 55°C, 300µs Pulse) | $V_{F2}$ | 0.62 | Vdc |
| **Reverse Leakage Current**<br>(Rated VR, $T_A$=25°C, 300µs pulse minimum) | $I_{R1}$ | 200 | µA |
| **Reverse Leakage Current**<br>(Rated VR, $T_A$=100°C, 300µs pulse minimum) | $I_{R2}$ | 15 | mA |
| **Junction Capacitance**<br>($V_R$ = 10 Vdc, $T_A$=25°C, f= 1 MHz ) | CJ | 800 | pf |

## CASE OUTLINE: TO-59

**PIN OUT:**

**PIN 1: ANODE**
**PIN 3: CATHODE**
**STUD: N/C**




## TYPICAL OPERATING CURVES

**(TA=25°C unless otherwise specfied)**