

**SDR958/3  
 thru  
 SDR9511/3**

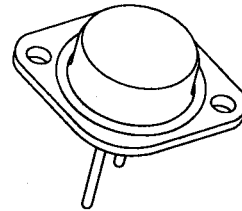
**Designer's Data Sheet**

**50 AMP  
 800-1100 VOLTS  
 80 nsec  
 ULTRA FAST  
 RECTIFIER**

**FEATURES:**

- Ultrafast Recovery: 60 nsec typical
- High Surge Rating
- Low Reverse Leakage Current
- Low Forward Voltage Drop
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
  
- TX, TXV and Space Level Screening Available

TO-3



**MAXIMUM RATINGS**

| RATING   | SYMBOL     | VALUE       | UNIT  |
|--|------------|-------------|-------|
| Peak Repetitive Reverse and DC Blocking Voltage  | VRRM       | 800         | Volts |
|  | VRWM       | 900         |       |
|  | SDR958/3   | 1000        |       |
|  | SDR959/3   | 1100        |       |
| Average Rectified Forward Current<br>(Resistive Load, 60Hz, Sine Wave, TA=25°C) note 1 | IO         | 50          | Amps  |
| Peak Surge Current<br>(8.3 ms Pulse, Half Sine Wave, TA=25°C)                          | IFSM       | 600         | Amps  |
| Operating and storage temperature  | Top & Tstg | -65 to +200 | °C    |
| Maximum Thermal Resistance<br>Junction to Case, note 1                                 | RθJC       | 1.2         | °C/W  |

note 1 Pins 1 & 2 connected

# SDR958/3 thru SDR9511/3

PRELIMINARY



SOLID STATE DEVICES, INC

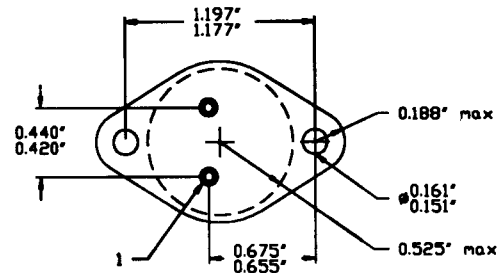
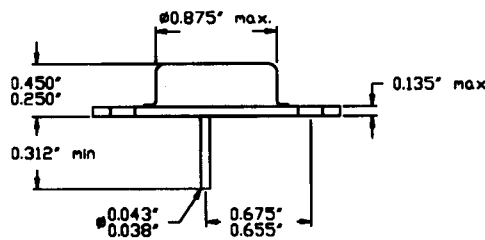
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## ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS   | SYMBOL     | MAXIMUM      | UNIT        |
|---|------------|--------------|-------------|
| <b>Instantaneous Forward Voltage Drop</b><br>(IF = 25 Adc, TA=25°C, 300ms Pulse) note 1<br>(IF = 50 Adc, TA=25°C, 300ms Pulse) note 1     | <b>VF</b>  | 1.40<br>1.55 | <b>Vdc</b>  |
| <b>Instantaneous Forward Voltage Drop</b><br>(IF = 25 Adc, TA=100°C, 300ms Pulse) note 1<br>(IF = 25 Adc, TA= - 55°C, 300ms Pulse) note 1 | <b>VF</b>  | 1.30<br>1.50 | <b>Vdc</b>  |
| <b>Reverse Leakage Current</b><br>(Rated VR, TA=25°C, 300ms pulse minimum)  | <b>IR</b>  | 100          | <b>μA</b>   |
| <b>Reverse Leakage Current</b><br>(Rated VR, TA=100°C, 300ms pulse minimum)   | <b>IR</b>  | 10           | <b>mA</b>   |
| <b>Junction Capacitance</b><br>(VR = 10 Vdc, TA=25°C, f= 1 MHz )  | <b>CJ</b>  | 150          | <b>pf</b>   |
| <b>Reverse Recovery Time</b><br>(IF=500mA, IR=1 A, IRR=250mA, TA=25°C)  | <b>trr</b> | 80           | <b>nsec</b> |

**CASE OUTLINE: TO-3**  
**CASE: CATHODE**  
**PIN 1: ANODE**  
**PIN 2: ANODE**

**Note 1:**  
**Connect**  
**Pin 1 & 2**  
**together.**



## TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

