



PRELIMINARY

SOLID STATE DEVICES, INC

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

SSR1645J

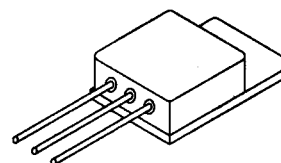
## Designer's Data Sheet

## FEATURES:

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

15 AMP  
45 VOLTS  
SCHOTTKY  
RECTIFIER

TO-257



## MAXIMUM RATINGS

| RATING                                                                                                                                  | SYMBOL             | VALUE       | UNIT  |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|-------|
| Peak Repetitive Reverse<br>and DC Blocking Voltage                                                                                      | VRRM<br>VRWM<br>VR | 45          | Volts |
| Average Rectified Forward Current<br>(Resistive Load, 60Hz, Sine Wave, TA=25°C)                                                         | IO                 | 15          | Amps  |
| Peak Surge Current<br>(8.3 ms Pulse, Half Sine Wave Superimposed on IO, allow<br>junction to reach equilibrium between pulses, TA=25°C) | IFSM               | 250         | Amps  |
| Operating and storage temperature                                                                                                       | Top & Tstg         | -65 to +175 | °C    |
| Maximum Thermal Resistance<br>Junction to Case                                                                                          | RθJC               | 1.5         | °C/W  |

NOTE: All specifications are subject to change without notification.  
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RS0011 A

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# SSR1645J

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# SSDI

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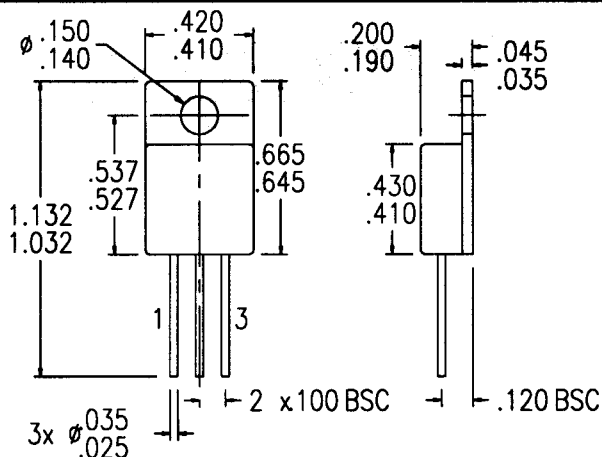
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## ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS                                                                                                                                                                                                                                                                                   | SYMBOL     | MAXIMUM              | UNIT          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|---------------|
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 5 \text{ A dc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)<br>( $I_F = 10 \text{ A dc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)<br>( $I_F = 15 \text{ A dc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse) | <b>VF1</b> | 0.52<br>0.64<br>0.75 | Vdc           |
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 10 \text{ A dc}$ , $T_A = -55^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)                                                                                                                                                                     | <b>VF2</b> | 0.72                 | Vdc           |
| <b>Reverse Leakage Current</b><br>(Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)                                                                                                                                                                                      | <b>IR1</b> | 200                  | $\mu\text{A}$ |
| <b>Reverse Leakage Current</b><br>(Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)                                                                                                                                                                                     | <b>IR2</b> | 15                   | mA            |
| <b>Junction Capacitance</b><br>( $V_R = 10 \text{ Vdc}$ , $T_A = 25^\circ\text{C}$ , $f = 1 \text{ MHz}$ )                                                                                                                                                                                        | <b>CJ</b>  | 800                  | pf            |

## CASE OUTLINE: TO-257

**PIN 1: CATHODE**  
**PIN 2: ANODE**  
**PIN 3: ANODE**



## TYPICAL OPERATING CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise specified)

