



PRELIMINARY

**SOLID STATE DEVICES, INC**

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

**SSR1645-28**

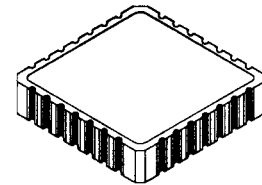
## Designer's Data Sheet

### FEATURES:

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

**15 AMP  
45 VOLTS  
SCHOTTKY  
RECTIFIER**

**28 PIN CLCC**



### MAXIMUM RATINGS

| RATING                                                                                                                                      | SYMBOL             | VALUE       | UNIT  |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|-------|
| <b>Peak Repetitive Reverse and DC Blocking Voltage</b>                                                                                      | VRRM<br>VRWM<br>VR | 45          | Volts |
| <b>Average Rectified Forward Current</b><br>(Resistive Load, 60Hz, Sine Wave, TA=25°C)                                                      | IO                 | 15          | Amps  |
| <b>Peak Surge Current</b><br>(8.3 ms Pulse, Half Sine Wave Superimposed on IO, allow junction to reach equilibrium between pulses, TA=25°C) | IFSM               | 80*         | Amps  |
| <b>Operating and storage temperature</b>                                                                                                    | Top & Tstg         | -65 to +175 | °C    |
| <b>Maximum Thermal Resistance</b><br>Junction to Case                                                                                       | RθJC               | 4.0         | °C/W  |

\* Connect all cathode and anode pins.

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

**DATA SHEET #: RS0001 A**

**MED**

# SSR1645-28

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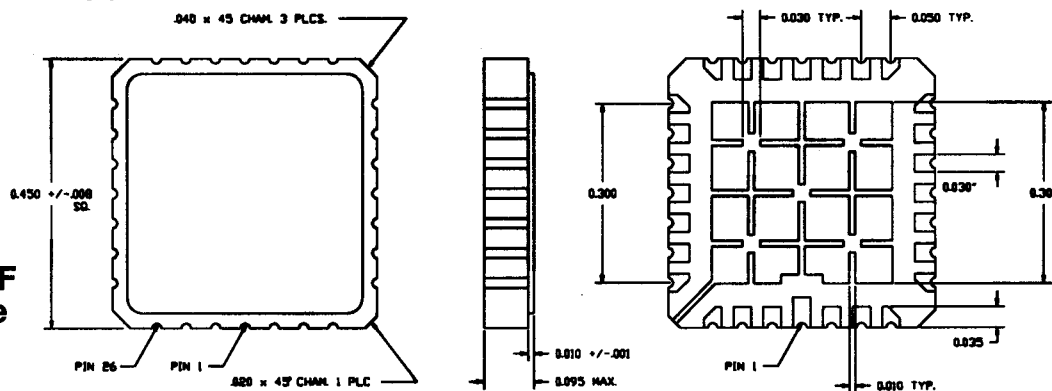
## ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS                                                                                                                                                                                                                                                                                  | SYMBOL     | MAXIMUM              | UNIT          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|---------------|
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 3 \text{ A dc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)<br>( $I_F = 5 \text{ A dc}$ , $T_A = 25^\circ\text{C}$ , 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> | 0.48<br>0.55<br>0.82 | Vdc           |
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 5 \text{ A dc}$ , $T_A = -55^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)                                                                                                                                                                     | <b>VF2</b> | 0.64                 | 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: 28 PIN CLCC

**PIN 5-11: CATHODE**  
**PIN 1, 15-28: ANODE**  
**PIN 2,3,13,14: N/C**

**NOTE:**  
Connect all cathode/  
anode pins for best VF  
values and best surge  
capability.



## TYPICAL OPERATING CURVES

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

