



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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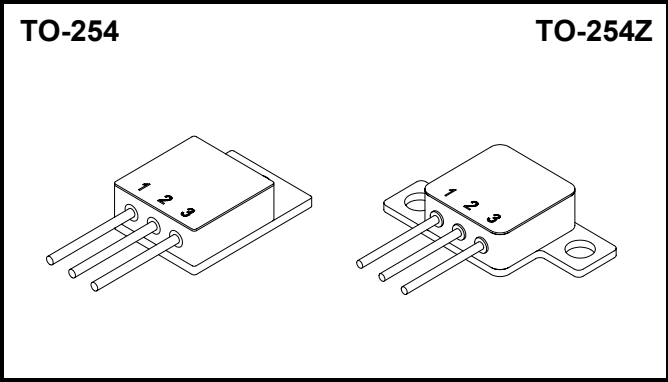
**SSR2008CTM, SSR2008CTZ  
SSR2009CTM, SSR2009CTZ  
SSR2010CTM, SSR2010CTZ**

## Designer's Data Sheet

### FEATURES:

- PIV: 100 Volts
- Low Reverse Leakage Current
- Low Forward Voltage Drop
- Guard Ring for Overvoltage Protection
- Isolated Hermetically Sealed Package
- Available in Glass or Ceramic Seal Packages
- Custom Lead Forming Available
- Eutectic Die Attach
- 175°C Operating Junction Temperature
- TX, TXV, and Space Level Screening Available

**20 AMPS  
100 VOLTS  
CENTER TAP  
SCHOTTKY RECTIFIER**



Available in Given Voltage (2008, 2009, 2010) in the Following Configurations:  
TO-254: **SSR2010CTM, SSR2010CTMUB, SSR2010CTMDB, SSR2010CAM, SSR2010CAMUB, SSR2010CAMDB  
SSR1010DM, SSR1010DMUB, SSR1010DMDB**  
TO-254Z: **SSR2010CTZ, SSR2010CTZUB, SSR2010CTZDB, SSR2010CAZ, SSR2010CAZUB, SSR2010CAZDB  
SSR1010DZ, SSR1010DZUB, SSR1010DZDB**

| MAXIMUM RATINGS <sup>1/</sup>   |                                | Symbol              | Value       | Unit  |
|---|--------------------------------|---------------------|-------------|-------|
| Peak Repetitive Reverse Voltage and DC Blocking Voltage   | SSR2008CTM & CTZ               | $V_{RRM}$           | 80          | Volts |
|   | SSR2090CTM & CTZ               | $V_{RWM}$           | 90          |       |
|   | SSR2010CTM & CTZ               | $V_R$               | 100         |       |
| Average Rectified Forward Current <sup>3/ 4/</sup><br>(Resistive Load, 60 Hz, Sine Wave, $T_C = 25^\circ C$ ) |                                | $I_O$               | 20          | Amps  |
| Peak Surge Current <sup>3/ 4/</sup><br>(8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$ )                    |                                | $I_{FSM}$           | 300         | Amps  |
| Operating and Storage Temperature   |                                | $T_{OP} \& T_{stg}$ | -65 to +175 | °C    |
| Maximum Thermal Resistance  | Junction to Case <sup>3/</sup> | $R_{\theta JC}$     | 1.0         | °C/W  |
|   | Junction to Case <sup>2/</sup> |                     | 1.7         |       |

### NOTE:

- 1/** All Electrical Characteristics @25°C, Unless Otherwise Specified.
- 2/** Per Leg.
- 3/** Pins 1 and 3 Connected Together.
- 4/** Doubler:  $I_O = 10A$ ,  $I_{FSM} = 200A$ .

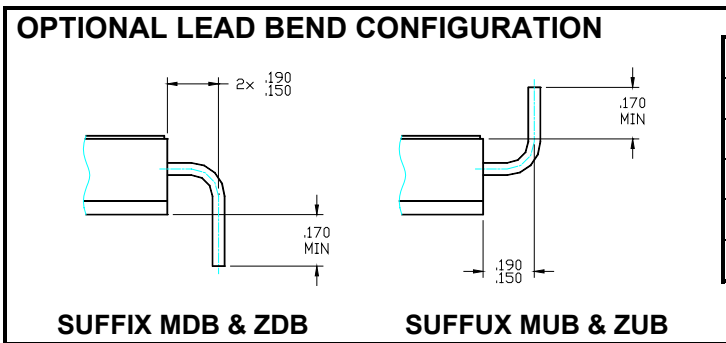
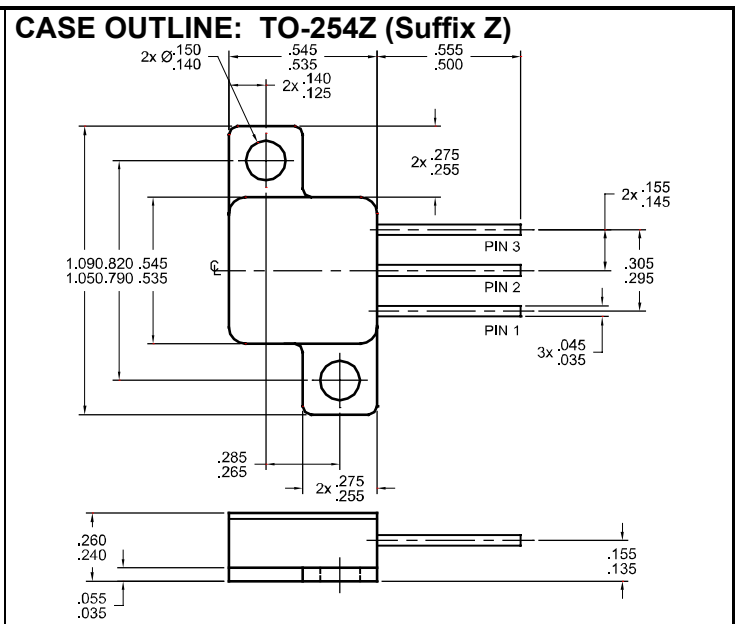
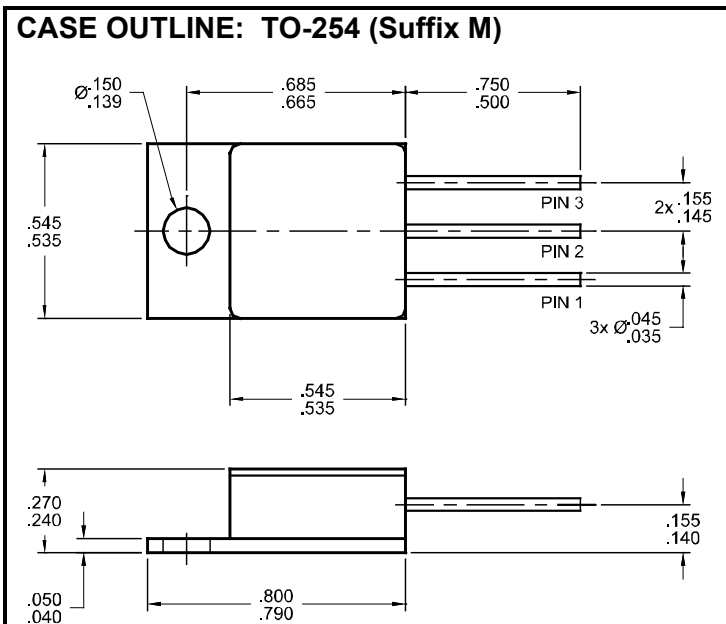


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**SSR2010CTM, SSR2010CTZ**

| ELECTRICAL CHARACTERISTICS <sup>1/, 2/</sup>                         |                                 | Symbol   | Max  | Unit  |
|--|---------------------------------|----------|------|-------|
| Instantaneous Forward Voltage Drop<br>(300 - 500µs Pulse)            | $I_F = 1A$                      | $V_{F1}$ | 0.57 | Volts |
|  | $I_F = 5A$                      | $V_{F2}$ | 0.72 |       |
|  | $I_F = 10A$                     | $V_{F3}$ | 0.80 |       |
| Instantaneous Forward Voltage Drop<br>(300 - 500µs Pulse)            | $I_F = 10A, T_A = 100^\circ C$  | $V_{F4}$ | 0.70 | Volts |
|  | $I_F = 10A, T_A = -55^\circ C,$ | $V_{F5}$ | 0.90 |       |
| Reverse Leakage Current<br>(300µs pulse minimum)                     | $V_R = 100V, T_A = 25^\circ C$  | $I_{R1}$ | 100  | µA    |
|  | $V_R = 100V, T_C = 100^\circ C$ | $I_{R2}$ | 5    | mA    |
| Junction Capacitance<br>( $V_R = 10 V, f = 1MHz, T_A = 25^\circ C$ ) |                                 | $C_J$    | 400  | pF    |



| PIN ASSIGNMENT |                 |         |         |         |
|----------------|-----------------|---------|---------|---------|
| CODE           | FUNCTION        | PIN 1   | PIN 2   | PIN 3   |
| CT             | Common Cathode  | Anode   | Cathode | Anode   |
| CA             | Common Anode    | Cathode | Anode   | Cathode |
| D              | Doubler         | Cathode | Common  | Anode   |
| DR             | Reverse Doubler | Anode   | Common  | Cathode |

**NOTE:**

- 1/ All Electrical Characteristics @25°C, Unless Otherwise Specified.
- 2/ Per Leg.