



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, CA 90638  
Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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## SSR3010 series

### 30 AMP 100 VOLTS SCHOTTKY RECTIFIER

### Designer's Data Sheet

**Part Number / Ordering Information<sup>1/</sup>**  
**SSR3010**

	L	<b>Screening<sup>2/</sup></b>
		— = Not Screened
		TX = TX Level
		TXV = TXV Level
		S = S Level
	L	<b>Package</b>
		S.5 = SMD.5
		G = Cerpack

- FEATURES:**
- PIV: 100 Volts
  - Low Forward Voltage Drop
  - Low Reverse Leakage
  - Hermetically Sealed Power Surface Mount Package
  - Guard Ring for Overvoltage Protection
  - Eutectic Die Attach
  - 175°C Operating Junction Temperature
  - TX, TXV, or Space Level Screening Available

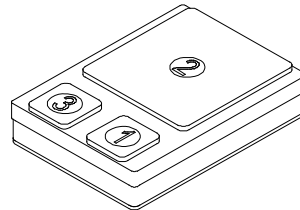
### MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	100	Volts
Average Rectified Output Current <sup>3/</sup> (Resistive Load, 60Hz, Sine Wave, TA=25°C)	$I_O$	30	Amps
Peak Surge Current <sup>3/</sup> (8.3 ms Pulse, Half Sine Wave superimposed on $I_O$ , allow junction to reach equilibrium between pulses, TA=25°C)	$I_{FSM}$	250	Amps
Operating and Storage Temperature	$T_{OP}$ & $T_{STG}$	-65 to +175	°C
Maximum Thermal Resistance <sup>3/</sup> Junction to Case	$R_{\theta JC}$	2	°C/W

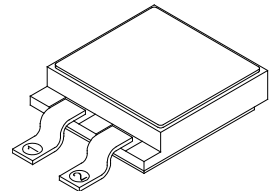
**Note:**

- 1/ For ordering information, price, and availability, contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Both legs tied together.

**SMD.5**



**Cerpack**





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## ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	TYPICAL	MAXIMUM	UNIT
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 20 \text{ Adc}$ , $T_A = 25^\circ\text{C}$ , Pulse)	$V_{F1}$	0.86	0.90	Vdc
( $I_F = 30 \text{ Adc}$ , $T_A = 25^\circ\text{C}$ , Pulse)	$V_{F2}$	0.97	1.04	
( $I_F = 60 \text{ Adc}$ , $T_A = 25^\circ\text{C}$ , Pulse)	$V_{F3}$	1.20	1.35	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 20 \text{ Adc}$ , $T_A = -55^\circ\text{C}$ , Pulse)	$V_{F4}$	0.90	0.98	Vdc
( $I_F = 30 \text{ Adc}$ , $T_A = -55^\circ\text{C}$ , Pulse)	$V_{F5}$	1.00	1.10	
( $I_F = 60 \text{ Adc}$ , $T_A = -55^\circ\text{C}$ , Pulse)	$V_{F6}$	1.24	1.43	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 20 \text{ Adc}$ , $T_A = 125^\circ\text{C}$ , Pulse)	$V_{F7}$	0.65	0.73	Vdc
( $I_F = 30 \text{ Adc}$ , $T_A = 125^\circ\text{C}$ , Pulse)	$V_{F8}$	0.72	0.81	
( $I_F = 60 \text{ Adc}$ , $T_A = 125^\circ\text{C}$ , Pulse)	$V_{F9}$	0.85	1.03	
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25^\circ\text{C}$ , Pulse)	$I_{R1}$	20	250	$\mu\text{A}$
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100^\circ\text{C}$ , Pulse)	$I_{R2}$	1.3	-	mA
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 125^\circ\text{C}$ , Pulse)	$I_{R3}$	4.5	15	mA
<b>Junction Capacitance</b> ( $V_R = 5 \text{ Vdc}$ , $T_A = 25^\circ\text{C}$ , $f = 1 \text{ MHz}$ )	$C_J$	375	450	pF

