

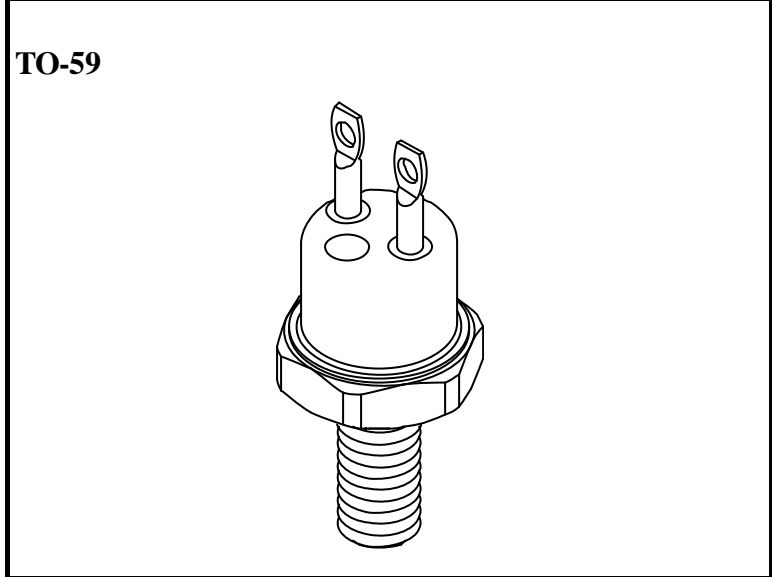


**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, CA 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**SDR623/59  
 Thru  
 SDR626/59**

**DESIGNER'S DATA SHEET <sup>1/</sup>**



**20A 35nsec 300-600 V  
 Hyper Fast Rectifier**

- Features:**
- Hyper Fast Recovery: 35nsec Maximum <sup>3/</sup>
  - High Surge Rating
  - Low Reverse Leakage Current
  - Low Junction Capacitance
  - Hermetically Sealed Package
  - Gold Eutectic Die Attach
  - Ultrasonic Aluminum Wire Bonds
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>

Maximum Ratings		Symbol	Value	Units
<b>Peak Repetitive Reverse Voltage</b>	SDR623/59	$V_{RRM}$ $V_{RWM}$ $V_R$	300	<b>Volts</b>
	SDR624/59		400	
	SDR625/59		500	
	SDR626/59		600	
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz Sine Wave, T <sub>A</sub> = 25 °C)		I <sub>O</sub>	20	<b>Amps</b>
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> = 25 °C)		I <sub>FSM</sub>	200	<b>Amps</b>
<b>Operating &amp; Storage Temperature</b>		T <sub>OP</sub> & T <sub>STG</sub>	-65 to +200	<b>°C</b>
<b>Maximum Total Thermal Resistance</b> Junction to Case		R <sub>θJC</sub>	1.5	<b>°C/W</b>

- **Notes:**

1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.  
 2/ Screened to MIL-PRF-19500.  
 3/ Recovery Conditions: I<sub>F</sub> = 0.5 Amp, I<sub>R</sub> = 1.0 Amp, rec. to .25 Amp.



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Electrical Characteristics		Symbol	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 25\text{ }^\circ\text{C}$	$V_{F1}$	1.45	$V_{DC}$
	$T_A = 25\text{ }^\circ\text{C}$	$V_{F2}$	1.65	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 100\text{ }^\circ\text{C}$	$V_{F3}$	1.35	$V_{DC}$
	$T_A = -55\text{ }^\circ\text{C}$	$V_{F4}$	1.55	
<b>Reverse Leakage Current</b> (100% of rated $V_R$ , Pulse)	$T_A = 25\text{ }^\circ\text{C}$	$I_{R1}$	50	$\text{mA}$
	$T_A = 100\text{ }^\circ\text{C}$	$I_{R2}$	5	$\text{mA}$
<b>Reverse Recovery Time</b> ( $I_F = 0.5\text{A}$ , $I_R = 1\text{A}$ , $I_{RR} = 0.25\text{A}$ , $T_A = 25\text{ }^\circ\text{C}$ )		$t_{RR}$	35	nsec
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25\text{ }^\circ\text{C}$ , $f = 1\text{MHz}$ )		$C_J$	150	pF

PIN ASSIGNMENT			
PACKAGE	Pin 1	Pin 2	Pin 3
TO-59	Anode	---	Cathode

