



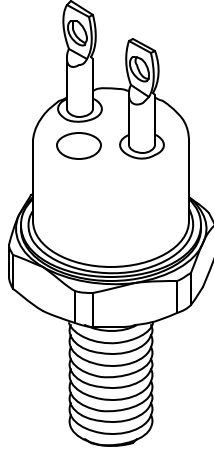
**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, CA 90638  
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**SDR623/59  
Thru  
SDR626/59**

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

**TO-59**



**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>	<b>SDR623/59</b>	$V_{RRM}$ $V_{RWM}$ $V_R$	300	<b>Volts</b>
	<b>SDR624/59</b>		400	
	<b>SDR625/59</b>		500	
	<b>SDR626/59</b>		600	
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ C$ )		$I_O$	20	<b>Amps</b>
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$ )		$I_{FSM}$	200	<b>Amps</b>
<b>Operating &amp; Storage Temperature</b>		$T_{OP}$ & $T_{STG}$	-65 to +200	<b>°C</b>
<b>Maximum Total Thermal Resistance</b> Junction to Case		$R_{\theta JC}$	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:  $I_F = 0.5$  Amp,  $I_R = 1.0$  Amp, rec. to .25 Amp.

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

**DATA SHEET #: RH0047B**

**DOC**



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Electrical Characteristics	Symbol	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse) ( $I_F = 20\text{Adc}$ , Pulse)	$T_A = 25^\circ\text{C}$ $V_{F1}$	1.45	$V_{DC}$
	$T_A = 25^\circ\text{C}$ $V_{F2}$	1.65	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 100^\circ\text{C}$ $V_{F3}$	1.35	$V_{DC}$
	$T_A = -55^\circ\text{C}$ $V_{F4}$	1.55	
<b>Reverse Leakage Current</b> (100% of rated $V_R$ , Pulse)	$T_A = 25^\circ\text{C}$ $I_{R1}$	50	$\text{mA}$
	$T_A = 100^\circ\text{C}$ $I_{R2}$	5	$\text{mA}$
<b>Reverse Recovery Time</b> ( $I_F = 0.5\text{A}$ , $I_R = 1\text{A}$ , $I_{RR} = 0.25\text{A}$ , $T_A = 25^\circ\text{C}$ )	$t_{RR}$	35	$\text{nsec}$
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )	$C_J$	150	$\text{pF}$

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

