



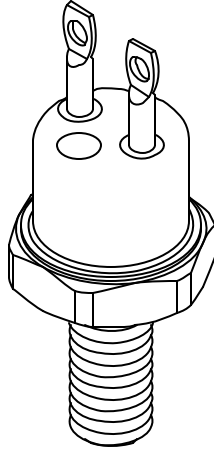
Solid State Devices, Inc.

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**SDR623/59
Thru
SDR626/59**

DESIGNER'S DATA SHEET ^{1/}

TO-59



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

Features:

- **Hyper Fast Recovery: 35nsec Maximum ^{3/}**
- **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 ^{2/}**

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR623/59	V_{RRM} V_{RWM} V_R	300	Volts
	SDR624/59		400	
	SDR625/59		500	
	SDR626/59		600	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25\text{ }^\circ\text{C}$)		I_O	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25\text{ }^\circ\text{C}$)		I_{FSM}	200	Amps
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +200	°C
Maximum Total Thermal Resistance Junction to Case		$R_{\theta JC}$	1.5	°C/W

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

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

