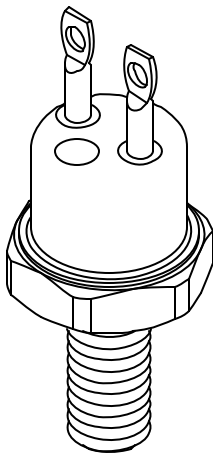
Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
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SDR623/59 Thru SDR626/59

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** **SDR624/59** **SDR625/59** **SDR626/59**	V_{RRM} V_{RWM} V_R	300 400 500 600	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25 °C)		Io	20	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A = 25 °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.

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

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

TO-59
Outline:

