

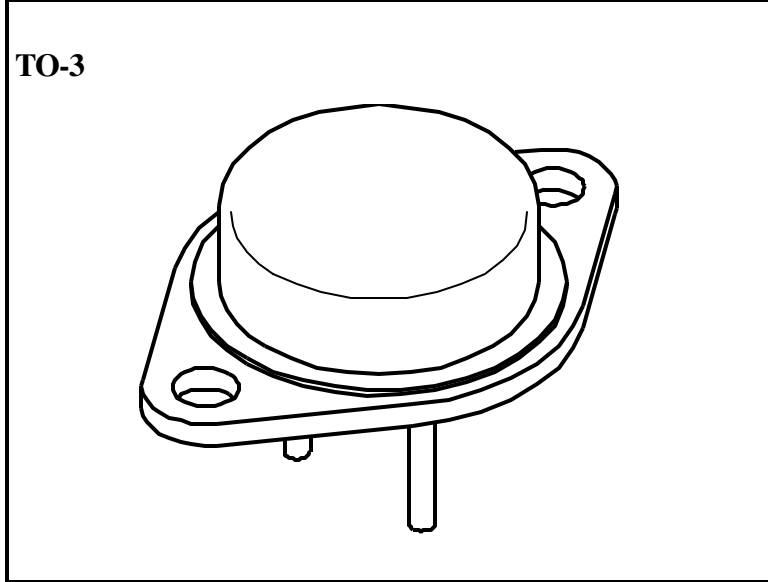


**Solid State Devices, Inc.**

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

**SDR623CT/3  
 Thru  
 SDR626CT/3**

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



**40A 35nsec 300-600 V  
 Hyper Fast Centertap 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
  - Common Anode and Doubler Versions Available
  - Ceramic Seals for Improved Hermeticity Available
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>

Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	300	Volts
		400	
		500	
		600	
Average Rectified Forward Current <sup>4/</sup> (Resistive Load, 60 Hz Sine Wave, T <sub>A</sub> = 25 °C)	I <sub>o</sub>	40	Amps
Peak Surge Current <sup>5/</sup> (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> = 25 °C)	I <sub>FSM</sub>	200	Amps
Operating & Storage Temperature	T <sub>OP</sub> & T <sub>STG</sub>	-65 to +200	°C
Maximum Total Thermal Resistance Junction to Case <sup>4/</sup> Junction to Case <sup>5/</sup>	R <sub>θJC</sub>	1.45	°C/W
		2.3	

**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.  
 4/ Both Legs Tied Together.  
 5/ Each Leg.

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Electrical Characteristics, per leg		Symbol	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 25^\circ\text{C}$	$V_{F1}$	1.30	$V_{DC}$
	$T_A = 25^\circ\text{C}$	$V_{F2}$	1.45	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 100^\circ\text{C}$	$V_{F3}$	1.2	$V_{DC}$
	$T_A = -55^\circ\text{C}$	$V_{F4}$	1.4	
<b>Reverse Leakage Current</b> (100% of rated $V_R$ , Pulse)	$T_A = 25^\circ\text{C}$	$I_{R1}$	50	$\mu\text{A}$
	$T_A = 100^\circ\text{C}$	$I_{R2}$	5	<b>mA</b>
<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	<b>nsec</b>
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )		$C_J$	150	<b>pF</b>

PIN ASSIGNMENT			
Configuration	Pin 1	Pin 2	Case
Common Cathode	Anode	Anode	Cathode
Common Anode	Cathode	Cathode	Anode
Doubler	Anode	Cathode	Common
Doubler Reverse	Cathode	Anode	Common

