



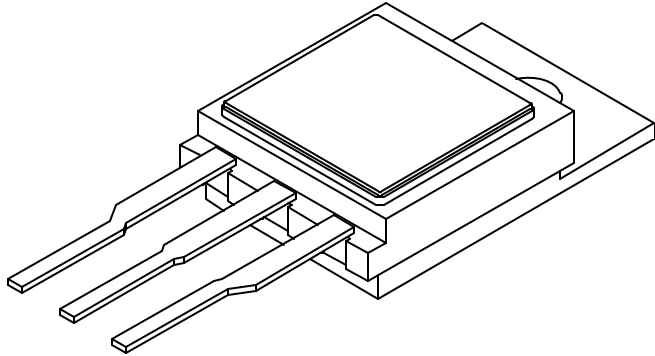
**Solid State Devices, Inc.**

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

**SDR623CTC  
 Thru  
 SDR626CTC**

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

**CERAMIC TO-254**



**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
  - Flat Leads for Low Inductance
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>

Maximum Ratings	Symbol	Value	Units
<b>Peak Repetitive Reverse Voltage</b>	SDR623CTC	300	Volts
	SDR624CTC	400	
	SDR625CTC	500	
	SDR626CTC	600	
<b>Average Rectified Forward Current <sup>4/</sup></b> (Resistive Load, 60 Hz Sine Wave, T <sub>A</sub> = 25 °C)	<b>I<sub>o</sub></b>	40	Amps
<b>Peak Surge Current <sup>5/</sup></b> (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> = 25 °C)	<b>I<sub>FSM</sub></b>	200	Amps
<b>Operating &amp; Storage Temperature</b>	<b>T<sub>OP</sub> &amp; T<sub>STG</sub></b>	-65 to +200	°C
<b>Maximum Total Thermal Resistance</b> Junction to Case <sup>4/</sup> Junction to Case <sup>5/</sup>	<b>R<sub>qJC</sub></b>	1.0	°C/W
		2.1	

**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.

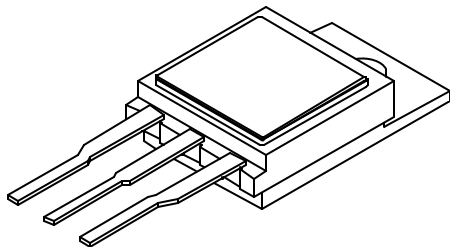


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Electrical Characteristics, per leg		Symbol	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 25^\circ\text{C}$	$V_{F1}$	1.4	$V_{DC}$
	$T_A = 25^\circ\text{C}$	$V_{F2}$	1.6	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{Adc}$ , Pulse)	$T_A = 100^\circ\text{C}$	$V_{F3}$	1.3	$V_{DC}$
	$T_A = -55^\circ\text{C}$	$V_{F4}$	1.5	
<b>Reverse Leakage Current</b> (100% of rated $V_R$ , Pulse)	$T_A = 25^\circ\text{C}$	$I_{R1}$	50	<b>mA</b>
	$T_A = 100^\circ\text{C}$	$I_{R2}$	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	Pin 3
<b>Common Cathode</b>	Anode 1	Cathode	Anode 2
<b>Common Anode</b>	Cathode 1	Anode	Cathode 2
<b>Doubler</b>	Cathode	Common	Anode
<b>Doubler Reverse</b>	Anode	Common	Cathode

**TO-254C Outline:**

**Tolerances, Unless Specified Otherwise - .XX ± .020"**  
**.XXX ± .010"**