



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, CA 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**SDR623CTJ, CAJ, DJ, DRJ  
 thru  
 SDR626CTJ, CAJ, DJ, DRJ**

**Designer's Data Sheet**

**Part Number/Ordering Information <sup>1/</sup>**  
 SDR62 J

**Screening <sup>2/</sup>**      = Not Screened  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level

**Leg Bend**      = Straight  
 (See Figure 1) DB = Down Bend  
 UB = Up Bend

**Package** J = TO-257

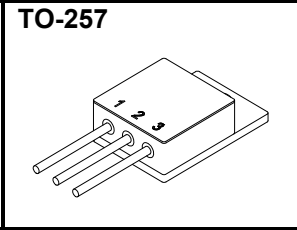
**Pin Configuration** CT: common cathode  
 CA: common anode  
 D: doubler  
 DR: doubler reverse

**Voltage <sup>3</sup>** 3 = 300V, 4 = 400V, 5 = 500V, 6 = 600V

**40 AMPS  
 300 - 600 VOLTS  
 35 nsec  
 HYPER FAST  
 CENTERTAP RECTIFIER**

- FEATURES:**
- Hyper Fast Recovery: 35 nsec Maximum <sup>3/</sup>
  - High Surge Rating
  - Low Reverse Leakage Current
  - Low Junction Capacitance
  - Isolated Hermetically Sealed Package
  - Gold Eutectic Die Attach Available
  - Ultrasonic Aluminum Wire Bonds
  - Custom Lead Forming Available
  - TX, TXV, and Space Level Screening Available Consult Factory. <sup>2/</sup>

**Available in Following Configurations:**  
*Common Cathode Centertap:* SDR623CTJ, SDR623CTJUB, SDR623CTJDB; SDR624CTJ, SDR624CTJUB, SDR624CTJDB; SDR625CTJ, SDR625CTJUB, SDR625CTJDB; SDR626CTJ, SDR626CTJUB, SDR626CTJDB  
*Common Anode Centertap:* SDR623CAJ, SDR623CAJUB, SDR623CAJDB; SDR624CAJ, SDR624CAJUB, SDR624CAJDB; SDR625CAJ, SDR625CAJUB, SDR625CAJDB; SDR626CAJ, SDR626CAJUB, SDR626CAJDB  
*Doubler:* SDR623DJ, SDR623DJUB, SDR623DJDB; SDR624DJ, SDR624DJUB, SDR624DJDB; SDR625DJ, SDR625DJUB, SDR625DJDB; SDR626DJ, SDR626DJUB, SDR626DJDB; SDR623DRJ, SDR623DRJUB, SDR623DRJDB; SDR624DRJ, SDR624DRJUB, SDR624DRJDB; SDR625DRJ, SDR625DRJUB, SDR625DRJDB; SDR626DRJ, SDR626DRJUB, SDR626DRJDB



MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR623CTJ SDR624CTJ SDR625CTJ SDR626CTJ	$V_{RRM}$ $V_{RWM}$ $V_R$	300 400 500 600	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$ ) <sup>4/</sup>		$I_O$	40 <sup>6/</sup>	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A=25^\circ\text{C}$ ) <sup>5/</sup>		$I_{FSM}$	150	Amps
Operating and Storage Temperature		$T_{OP}$ & $T_{STG}$	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case <sup>4/</sup> Junction to Case <sup>5/</sup>		$R_{\theta JC}$	1.2 2.0	$^\circ\text{C/W}$

- NOTES:** 1/ For ordering information, price, operating curves, and availability - contact factory.  
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.  
 3/ Recovery conditions:  $I_F = 0.5$  Amp,  $I_R = 1.0$  Amp, rec. to 0.25 Amp.  
 4/ Both legs tied together.  
 5/ Per leg.  
 6/ Doublers:  $I_O = 20\text{A/leg}$ .

<b>NOTE:</b> All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	<b>DATA SHEET #: RH0051G</b>	<b>DOC</b>
--	------------------------------	------------

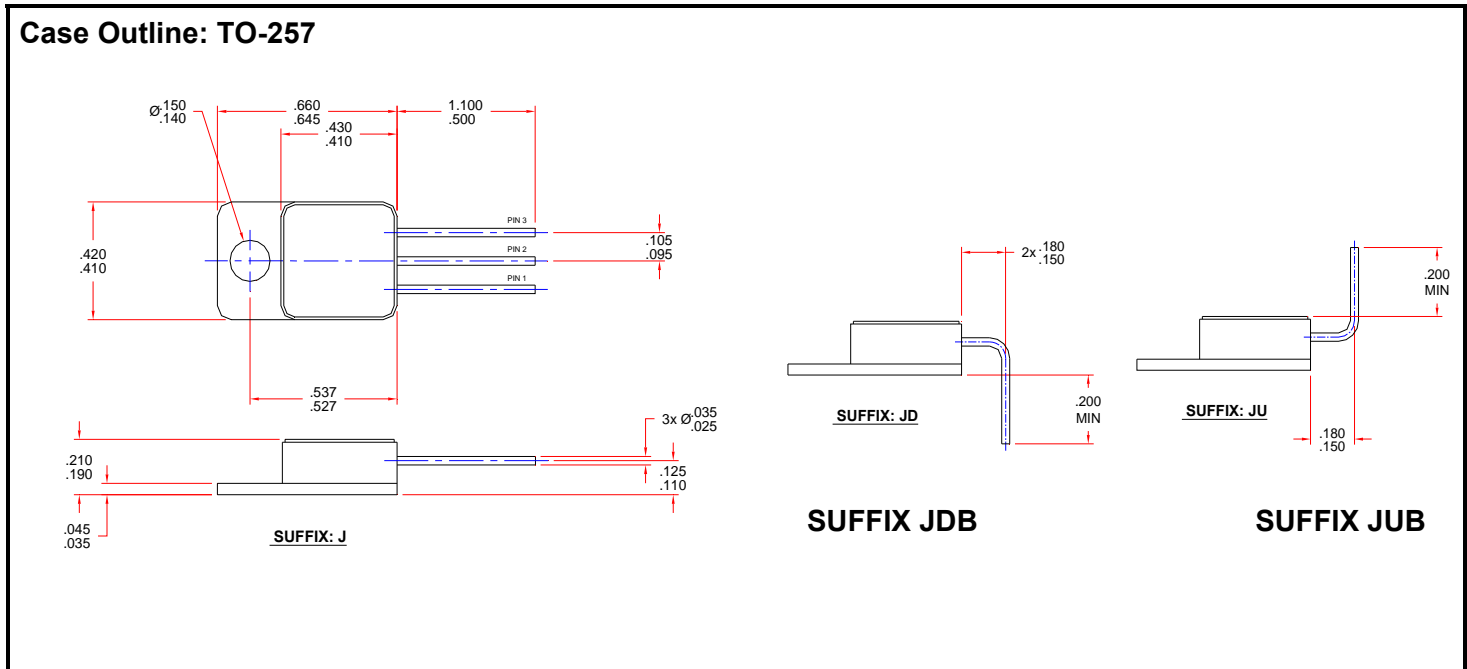


**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, CA 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* [www.ssdi-power.com](http://www.ssdi-power.com)

**SDR623CTJ, CAJ, DJ, DRJ  
 thru  
 SDR626CTJ, CAJ, DJ, DRJ**

ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10$ Amps, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse) ( $I_F = 20$ Amps, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$V_{F1}$ $V_{F2}$	—	1.4 1.7	<b>Volts</b>
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10$ Amps, $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse) ( $I_F = 10$ Amps, $T_A = -55^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$V_{F3}$ $V_{F4}$	—	1.3 1.5	<b>Volts</b>
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse minimum)	$I_{R1}$	—	50	<b><math>\mu\text{A}</math></b>
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse minimum)	$I_{R2}$	—	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>ns</b>
<b>Junction Capacitance</b> ( $V_R = 10\text{V}_{\text{DC}}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )	$C_J$	—	150	<b>pF</b>



			<b>PIN ASSIGNMENT</b>				
Common Cathode	Common Anode	Doubler	CODE	FUNCTION	PIN 1	PIN 2	PIN 3
			CT	Common Cathode	Anode 1	Cathode	Anode 2
			CA	Common Anode	Cathode 1	Anode	Cathode 2
			D	Doubler	Cathode 1	Cathode2/Anode 1	Anode 2
			DR	Doubler Reverse	Anode 1	Cathode1/Anode 2	Cathode 2