



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 Thru SDR626DRJ

40A 35nsec 300-600 V Hyper Fast Centertap Rectifier

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR62

+ **Screening** ^{2/} ___ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

+ **Leg Bend Option**
(See Figure 1)

+ **Package** J = TO-257(J)

+ **Configuration** CT = Common Cathode,
CA = Common Anode, D = Doubler,
DR = Doubler Reverse

+ **Voltage** 3 = 300V, 4 = 400V, 5 = 500V, 6 = 600V

Features:

- Hyper Fast Recovery: 35nsec Maximum ^{3/}
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Isolated Hermetically Sealed Package
- Gold Eutectic Die Attach
- Ultrasonic Aluminum Wire Bonds
- Available in Common Anode, Common Cathode, Doubler, and Doubler Reverse Configurations
- Custom Lead Forming Available
- TX, TXV, and S-Level Screening Available ^{2/}

Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse Voltage SDR623__J SDR624__J SDR625__J SDR626__J	V_{RRM} V_{RWM} V_R	300 400 500 600	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ C$) ^{4/}	I_o	40	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$) ^{5/}	I_{FSM}	200	Amps
Operating & Storage Temperature	T_{OP} & T_{STG}	-65 to +175	$^\circ C$
Maximum Total Thermal Resistance Junction to Case ^{4/} Junction to Case ^{5/}	R_{qJC}	1.0 2.1	$^\circ C/W$

Notes:

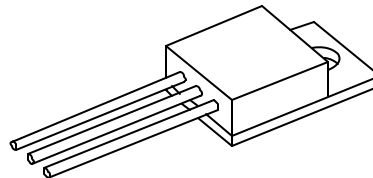
1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, rec. to .25 Amp.

4/ Both Legs Tied Together.

5/ Per Leg.



TO-257(J)

NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

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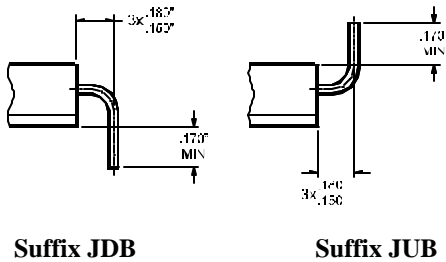
Solid State Devices, Inc.

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

**SDR623CTJ
 Thru
 SDR626DRJ**

Electrical Characteristics, per leg		Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 10\text{Adc}$, Pulse) ($I_F = 20\text{Adc}$, Pulse)	$T_A = 25\text{ }^\circ\text{C}$	V_{F1}	1.4	V_{DC}
	$T_A = 25\text{ }^\circ\text{C}$	V_{F2}	1.7	
Instantaneous Forward Voltage Drop ($I_F = 10\text{Adc}$, Pulse)	$T_A = 100\text{ }^\circ\text{C}$	V_{F3}	1.3	V_{DC}
	$T_A = -55\text{ }^\circ\text{C}$	V_{F4}	1.5	
Reverse Leakage Current (100% of rated V_R , Pulse)	$T_A = 25\text{ }^\circ\text{C}$	I_{R1}	50	mA
	$T_A = 100\text{ }^\circ\text{C}$	I_{R2}	5	mA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$, $T_A = 25\text{ }^\circ\text{C}$)		t_{RR}	35	nsec
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25\text{ }^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	150	pF

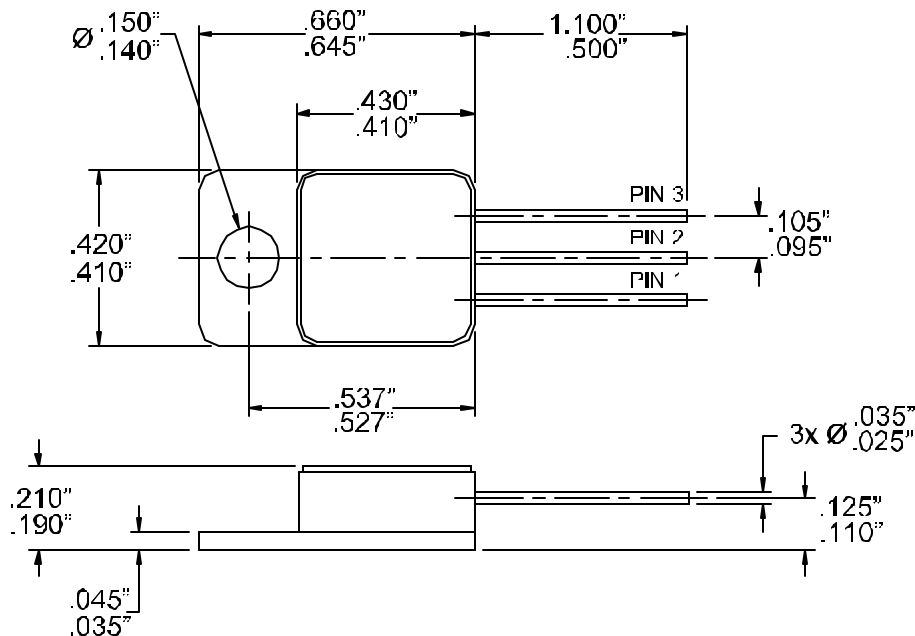
Figure 1- Optional Lead Bends



PIN ASSIGNMENT

Code	FUNCTION	Pin 1	Pin 2	Pin 3
CT	Common Cathode	Anode1	Cathode	Anode2
CA	Common Anode	Cathode1	Anode	Cathode2
D	Doubler	Cathode	Common	Anode
DR	Doubler Reverse	Anode	Common	Cathode

TO-257(J) Outline:



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