



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
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Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR62

J

Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Leg Bend

(See Figure 1)

— = Straight

DB = Down Bend

UB = Up Bend

Package J = TO-257

Pin Configuration

CT: common cathode

CA: common anode

D: doubler

DR: doubler reverse

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

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

**40 AMPS
300 - 600 VOLTS
35 nsec**

**HYPER FAST
CENTERTAP RECTIFIER**

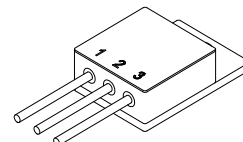
FEATURES:

- Hyper Fast Recovery: 35 nsec Maximum ^{3/}
 - 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. ^{2/}

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

TO-257



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, $T_A=25^\circ\text{C}$) ^{4/}	I_O	40 ^{6/}	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A=25^\circ\text{C}$) ^{5/}	I_{FSM}	150	Amps
Operating and Storage Temperature	$T_{OP} \text{ \& } T_{STG}$	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case ^{4/} Junction to Case ^{5/}	$R_{\theta JC}$	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: $I_O = 20\text{A/leg}$.

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

DATA SHEET #: RH0051G

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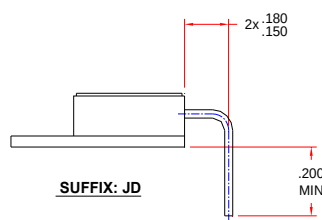
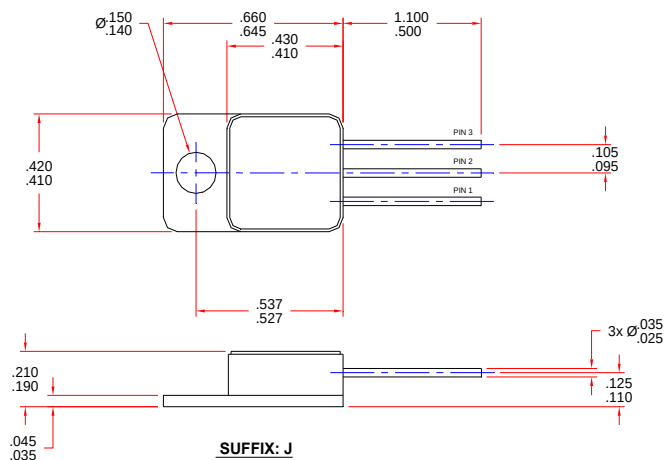
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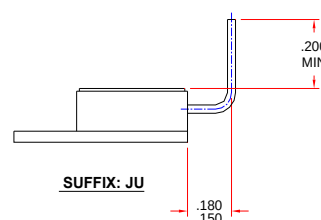
SDR623CTJ, CAJ, DJ, DRJ thru SDR626CTJ, CAJ, DJ, DRJ

ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 10$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse) ($I_F = 20$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	V_{F1} V_{F2}	—	1.4 1.7	Volts
Instantaneous Forward Voltage Drop ($I_F = 10$ Amps, $T_A = 100^\circ\text{C}$, 300 μsec Pulse) ($I_F = 10$ Amps, $T_A = -55^\circ\text{C}$, 300 μsec Pulse)	V_{F3} V_{F4}	—	1.3 1.5	Volts
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μsec pulse minimum)	I_{R1}	—	50	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μsec pulse minimum)	I_{R2}	—	5	mA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$, $T_A = 25^\circ\text{C}$)	t_{rr}	—	35	ns
Junction Capacitance ($V_R = 10\text{V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	—	150	pF

Case Outline: TO-257



SUFFIX JDB



SUFFIX JUB

Common Cathode



Common Anode



Doubler



PIN ASSIGNMENT

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

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