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

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

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

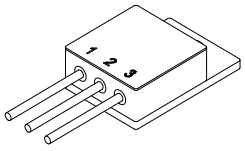
FEATURES:

- **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°C) [4/]		I_O	40 [6/]	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A=25°C) [5/]		I_{FSM}	150	**Amps**
Operating and Storage Temperature		T_{OP} & T_{STG}	-65 to +200	°C
Maximum Thermal Resistance Junction to Case [4/] Junction to Case [5/]		$R_{\theta JC}$	1.2 2.0	°C/W

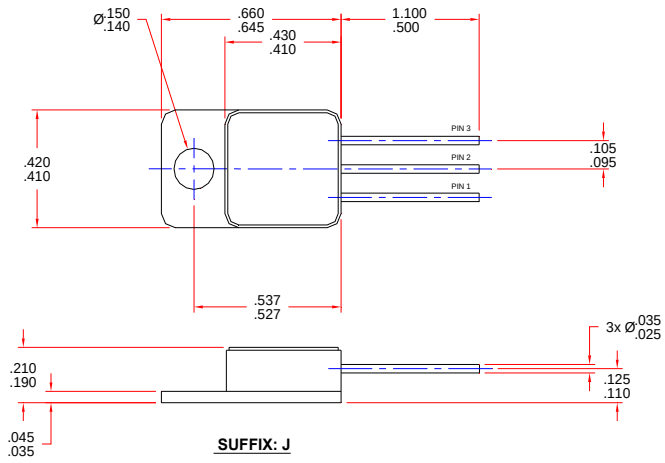
NOTES: 1/ For ordering information, price, operating curves, and availability - contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.
3/ Recovery conditions: I_F = 0.5 Amp, I_R = 1.0 Amp, rec. to 0.25 Amp.
4/ Both legs tied together.
5/ Per leg.
6/ Doublers: I_O=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

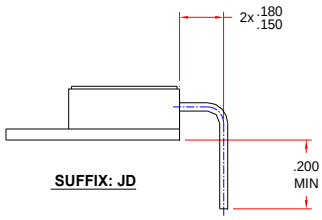
Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

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

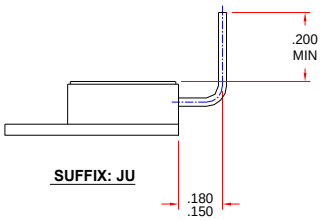
ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop (I_F = 10 Amps, T_A = 25°C, 300µsec Pulse) (I_F = 20 Amps, T_A = 25°C, 300µsec Pulse)	V_{F1} V_{F2}	— —	1.4 1.7	**Volts**
Instantaneous Forward Voltage Drop (I_F = 10 Amps, T_A = 100°C, 300µsec Pulse) (I_F = 10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

Case Outline: TO-257



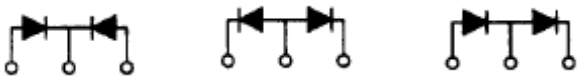


SUFFIX JDB



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