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

SDR620CTJ, CAJ, DJ, DRJ thru SDR622CTJ, CAJ, DJ, DRJ

40 AMPS
100 - 200 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**: **0** = 100V, **1** = 150V, **2** = 200V

FEATURES:

- **Replaces Two 1N5816 Devices**
- **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/]

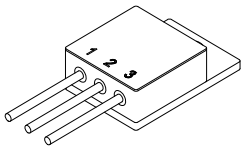
Available in Following Configurations:

Common Cathode Centertap: **SDR620CTJ, SDR620CTJUB, SDR620CTJDB; SDR621CTJ, SDR621CTJUB, SDR621CTJDB; SDR622CTJ, SDR622CTJUB, SDR622CTJDB**

Common Anode Centertap: **SDR620CAJ, SDR620CAJUB, SDR620CAJDB; SDR621CAJ, SDR621CAJUB, SDR621CAJDB; SDR622CAJ, SDR622CAJUB, SDR622CAJDB**

Doubler: **SDR620DJ, SDR620DJUB, SDR620DJDB; SDR621DJ, SDR621DJUB, SDR621DJDB; SDR622DJ, SDR622DJUB, SDR622DJDB; SDR620DRJ; SDR620DRJUB; SDR620DRJDB; SDR621DRJ; SDR621DRJUB; SDR621DRJDB; SDR622DRJ; SDR622DRJUB; SDR622DRJDB**

TO-257



MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	**SDR620CTJ** **SDR621CTJ** **SDR622CTJ**	V_{RRM} V_{RWM} V_R	100 150 200	**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}	200	**Amps**
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	°C
Maximum Thermal Resistance Junction to Case [4/] Junction to Case (Each Individual Diode) [5/]		$R_{\theta JC}$	0.95 1.7	°C/W

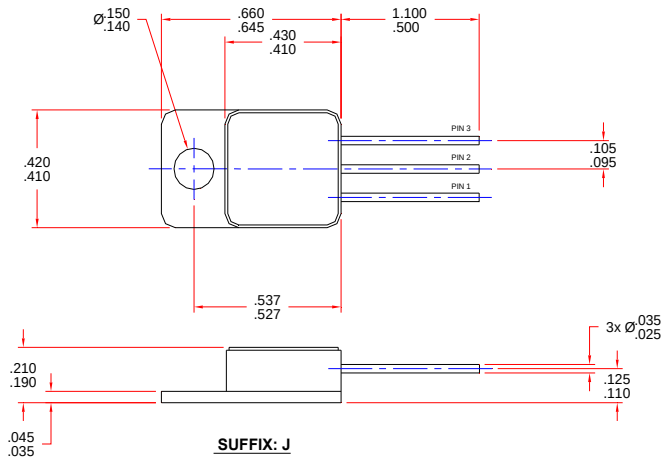
NOTES: 1/ For ordering information, Price, Operating Curves, and Availability - Contact Factory.
2/ Screened to MIL-PRF-19500.
3/ Recovery Conditions: I_F = 0.5 Amp, I_R = 1.0 Amp, rec. to 0.25 Amp.
4/ Both Legs Tied Together.
5/ Per Leg.
6/ Doublers: I_O= 20A/leg.

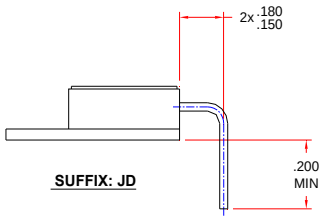
Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR620CTJ, CAJ, DJ, DRJ thru SDR622CTJ, CAJ, DJ, DRJ

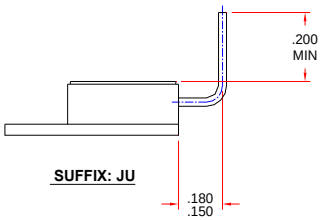
ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop (I_F = 10 Amps, T_A = 25°C, 300µsec Pulse) (I_F = 20 Amps, T_A = 25°C, 300µsec Pulse)	V_{F1} V_{F2}	— —	1.05 1.25	**Volts**
Instantaneous Forward Voltage Drop (I_F = 10 Amps, T_A = 100°C, 300µsec Pulse) (I_F = 10 Amps, T_A = -55°C, 300µsec Pulse)	V_{F3} V_{F4}	— —	0.95 1.2	**Volts**
Reverse Leakage Current (Rated V_R, T_A = 25°C, 300µsec pulse minimum)	I_{R1}	—	10	**µA**
Reverse Leakage Current (Rated V_R, T_A = 100°C, 300µsec pulse minimum)	I_{R2}	—	100	**µA**
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	—	225	**pF**

Case Outline: TO-257



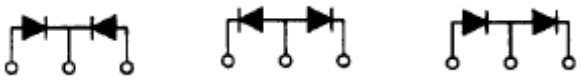


SUFFIX JDB



SUFFIX JUB

Common Cathode **Common Anode** **Doubler**



PIN ASSIGNMENT				
CODE	**FUNCTION**	**PIN 1**	**PIN 2**	**PIN 3**
CT	Common Anode	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