



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**

- 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/}

Designer's Data Sheet

Part Number/Ordering Information ^{1/}
SDR62 **J**

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

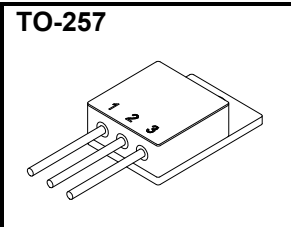
Leg Bend **---** = Straight
 (See Figure 1) **DB** = Down Bend
 UB = Up Bend

Package **J** = TO-257

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

Voltage **0** = 100V, **1** = 150V, **2** = 200V

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



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, $T_A=25^{\circ}C$) ^{4/}		I_O	40 ^{6/} Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A=25^{\circ}C$) ^{5/}		I_{FSM}	200 Amps
Operating and Storage Temperature	T_{OP} & T_{stg}	-65 to +175	°C
Maximum Thermal Resistance Junction to Case (Each Individual Diode) ^{4/} Junction to Case ^{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: $I_O = 20A/leg$.

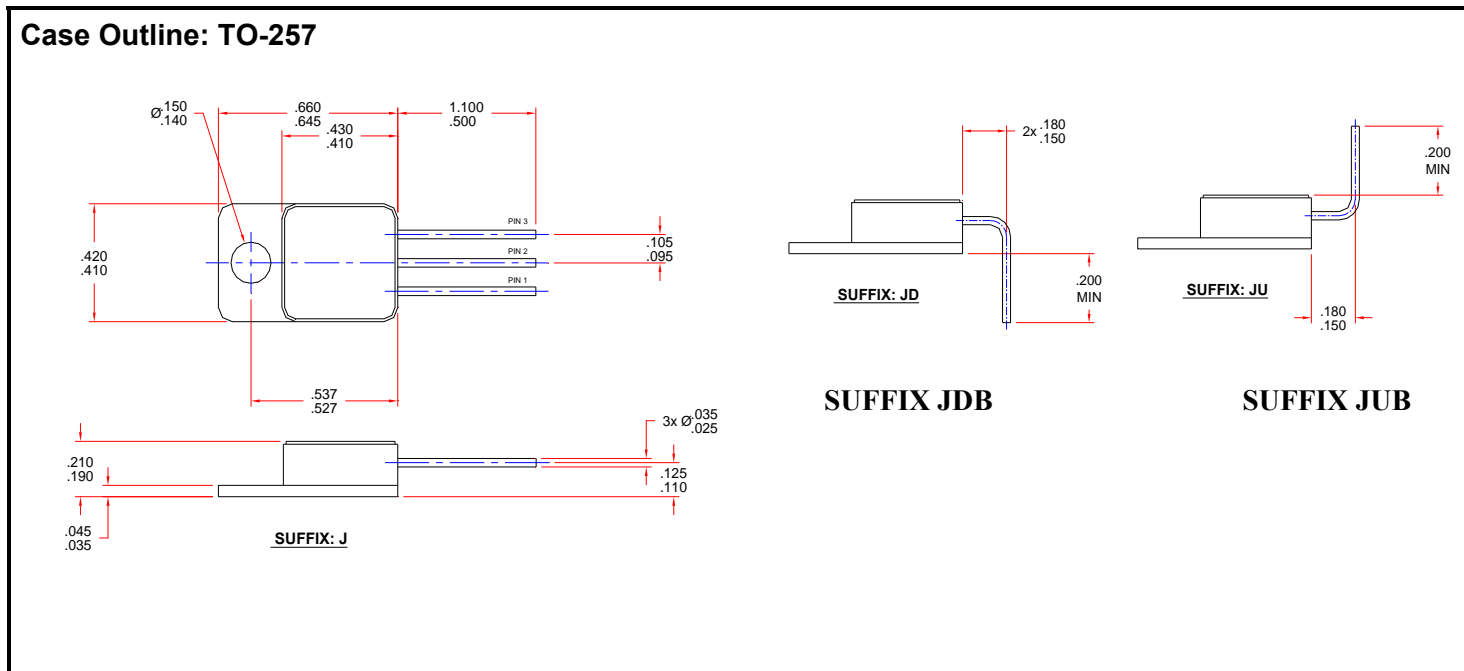


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 thru
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ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 10$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse) ($I_F = 20$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	V_{F1} V_{F2}	—	1.05 1.25	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}	—	0.95 1.2	Volts
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μsec pulse minimum)	I_{R1}	—	10	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μsec pulse minimum)	I_{R2}	—	100	μA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1$ A, $I_{RR} = 0.25\text{A}$, $T_A = 25^\circ\text{C}$)	t_{rr}	—	35	ns
Junction Capacitance ($V_R = 10$ V _{DC} , $T_A = 25^\circ\text{C}$, $f = 1$ MHz)	C_J	—	225	pF



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