



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

**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/}

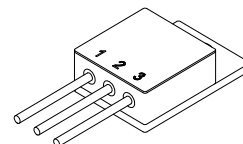
Available in Following Configurations:

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
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	$T_{OP} \text{ \& } T_{stg}$	-65 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case ^{4/} Junction to Case (Each Individual Diode) ^{5/}	$R_{\theta JC}$	0.95 1.7	$^{\circ}C/W$

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 0.25 Amp.

4/ Both Legs Tied Together.

5/ Per Leg.

6/ Doublers: $I_O = 20A/leg$.

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

DATA SHEET #: RH0071J

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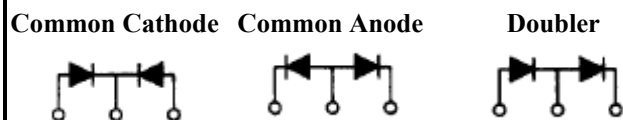
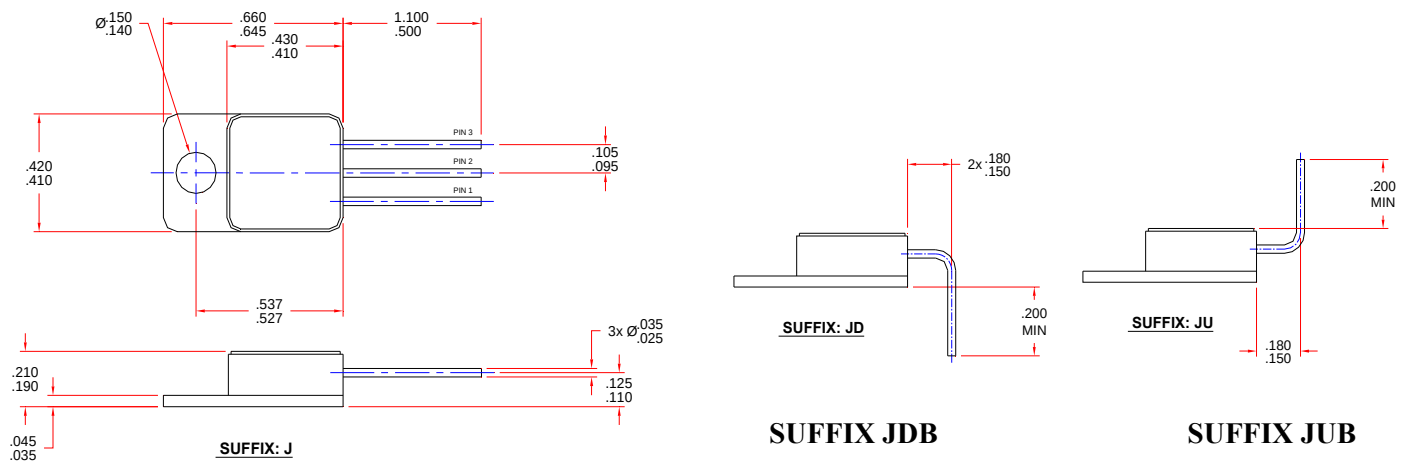
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SDR620CTJ, CAJ, DJ, DRJ thru SDR622CTJ, CAJ, DJ, DRJ

ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 10$ Amps, $T_A = 25^\circ\text{C}$, 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 ($I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$, $T_A = 25^\circ\text{C}$)	t_{rr}	—	35	ns
Junction Capacitance ($V_R = 10\text{V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	—	225	pF

Case Outline: TO-257



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

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