



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
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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 = 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

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

**40 AMPS
100 - 200 VOLTS
35 nsec
HYPER FAST
CENTERTAP RECTIFIER**

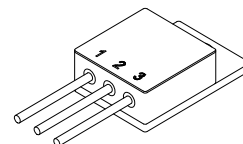
FEATURES:

- 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	V_{RRM}	100	Volts
	SDR621CTJ	V_{RWM}	150	
	SDR622CTJ	V_R	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} & T_{stg}	-65 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case (Each Individual Diode) ^{4/} Junction to Case ^{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.

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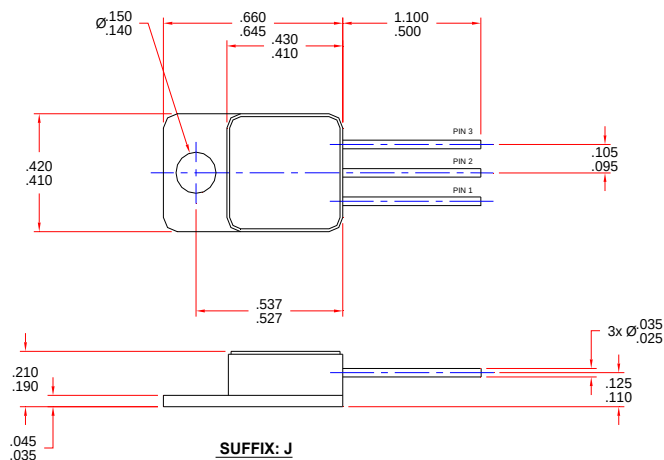
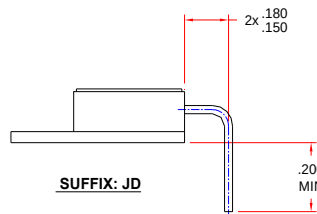
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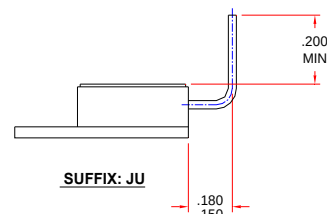
SDR620CTJ, CAJ, DJ, DRJ thru SDR622CTJ, CAJ, DJ, DRJ

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



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

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