



**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

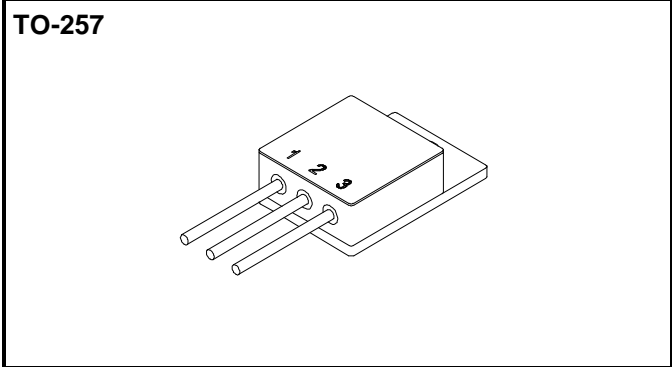
**SDR620CTJ  
 thru  
 SDR622CTJ**

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

**Designer's Data Sheet**

**FEATURES:**

- Replaces Two 1N5816 Devices
- Hyper Fast Recovery: 35 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach Available
- TX, TXV, and Space Level Screening Available. Consult Factory.



**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 <sup>1/</sup>	SDR620CTJ	V <sub>RRM</sub>	100	Volts
	SDR621CTJ	V <sub>RWM</sub>	150	
	SDR622CTJ	V <sub>R</sub>	200	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T <sub>A</sub> =25°C) <sup>2/</sup>		I <sub>O</sub>	40	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> =25°C) <sup>2/</sup>		I <sub>FSM</sub>	300	Amps
Operating and Storage Temperature		T <sub>OP</sub> & T <sub>stg</sub>	-65 to +200	°C
Maximum Thermal Resistance Junction to Case (Each Individual Diode)		R <sub>qJC</sub>	1.2	°C/W
Junction to Case <sup>2/</sup>			0.8	

**NOTES:**  
 1/ Higher voltage class available  
 2/ Both legs tied together

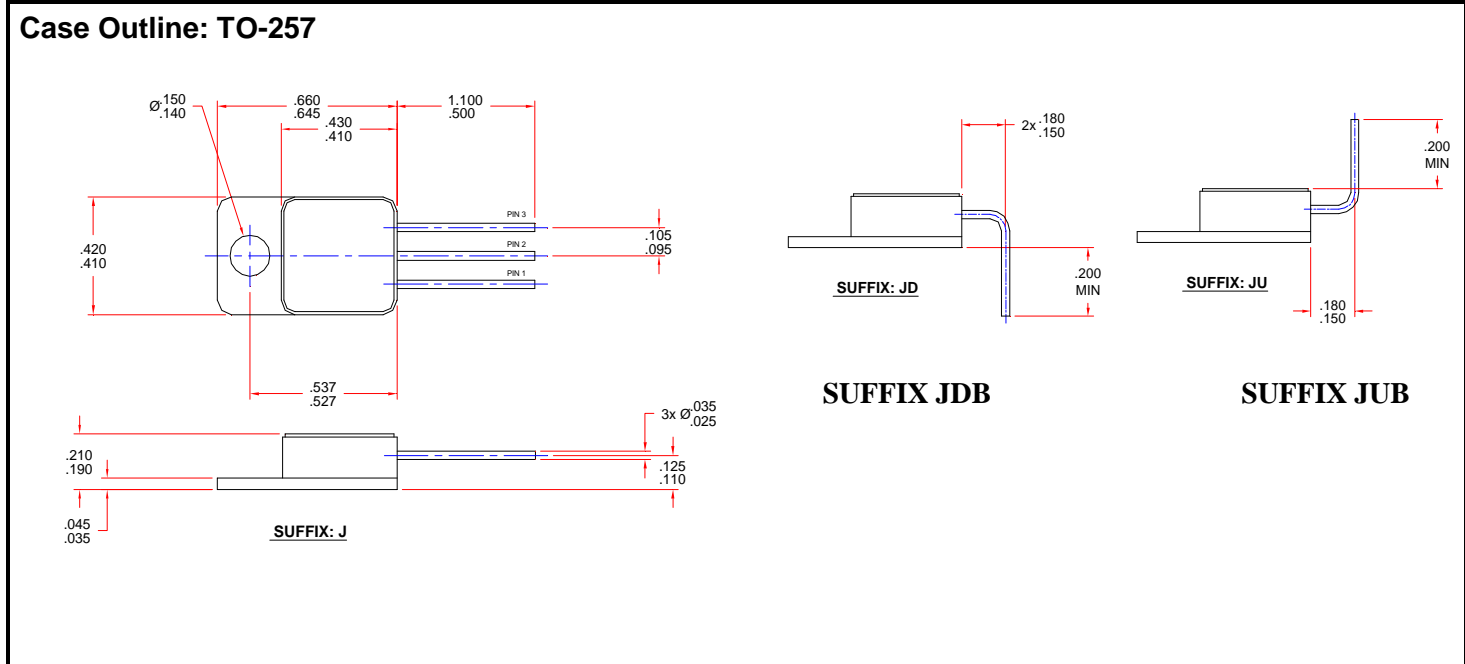


**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* [www.ssdi-power.com](http://www.ssdi-power.com)

**SDR620CTJ  
 thru  
 SDR622CTJ**

ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Min	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10$ Amps, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse) ( $I_F = 20$ Amps, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$V_{F1}$ $V_{F2}$	—	1.05 1.25	Volts
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10$ Amps, $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse) ( $I_F = 10$ Amps, $T_A = -55^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$V_{F3}$ $V_{F4}$	—	0.95 1.20	Volts
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse minimum)	$I_{R1}$	—	10	mA
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse minimum)	$I_{R2}$	—	1	mA
<b>Junction Capacitance</b> ( $V_R = 10$ V <sub>DC</sub> , $T_A = 25^\circ\text{C}$ , $f = 1$ MHz)	$C_J$	—	225	pF
<b>Reverse Recovery Time</b> ( $I_F = 0.5$ A, $I_R = 1$ A, $I_{RR} = 0.25$ A, $T_A = 25^\circ\text{C}$ )	$t_{rr}$	—	35	ns



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	Anode 1	Cathode1/Anode 2	Cathode 2
			DR	Doubler Reverse	Cathode 1	Cathode2/Anode 1	Anode 2