



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

**SDR9103CTN&P
 thru
 SDR9105CTN&P**

**100 AMP, 300 - 500 VOLTS
 40 nsec HYPER FAST
 CENTERTAP RECTIFIER**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR91

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

--- Lead Options = Straight Leads,
 DB = Bent Down
 UB = Bent Up

Package N = TO-258
 P = TO-259

Configuration CT = Common Cathode
 CA = Common Anode
 D = Doubler
 DR = Doubler Reverse

Family/Voltage 03 = 300V
 04 = 400V
 05 = 500V

- FEATURES:**
- **Hyper Fast Recovery: 40 ns Maximum**
 - **High Surge Rating**
 - **Low Reverse Leakage Current**
 - **Hermetically Sealed Low Profile Package**
 - **Gold Eutectic Die Attach Available**
 - **Ultrasonic Aluminum Wire Bonds**
 - **Ceramic Seal for Improved Hermeticity Available**
 - **Common Anode and Doubler Versions Available**
 - **TX, TXV, or Space Level Screening Available**

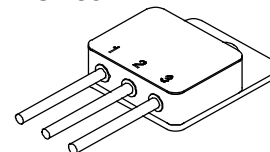
MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	V_{RRM}	300	Volts
SDR9103CTN & P	V_{RWM}	400	
SDR9104CTN & P	V_R	500	
Average Rectified Output Current ^{3/} (Resistive Load, 60Hz, Sine Wave, $T_A=25^\circ C$)	I_O	100	Amps
Peak Surge Current ^{4/} (8.3 ms Pulse, Half Sine Wave, $T_A=25^\circ C$)	I_{FSM}	500	Amps
Operating and Storage Temperature	T_{OP} & T_{STG}	-65 to +200	$^\circ C$
Maximum Thermal Resistance Junction to Case ^{3/} Junction to Case (Each Individual Diode)	$R_{\theta JC}$	0.4 0.73	$^\circ C/W$

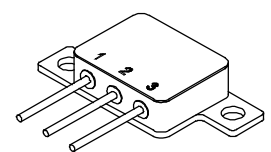
NOTES:

- 1/ For ordering Information, Price, and Availability, Contact Factory.
- 2/ Screening per MIL-PRF-19500
- 3/ Both Legs Tied Together.
- 4/ Available with Higher Surge Ratings.

TO-258



TO-259



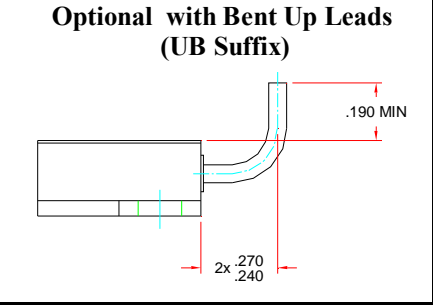
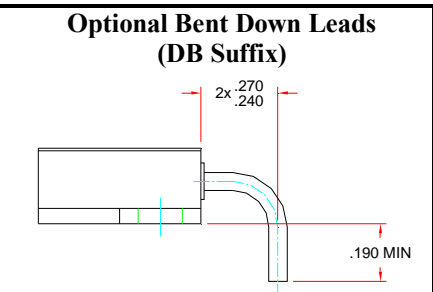
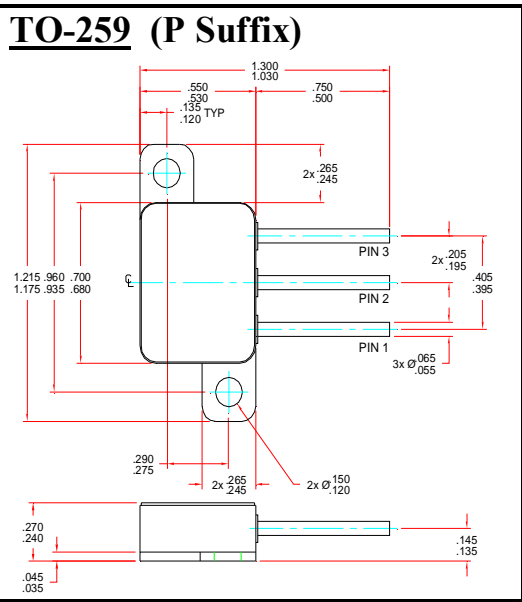
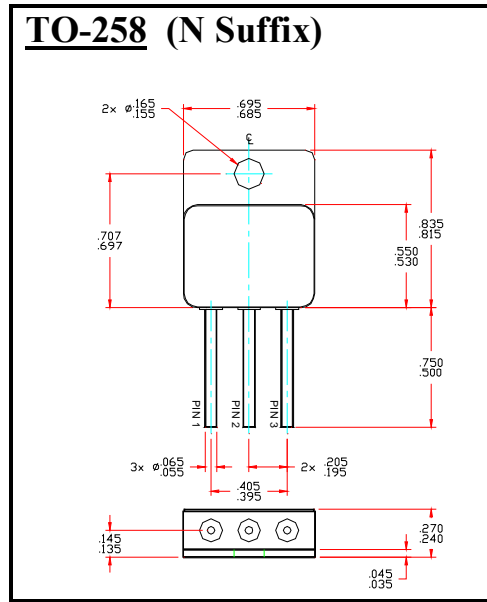


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ELECTRICAL CHARACTERISTICS (Per Leg)			
CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ($I_F = 25\text{ A}$, $T_A = 25^\circ\text{C}$, Pulse) ($I_F = 50\text{ A}$, $T_A = 25^\circ\text{C}$, Pulse)	V_{F1} V_{F2}	1.25 1.55	Vdc
Instantaneous Forward Voltage Drop ($I_F = 25\text{ A}$, $T_A = 100^\circ\text{C}$, Pulse) ($I_F = 25\text{ A}$, $T_A = -55^\circ\text{C}$, Pulse)	V_{F3} V_{F4}	1.15 1.35	Vdc
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, Pulse)	I_{R1}	100	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, Pulse)	I_{R2}	10	mA
Junction Capacitance ($V_R = 10\text{ V}$, $T_A = 25^\circ\text{C}$, $f = 1\text{ MHz}$)	C_J	250	pF
Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1.0\text{ A}$, $I_{RR} = 250\text{ mA}$, $T_A = 25^\circ\text{C}$)	t_{rr}	40	nsec



Pin Assignment

For information on curves, contact the Factory Representative for Engineering Assistance.

Code	Function	Pin 1	Pin 2	Pin 3
CT	Common Cathode	Anode	Cathode	Anode
CA	Common Anode	Cathode	Anode	Cathode
D	Doubler	Cathode	AC	Anode
DR	Doubler, Reverse	Anode	AC	Cathode