



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR91

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

SDR9103CTN&P thru SDR9105CTN&P

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

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

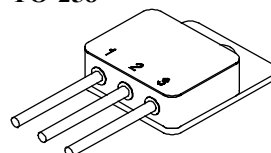
MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR9103CTN & P SDR9104CTN & P SDR9105CTN & P	V_{RRM} V_{RWM} V_R	300 400 500 Volts
Average Rectified Output Current ^{3/} (Resistive Load, 60Hz, Sine Wave, TA=25°C)		I_O	100 Amps
Peak Surge Current ^{4/} (8.3 ms Pulse, Half Sine Wave, TA=25°C)		I_{FSM}	500 Amps
Operating and Storage Temperature	T_{OP} & T_{STG}	-65 to +200	°C
Maximum Thermal Resistance Junction to Case ^{3/} Junction to Case (Each Individual Diode)	$R_{\theta JC}$	0.4 0.73	°C/W

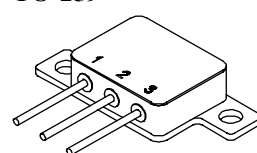
NOTES:

- 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



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

DATA SHEET #: RH0033E

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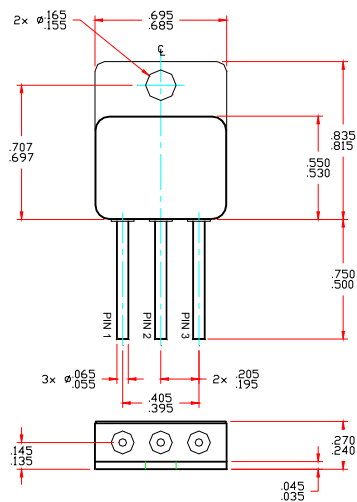
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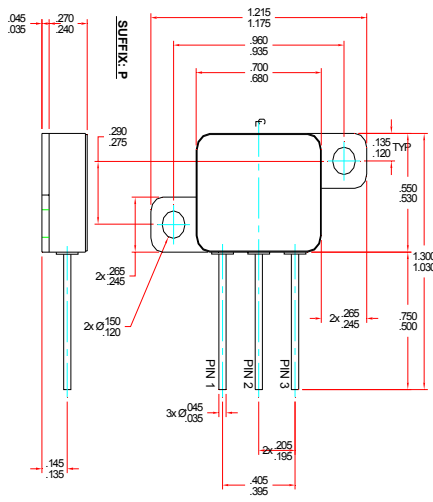
ELECTRICAL CHARACTERISTICS (Per Leg)

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ($I_F = 25$ A, $T_A = 25^\circ\text{C}$, Pulse) ($I_F = 50$ A, $T_A = 25^\circ\text{C}$, Pulse)	V_{F1} V_{F2}	1.25 1.55	Vdc
Instantaneous Forward Voltage Drop ($I_F = 25$ A, $T_A = 100^\circ\text{C}$, Pulse) ($I_F = 25$ 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 ($V_R = 10$ V, $T_A = 25^\circ\text{C}$, $f = 1$ 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

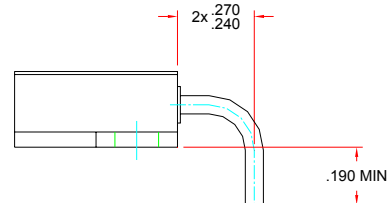
TO-258 (N Suffix)



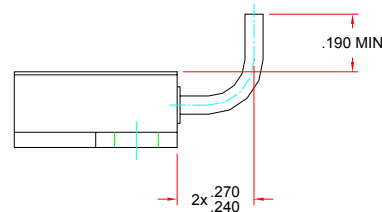
TO-259 (P Suffix)



Optional Bent Down Leads (DB Suffix)



Optional with Bent Up Leads (UB Suffix)



Pin Assignment

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

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