



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638

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**SDR998N&P  
thru  
SDR9912N&P**

**DESIGNER'S DATA SHEET**

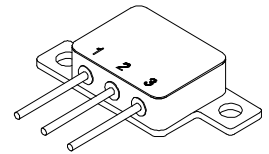
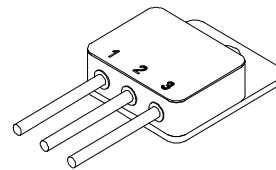
**Features:**

- Ultra Fast Recovery: 60 nsec typical
- High Surge Rating
- Low Reverse Leakage Current
- Low Forward Voltage Drop
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
- Ceramic Seals for improved hermeticity available
- TX, TXV, Space Level Screening Available Consult Factory.

**50 AMP  
800 -1200 Volts  
80 nsec  
Ultra Fast Recovery  
Rectifier**

TO-258

TO-259



Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDR998N&P	$V_{RRM}$	800	Volts
	SDR999N&P		900	
	SDR9910N&P	$V_{RWM}$	1000	
	SDR9911N&P		1100	
	SDR9912N&P	$V_R$	1200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$ )note 1		$I_o$	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on $I_o$ , Allow Junction to Reach Equilibrium Between Pulses, $T_A = 25^\circ\text{C}$ )note 2		$I_{FSM}$	550	Amps
Operating & Storage Temperature		Top & Tstg	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to End Tab, note 1		$R_{qJE}$	0.5	$^\circ\text{C/W}$

Note 1: Pins 2&3 connected

Note 2: High surge ratings available

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

**DATA SHEET #: RU0117B**

**DOC**



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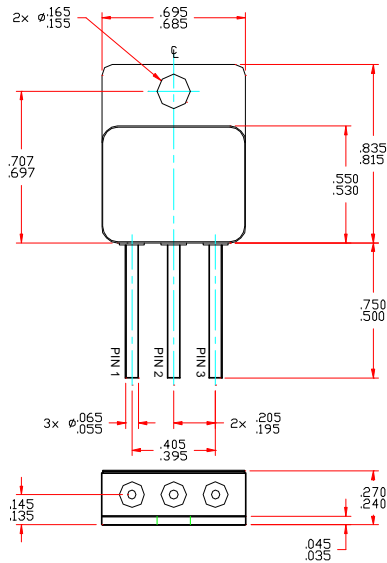
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 SDR9912N&P**

Electrical Characteristics		Symbol	Min	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse)	$I_F = 50\text{A dc}$ $I_F = 100\text{A dc}$	$V_{F1}$	—	1.75 2.3	Volts
<b>Instantaneous Forward Voltage Drop</b> ( $T_A = -55^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse) ( $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse)	$I_F = 50\text{A dc}$ $I_F = 50\text{A dc}$	$V_{F2}$	—	1.7 1.85	Volts
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse minimum)		$I_{R1}$	—	100	mA
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse minimum)		$I_{R2}$	—	10	mA
<b>Junction Capacitance</b> ( $V_R = 10\text{ Vdc}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )		$C_J$	—	150	pF
<b>Reverse Recovery Time</b> ( $I_F = 500\text{ mA}$ , $I_R = 1\text{A}$ , $I_{RR} = 0.25\text{A}$ )	$T_A = 25^\circ\text{C}$	$t_{rr}$	—	80	nsec

**Case Outline: TO-258**

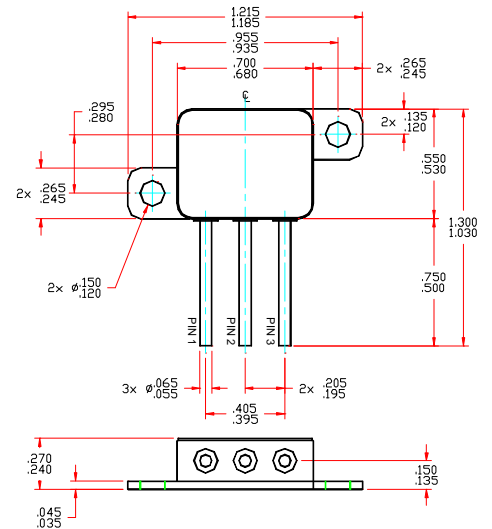
- Pin1: Cathode
- Pin2: Anode
- Pin3: Anode



Note 1: Pin 2&3 connected together

**Case Outline: TO-259**

- Pin1: Cathode
- Pin2: Anode
- Pin3: Anode



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