



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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**SDR9P thru SDR9T  
Series**

**Designer's Data Sheet**

**Part Number/Ordering Information <sup>1/</sup>**

**SDR9**    \_    \_    \_    \_

L    **Screening <sup>2/</sup>**  
       \_ = Not Screened  
       TX = TX Level  
       TXV = TXV Level  
       S = S Level

L    **Package Type**  
       \_ = Axial Leaded  
       SMS = Surface Mount Square Tab

L    **Recovery Time**  
       \_ = Standard Recovery

L    **Voltage/Family**  
       P = 1300V  
       R = 1400V  
       T = 1500V

**9.0 AMP  
STANDARD RECOVERY  
RECTIFIER  
1300 – 1500 VOLTS**

**FEATURES:**

- PIV to 1500 Volts
- Hermetically Sealed
- Low Reverse Leakage Current
- Single Chip Construction
- Replaces Larger DO-4 Rectifiers
- Low Thermal Resistance
- Available in Axial & Square Tab Versions
- TX, TXV, and S-Level Screening Available<sup>2/</sup>
- Fast, and Ultra Fast Versions Available-Contact Factory

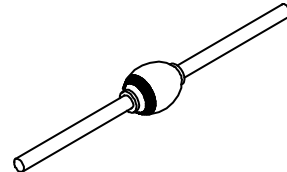
**MAXIMUM RATINGS <sup>3/</sup>**

RATING		SYMBOL	VALUE	UNIT
<b>Peak Repetitive Reverse Voltage And DC Blocking Voltage</b>	SDR9P	$V_{RRM}$	1300	Volts
	SDR9R	$V_{RWM}$	1400	
	SDR9T	$V_R$	1500	
<b>Average Rectified Forward Current</b> (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$ )		$I_o$	9.0	Amps
<b>Peak Surge Current</b> (8.3 ms pulse, half sine wave, superimposed on $I_o$ , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$ )		$I_{FSM}$	130	Amps
<b>Operating &amp; Storage Temperature</b>		$T_J$ and $T_{STG}$	-65 to +175	$^\circ\text{C}$
<b>Thermal Resistance</b>	Junction to Lead for Axial, L = .125"	$R_{\theta JL}$	8	$^\circ\text{C/W}$
	Junction to End Tab for Surface Mount	$R_{\theta JE}$	4	

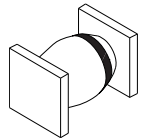
**NOTES:**

- 1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.
- 2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.
- 3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

**Axial Leaded**



**SMS**





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# SDR9P thru SDR9T Series

<b>ELECTRICAL CHARACTERISTICS<sup>3/</sup></b>				
CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
<b>Instantaneous Forward Voltage Drop</b> (pulsed)	$I_F = 9.0 \text{ Adc}, T_A = +25^\circ\text{C}$	$V_{F1}$	1.20	<b>Vdc</b>
	$I_F = 6.0 \text{ Adc}, T_A = +25^\circ\text{C}$	$V_{F2}$	1.10	
	$I_F = 9.0 \text{ Adc}, T_A = -55^\circ\text{C}$	$V_{F3}$	1.40	
<b>Reverse Leakage Current</b> ( $V_R = 80\%$ rated)	$T_A = +25^\circ\text{C}$	$I_{R1}$	1.0	<b><math>\mu\text{A}</math></b>
	$T_A = +100^\circ\text{C}$	$I_{R2}$	50	
<b>Minimum Breakdown Voltage</b> ( $I_R = 50 \mu\text{A}$ )	SDR9P	<b><math>B_{VR}</math></b>	1300	<b>V</b> (min)
	SDR9R		1400	
	SDR9T		1500	
<b>Junction Capacitance</b> ( $V_R = 10 \text{ Vdc}, f = 1\text{MHz}, T_A = 25^\circ\text{C}$ )		<b><math>C_J</math></b>	50	<b>pF</b>
<b>Reverse Recovery Time</b> ( $I_F = 500\text{mA}, I_R = 1\text{A}, I_{RR} = 250\text{mA}, T_A = 25^\circ\text{C}$ )		<b><math>t_{rr}</math></b>	5	<b><math>\mu\text{s}</math></b>

**Package Outlines:**

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	---	.170	A (SMS)	.170	.180
B	.210	.250	B	.260	.300
C	.037	.043	C	.020	.030
D	1.000	---	D	.002	---

<p><b>AXIAL</b></p>	<p><b>SMS</b></p>
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