

**SDR1A THRU SDR1N**  
**1 AMP**  
**ULTRA FAST RECOVERY RECTIFIER**  
**50-1200 VOLTS**



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**CASE STYLE****FEATURES**

- ULTRA FAST RECOVERY 50 NSEC MAX
- PIV TO 1200 VOLTS
- LOW REVERSE LEAKAGE
- HERMETICALLY SEALED
- SINGLE CHIP CONSTRUCTION
- FOR HIGH EFFICIENCY APPLICATIONS

**MAXIMUM RATINGS**

Rating		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR1A	$V_{RM} (rep)$	50	Volts
	SDR1B	$V_R$	100	
	SDR1D		200	
	SDR1G		400	
	SDR1J		600	
	SDR1K		800	
	SDR1M		1000	
	SDR1N		1200	
RMS Reverse Voltage	SDR1A	$V_r$	35	Volts
	SDR1B	70		
	SDR1D	140		
	SDR1G	280		
	SDR1J	420		
	SDR1K	560		
	SDR1M	700		
	SDR1N	840		
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave $T_A = 55^\circ C$ )		$I_O$	1	Amps
Peak Repetitive Forward Current ( $T_A = 55^\circ C$ , 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)		$I_{FM} (rep)$	6	Amps
Peak Surge Current ( $T_A = 55^\circ C$ , Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)		$I_{FM} (surge)$	25	Amps
Operating and Storage Temperature		$T_J, T_{stg}$	-65 to +175	$^\circ C$

**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Leads, $L = 3/8"$	$R_{\theta JL}$	35	$^\circ C/W$

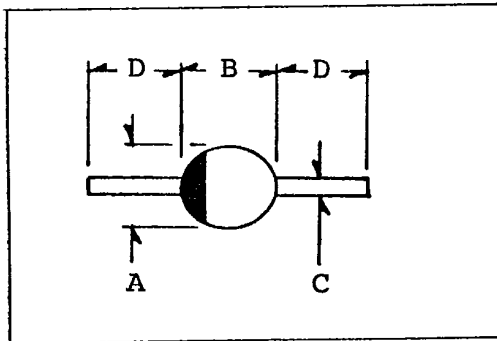
**ELECTRICAL CHARACTERISTICS**

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle ( $I_O$ (Max), 60 Hz, Square Wave, $T_A = 55^\circ\text{C}$ )	SDR1A - SDR1J SDR1K - SDR1N	$V_{F(AV)}$ .85 .95	Vdc
Max Instantaneous Forward Voltage Drop ( $I_F = 1\text{ A dc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	SDR1A - SDR1J SDR1K - SDR1N	$V_F$ 1.7 1.9	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle (Rated $V_R$ , 60Hz, Square Wave, $T_A = 100^\circ\text{C}$ )		$I_{R(AV)}$	$\mu\text{A dc}$
Max Reverse Leakage Current (Rated $V_R$ , $T_A = 25^\circ\text{C}$ )		$I_R$	$\mu\text{A dc}$
Max Junction Capacitance ( $V_R = 10\text{ V}$ , $T_A = 25^\circ\text{C}$ )		$C_J$	pf

**REVERSE RECOVERY CHARACTERISTICS**

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ )	SDR1A - SDR1J	--		50	ns
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ )	SDR1K	--		60	ns
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ )	SDR1M SDR1N	-- --		70 80	ns

**PHYSICAL DIMENSIONS**



**KEY TO DIMENSIONS:**

- (Inches)
- A = .100 - .150
  - B = .125 - .180
  - C = .028 - .032
  - D = 1.00 MIN.

**TYPICAL OPERATING CURVES**

