

SDR1A THRU SDR1N

1 AMP

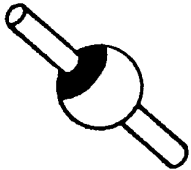
ULTRA FAST RECOVERY RECTIFIER

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
	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	$^\circ C/W$

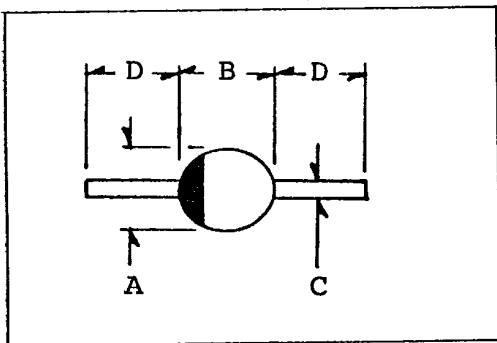
ELECTRICAL CHARACTERISTICS

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 ($I_F = 1$ Adc, $T_A = 25^\circ\text{C}$, 300 μs 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, $T_A = 100^\circ\text{C}$)		$I_{R(AV)}$	100 μAdc
Max Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$)		I_R	5 μAdc
Max Junction Capacitance ($V_R = 10$ V, $T_A = 25^\circ\text{C}$)		C_J	20 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

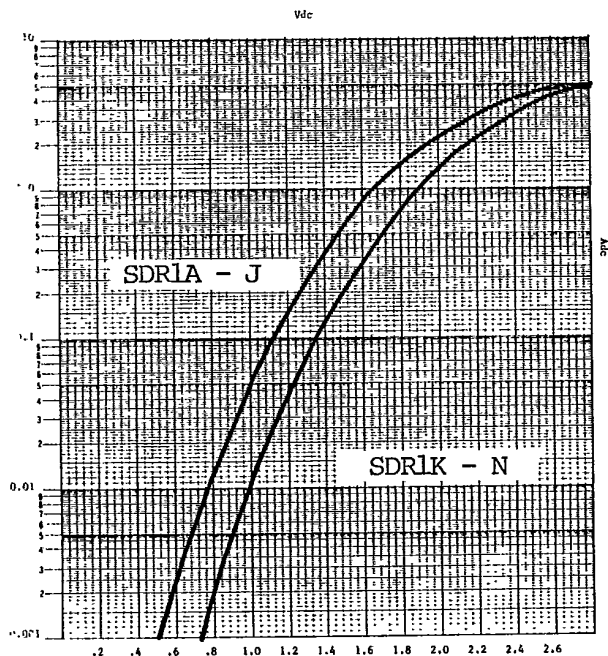
PHYSICAL DIMENSIONS



KEY TO DIMENSIONS:

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

TYPICAL OPERATING CURVES



SSDI SOLID STATE DEVICES, INC.