

SDR1A THRU SDR1N

1 AMP

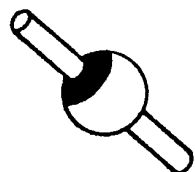
ULTRA FAST RECOVERY RECTIFIER

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	$^\circ C/W$

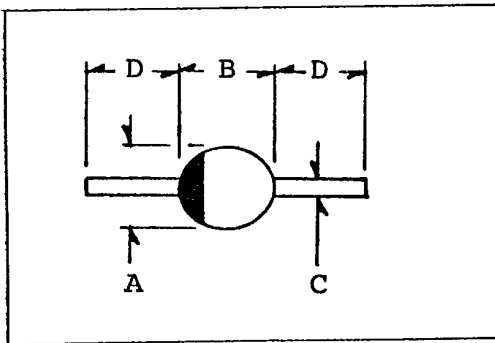
ELECTRICAL CHARACTERISTICS

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 ($I_F = 1\text{ Adc}$, $T_A = 25^\circ\text{C}$, 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 ($V_R = 10\text{ V}$, $T_A = 25^\circ\text{C}$)	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 t_{rr}	--		50	ns
Reverse Recovery Time ($I_F = 500\text{ma}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{ma}$)	SDR1K t_{rr}	--		60	ns
Reverse Recovery Time ($I_F = 500\text{ma}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{ma}$)	SDR1M SDR1N t_{rr}	-- --		70 80	ns

PHYSICAL DIMENSIONS

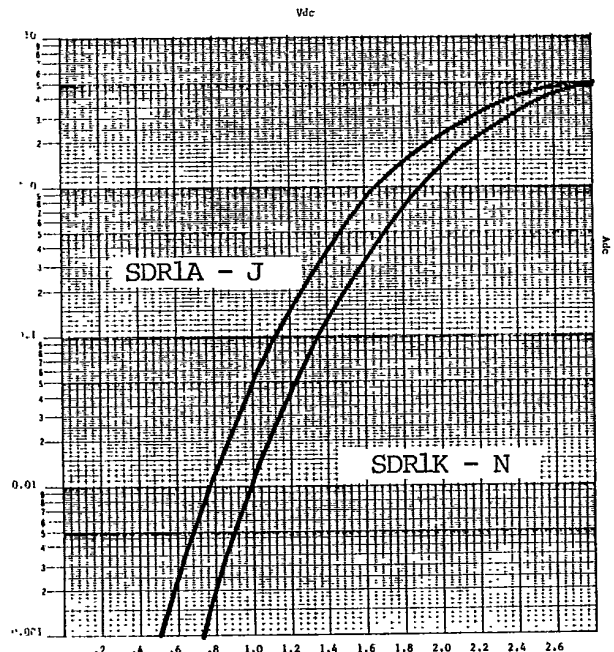


KEY TO DIMENSIONS:

(Inches)

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

TYPICAL OPERATING CURVES



SOLID STATE DEVICES, INC.