

SDR1304 thru SDR1308

3 AMP

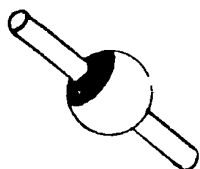
ULTRA FAST RECOVERY RECTIFIER

200-800 VOLTS

SSDI

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CASE STYLE



FEATURES

- PIV TO 800 VOLTS
- ULTRA FAST RECOVERY 70 NSEC MAX
- VOIDLESS CONSTRUCTION
- FOR HIGH EFFICIENCY APPLICATIONS
- HERMETICALLY SEALED
- LOW FORWARD DROP 1.35 VOLTS
- REPLACES UNITRODE UES1304 SERIES

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage SDR1304 SDR1305 SDR1306 SDR1308	V_{RM} (rep) V_R	 200 400 600 800	Volts
RMS Reverse Voltage SDR1304 SDR1305 SDR1306 SDR1308	V_r	 140 280 420 560	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_A = 55^\circ\text{C}$)	I_O	3	Amps
Peak Repetitive Forward Current ($T_A = 55^\circ\text{C}$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	I_{FM} (rep)	18	Amps
Peak Surge Current ($T_A = 55^\circ\text{C}$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	I_{FM} (surge)	75	Amps
Operating and Storage Temperature	T_J, T_{stg}	-65 to +175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Leads, $L = 3/8"$	$R_{\theta JL}$	20	$^\circ\text{C/W}$

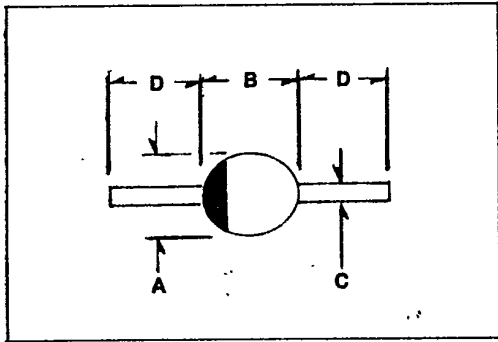
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle (I_O (Max), 60 Hz, Square Wave, $T_A = 55^\circ\text{C}$) SDR1304 thru SDR1308	$V_{F(AV)}$	.68	Vdc
Max Instantaneous Forward Voltage Drop ($I_F = 3\text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse) SDR1304 thru SDR1308	V_F	1.35	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle (Rated V_R 60Hz, Square Wave, $T_A = 100^\circ\text{C}$)	$I_{R(AV)}$	500	μAdc
Max Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$)	I_R	20	μAdc
Max Junction Capacitance ($V_R = 10\text{ V}$, $T_A = 25^\circ\text{C}$)	C_J	50	pf

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$) SDR1304 thru SDR1308	t_{rr}	-	60	70	ns

PHYSICAL DIMENSIONS



SDR1304 thru SDR1308

KEY TO DIMENSIONS:

(Inches)

- A = .250 Max.
- B = .260 Max.
- C = .048 - .052
- D = 1.00 Min.

TYPICAL OPERATING CURVES

