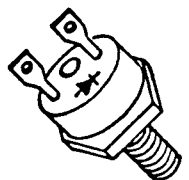


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<h1 style="margin: 0;">SDR943/61 THRU SDR946/61</h1> <h2 style="margin: 0;">40 AMP</h2> <h3 style="margin: 0;">ULTRA FAST RECOVERY RECTIFIER</h3> <h3 style="margin: 0;">300-600 VOLTS</h3>	
<p style="font-size: small; margin: 0;">14830 Valley View Avenue La Mirada, California 90638 P. O. Box 577 La Mirada, California 90637 (213) 921-9660 TWX 910-583-4807</p>	

**CASE STYLE T**  
2 PIN TO-61



**FEATURES**

- ISOLATED PACKAGE
- ULTRA FAST RECOVERY 80 NSEC MAX
- REVERSE VOLTAGE TO 600 VOLTS
- LOW REVERSE LEAKAGE
- HERMETICALLY SEALED
- SINGLE CHIP CONSTRUCTION
- 200°C OPERATING, GOLD EUTECTIC DIE ATTACH, ULTRASONIC ALUMINUM WIRE BONDS
- MILITARY GRADE REPLACEMENT FOR COMMERCIAL DO-5

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Per Leg and DC Blocking Voltage Per Leg (IR = 100µA)	$V_{RM (rep)}$ $V_R$	300 400 500 600	Volts
RMS Reverse Voltage Per Leg	$V_r$	210 280 350 420	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$ )	$I_o$	40	Amps
Peak Repetitive Forward Current ( $T_C = 55^\circ C$ , 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	$I_{FM (rep)}$	150	Amps
Peak Surge Current ( $T_C = 55^\circ C$ , Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	$I_{FM (surge)}$	375	Amps
Operating and Storage Temperature	$T_J, T_{stg}$	-65 to 200	°C

**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.0	°C/W

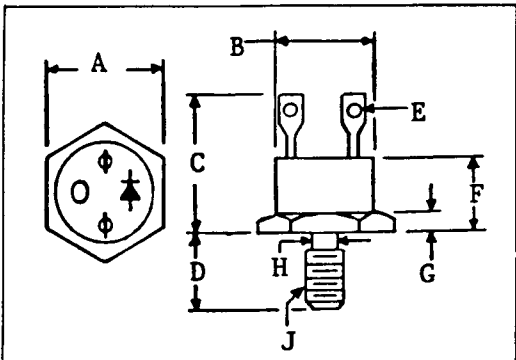
## ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle, ( $I_O$ (Max), 60 Hz. Square Wave, $T_C = 55^\circ\text{C}$ )	$V_{F(AV)}$	0.85	Vdc
Max Instantaneous Forward Drop ( $I_F = 40$ Adc, $T_C = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	$V_F$	1.7	Vdc
Max Reverse Leakage Current $T_C = 100^\circ\text{C}$	$I_{R(AV)}$	5.0	mAdc
Max Reverse Leakage Current ( $T_C = 25^\circ\text{C}$ )	$I_R$	50	$\mu\text{Adc}$
Max Junction Capacitance ( $V_R = 10$ V, $T_C = 25^\circ\text{C}$ )	$C_J$	350	pf

## REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ )	$t_{rr}$	-	60	80	ns

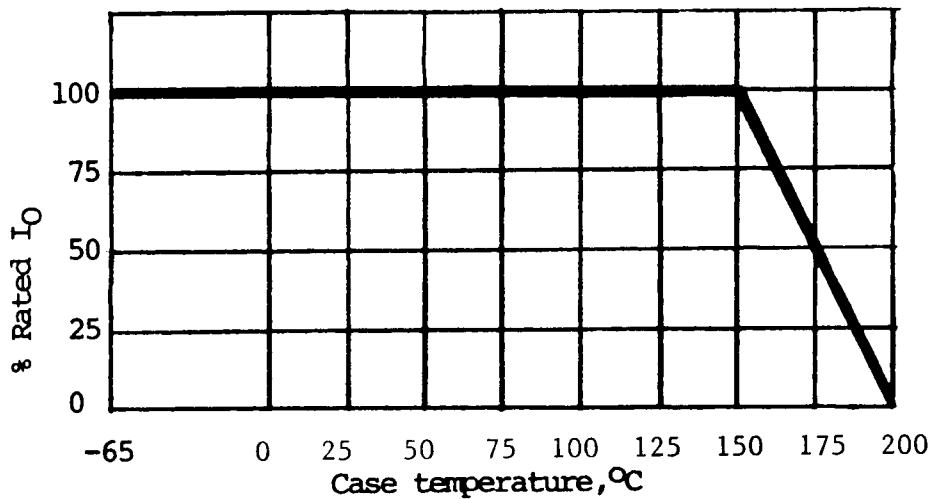
## PHYSICAL DIMENSIONS



### KEY TO DIMENSIONS:

	(Inches)
A =	.667 - .687
B =	.570 - .610
C =	.640 - .875
D =	.422 - .455
E =	.047 - .072 (Diameter)
F =	.325 - .460
G =	.090 - .150
H =	.220 - .249 (Diameter)
J =	$\frac{1}{4}$ - 28 UNF-2A

## TYPICAL OPERATING CURVES



**SSDII** SOLID STATE DEVICES, INC.