

SDR622/59 THRU SDR625/59

20 AMP

ULTRA FAST RECOVERY RECTIFIER

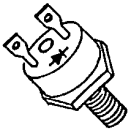
200 – 500 VOLTS



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MILITARY GRADE REPLACEMENT FOR COMMERCIAL DO-4

CASE STYLE O
2 PIN TO-59



FEATURES

- ISOLATED PACKAGE
- ULTRA FAST RECOVERY 35 NSEC MAX
- REVERSE VOLTAGE TO 500 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-4

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage (IR = 100 μ A)	V_{RM} (rep) V_R		Volts
		200	
		300	
		400	
		500	
RMS Reverse Voltage	V_r		Volts
		140	
		210	
		280	
		350	
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ\text{C}$)	I_o	20	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ\text{C}$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	I_{FM} (rep)	80	Amps
Peak Surge Current ($T_C = 55^\circ\text{C}$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	I_{FM} (surge)	300	Amps
Operating and Storage Temperature	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.0	$^\circ\text{C/W}$

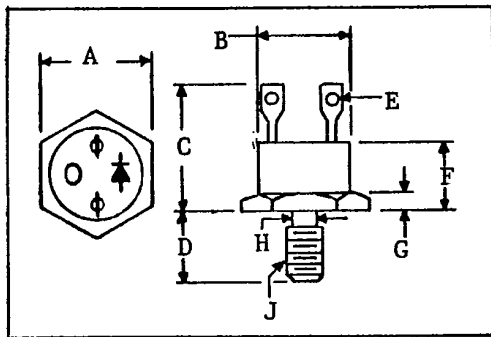
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle. (I_D (Max), 60 Hz. Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	0.75	Vdc
Max Instantaneous Forward Drop V_F . ($I_F = 20$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse)	V_F	1.7	Vdc
Max Reverse Leakage Current ($T_C = 100^\circ\text{C}$)	I_R	5.0	m Adc
		SDR622/59, $V_R = 100\text{V}$ SDR623/59, $V_R = 200\text{V}$ SDR624/59, $V_R = 300\text{V}$ SDR625/59, $V_R = 400\text{V}$	
Max Reverse Leakage Current ($T_C = 25^\circ\text{C}$)	I_R	50	μA dc
		SDR622/59, $V_R = 100\text{V}$ SDR623/59, $V_R = 200\text{V}$ SDR624/59, $V_R = 300\text{V}$ SDR625/59, $V_R = 400\text{V}$	
Max Junction Capacitance ($V_R = 10$ V, $T_C = 25^\circ\text{C}$)	C_J	150	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}	---	30	35	ns

PHYSICAL DIMENSIONS



KEY TO DIMENSIONS:

- (Inches)
- A = .424 - .437
 - B = .318 - .380
 - C = .570 - .763
 - D = .400 - .455
 - E = .040 - .065 (Diameter)
 - F = .320 - .468
 - G = .090 - .150
 - H = .163 - .189 (Diameter)
 - J = 10-32 UNF-2A

TYPICAL OPERATING CURVES

