

T-03-21



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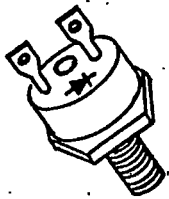
5R7/61 THRU 15R7/61

75 AMP

EPION II HIGH SPEED RECTIFIER

50-150 VOLTS

MILITARY GRADE REPLACEMENT FOR COMMERCIAL DO-5

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

- ISOLATED PACKAGE
- RADIATION TOLERANT
- ULTRA FAST RECOVERY 75 NSEC MAX
- REVERSE VOLTAGE TO 150 VOLTS
- LOW FORWARD VOLTAGE DROP 500 MV AVERAGE
- LOW REVERSE LEAKAGE
- HERMETICALLY SEALED/SINGLE CHIP CONSTRUCTION
- 200°C OPERATING, GOLD EUTECTIC DIE ATTACH, ULTRASONIC ALUMINUM WIRE BONDS

MAXIMUM RATINGS

Rating		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	5R7/61	V_{RM} (rep)	50	Volts
	7R7/61	V_R	70	
	10R7/61		100	
	12R7/61		125	
	15R7/61		150	
RMS Reverse Voltage	5R7/61	V_r	35	Volts
	7R7/61		50	
	10R7/61		70	
	12R7/61		90	
	15R7/61		110	
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ\text{C}$)		I_0	75	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)	200	Amps
Peak Surge Current ($T_C = 55^\circ\text{C}$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)		I_{FM} (surge)	500	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	$R_{\theta JC}$	0.65	$^\circ\text{C/W}$

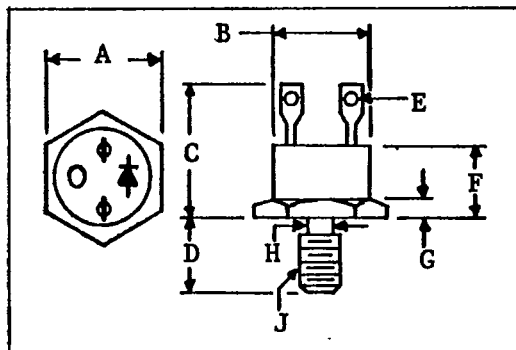
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle (I_O (Max), 60 Hz Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$.5	Vdc
Max Instantaneous Forward Drop ($I_F = 75$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse)	V_F	1.0	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle (Rated V_R , 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	5.0*	m Adc
Max Reverse Leakage Current (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	500*	μAdc
Max Junction Capacitance ($V_R = 10$ V, $T_C = 25^\circ\text{C}$)	C_J	350	pf

REVERSE RECOVERY CHARACTERISTICS *LOWER LEAKAGE DEVICES AVAILABLE FROM FACTORY

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}	---	50	75	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

