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MDA970A1 thru MDA970A6

Designers Data Sheet

INTEGRAL DIODE ASSEMBLIES

... diffused silicon dice interconnected and transfer molded into rectifier circuit assemblies for use in application where high output current/size ratio is of prime importance. These devices feature:

- Void-free, Transfer-molded Encapsulation to Assure High Resistance to Shock, Vibration, and Temperature Extremes
- High Dielectric Strength
- Simple, Compact Structure for Trouble-free Performance
- High Surge Capability — 100 Amps

Designers Data for "Worst Case" Conditions

The Designers Data Sheet permits the design of most circuits entirely from the information presented. Limit curves — representing boundaries on device characteristics — are given to facilitate "worst case" design.



SINGLE-PHASE FULL-WAVE BRIDGE

4 AMPERES
50-600 VOLTS



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	MDA970A1	MDA970A2	MDA970A3	MDA970A4	MDA970A5	MDA970A6	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600		Volts
RMS Reverse Voltage	$V_R(RMS)$	35	70	140	280	420		Volts
DC Output Voltage Resistive Load Capacitive Load	V_{dc} V_{dc}	31 50	62 100	124 200	248 400	372 600		Volts
Average Rectified Forward Current $T_A = 25^\circ\text{C}$ $T_C = 55^\circ\text{C}$	I_O	4.0 8.0						Amp
Nonrepetitive Peak Surge Current (surge applied at rated load conditions, $T_J = 150^\circ\text{C}$)	I_{FSM}	100						Amp
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150						$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max (Per Die)	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	10	$^\circ\text{C/W}$
Effective Bridge	$R_{\theta(EFF)}$	7.75	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Instantaneous Forward Voltage (Per Diode) ($I_F = 8.28 \text{ Amp}$, $T_J = 25^\circ\text{C}$)	V_F	—	1.1	Vdc
($I_F = 8.28 \text{ Amp}$, $T_J = 160^\circ\text{C}$)		—	1.8	
Reverse Current (Rated V_{RRM} applied to ac terminals, + and - terminals open, $T_A = 25^\circ\text{C}$)	I_R	—	1.0	mA

CASE: Transfer-molded plastic encapsulation.

FINISH: All external surfaces are corrosion-resistant. Leads are readily solderable.

POLARITY: Embossed symbols

AC Input = ~

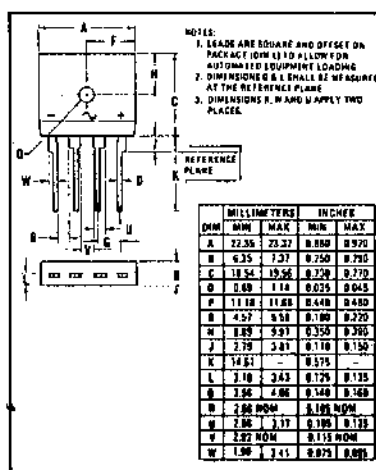
DC output = +

DC output = -

MOUNTING POSITION: Any

WEIGHT (Approximately): 7.5 Grams

MOUNTING TORQUE: 5 in.-lb. Max



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