

**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

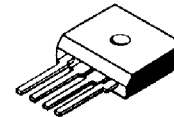
**Designers Data for "Worst Case" Conditions**

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<sub>A</sub> = 25°C unless otherwise noted)**

Rating	Symbol	MDA970A1	MDA970A2	MDA970A3	MDA970A5	MDA970A6	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>VRWM</sub> V <sub>R</sub>	50	100	200	400	600	Volts
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	Volts
DC Output Voltage Resistive Load Capacitive Load	V <sub>dc</sub> V <sub>dc</sub>	31 50	62 100	124 200	248 400	372 600	Volts
Average Rectified Forward Current T <sub>A</sub> = 25°C T <sub>C</sub> = 55°C	I <sub>O</sub>	←————— 4.0 —————→ ←————— 8.0 —————→					Amp
Nonrepetitive Peak Surge Current (surge applied at rated load conditions, T <sub>J</sub> = 150°C)	I <sub>FSM</sub>	←————— 100 —————→					Amp
Operating and Storage Junction Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	←————— -65 to +150 —————→					°C

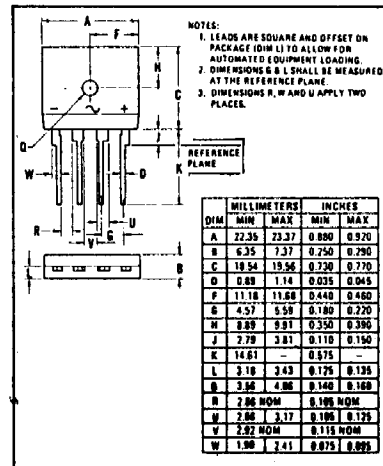
**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Max (Per Die)	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	10	°C/W
Effective Bridge	R <sub>θ(EFF)</sub>	7.75	°C/W

**ELECTRICAL CHARACTERISTICS**

Characteristic	Symbol	Min	Max	Unit
Instantaneous Forward Voltage (Per Diode) (I <sub>F</sub> = 6.28 Amp, T <sub>J</sub> = 25°C) (I <sub>F</sub> = 6.28 Amp, T <sub>J</sub> = 150°C)	V <sub>F</sub>	—	1.1 1.0	V <sub>dc</sub>
Reverse Current (Rated V <sub>RM</sub> applied to ac terminals, + and - terminals open, T <sub>A</sub> = 25°C)	I <sub>R</sub>	—	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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