

5 WATT MA/MH SERIES

FEATURES

Industry-standard pinout

High efficiency

Ultralow noise

Input/output isolation

3:1 wide input range option

Output current limiting; unlimited duration

UL, CSA recognized

Within FCC Class B limits



The MA and MH 5 Watt power modules provide high efficiency in a small footprint. These modules operate from a low input-voltage range (15 Vdc or less) and provide precisely regulated dc outputs. Undervoltage lockout provides predictable, snap-on start-up for your applications. High-frequency operation at 400 kHz, coupled with 100% state-of-the-art surface-mount technology, lets us squeeze this high-performance circuit into a one cubic inch package. We have isolated the outputs from the inputs, allowing you to design versatile polarity configurations and grounding connections. A 3:1 input range version of this module is also available for applications where you desire maximum flexibility.

The 2.00 inches long, 1.10 inches wide, and 0.46 inch high nonconductive case mounts on printed circuit boards. In a natural convection environment, the modules are rated to a full load at 70°C ambient with no heat sinking or external filtering.

SELECTION CHART

Input Vdc	Output Vdc
4.5-5.5 = H	5 = A
10-15 = A	12 = B
	15 = C
	±12 = B K
	±15 = C L
Part No. ↓	↓ ↓
M <input type="checkbox"/> <input type="checkbox"/> 0 0 5 <input type="checkbox"/> <input type="checkbox"/>	

We can provide any output voltages between 5 V and 15 V.

TYPICAL INPUT CHARACTERISTICS

Reflected Ripple Current	45 mAp-p
Ripple Rejection	50 dB

TYPICAL OUTPUT CHARACTERISTICS

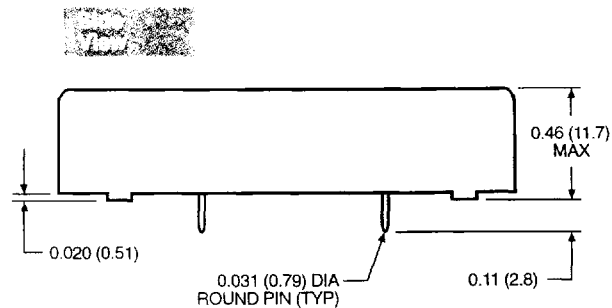
Set Point Accuracy	±2%
Load Regulation	±0.05%
Cross-Regulation (Dual)	±4%
Line Regulation	±0.02%
Output Temperature Drift	±0.01%/°C
Output Ripple	
5 V Output	15 mVp-p, 5 mVrms
12 V 15 V Output	20 mVp-p, 5 mVrms
±12 V ±15 V Output	60 mVp-p, 15 mVrms
Overvoltage Clamp Set Point	120%
Current Limit Inception	190%
Short Circuit Current	400%
Efficiency	
5 V Input; 5 V Output	73%
12 V, 15 V, ±12 V, ±15 V Output	75%
12 V Input; 5 V Output	77%
12 V, 15 V, ±12 V, ±15 V Output	78%

OPTIONS

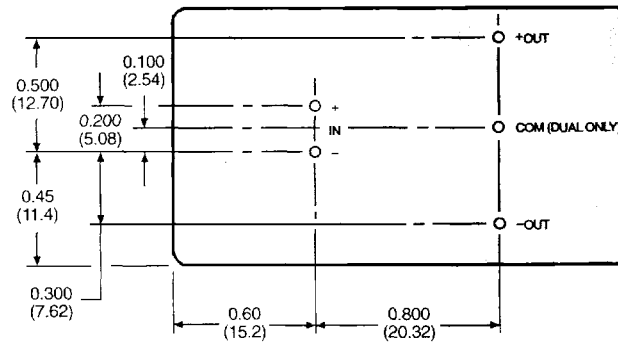
- Wide operating input voltage range (4.5–14 V)
- Metal case with ground pin

PRODUCT ATTRIBUTES

Isolation	
Voltage	500 Vdc
Capacitance	1200 pF
Resistance	>10 MΩ
Operating Ambient Temp.	-10° to 70°C
Storage Temperature	-40° to 110°C
Maximum Weight	1.0 oz (28 grams)
Case Dimensions	2.00" L, 1.10" W, 0.46" H
Calculated MTBF (40°C case)	5.46 million hrs.



Bottom View



Pins are solder-plated brass, 0.031 (0.79) DIA. Dimensions are in inches and (millimeters).

Compare to other 5 watt modules

- This module provides:
- Lower input and output noise
 - Higher efficiency
 - Smaller footprint

For more specific technical information, call 1-800-526-7819.

Call 1-800-372-2447 to ask for product-specific data sheets:

- **MAD05** Data Sheet DS91-203EPS
- **MHO05** Data Sheet DS89-205EPS