

International Power Sources, Inc.

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DC/DC Converters



SHOWN
ACTUAL
SIZE

NMF SERIES 1 WATT Flash Memory Programming

FEATURES

- Remote Flash Programming
- 0.18 in² Board Space
- Fully Regulated Outputs
- 5, 12, 24, and 48 VDC Inputs
- 1000 VDC Isolation
- 5, 9, 12, 12.75, and 15 VDC Outputs
- 100% Tested/Burned-In
- Surface Mount Available

DESCRIPTION

The NMF Series is a family of miniature fully regulated isolated DC/DC converters. Units are available with 5, 12, 24, and 48 VDC inputs and outputs of 5, 9, 12, 12.75, and 15 VDC. Delivered power is 1 Watt, input to output isolation of 1000 VDC with units occupying only 0.18 square inches of board space.

The NMF0512S and NMF0513S are specifically designed for use with flash memory. A control pin is provided for remote in-circuit electrical erasure and reprogramming of flash memory devices.

MODELS CHART

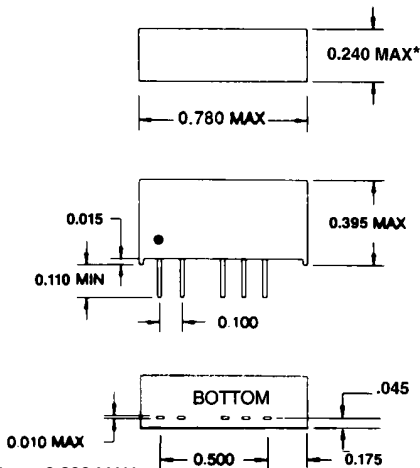
OUTPUT VOLTAGE(S)	OUTPUT CURRENT(S)	PART NUMBERS			
		5VDC INPUT	12VDC INPUT	24VDC INPUT	48VDC INPUT
5VDC	100mA	NMF0505S	NMF1205S	NMF2405S	NMF4805S
9VDC	100mA	NMF0509S	NMF1209S	NMF2409S	NMF4809S
12VDC	83mA	NMF0512S	NMF1212S	NMF2412S	NMF4805S
12.75VDC	78mA	NMF0513S	—	—	—
15VDC	67mA	NMF0515S	NMF1215S	NMF2415S	NMF4815S

ELECTRICAL SPECIFICATIONS

All specifications typical at nominal line, full load and 25°C

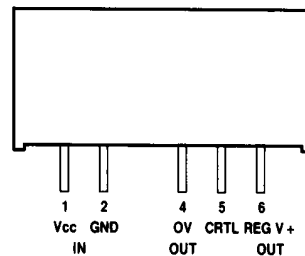
Input voltage range	±5%
Input reflected noise (20MHz BW)	40mV p-p
Output voltage accuracy	±5%
Line regulation (10% to 100% Load)	.25%/1% of Vin
Load regulation (10% to 100% Load)	1.5% max.
Output ripple and noise (20 MHz BW)	60mV p-p max.
Efficiency at full load, 9V, 12V and 15V outputs	62% typical, 55% min.
Efficiency at full load, 5V output	50% typical, 45% min.
Total output power (any output)	1 Watt
Short circuit protection	Indefinite
Switching frequency	100 KHz
Input output isolation	1000VDC (1000 megohms) min.
Temperature coefficient	0.03% per °C max.
Operating temperature range	-50°C to 125°C
	0°C to 70°C (no derating)
Storage temperature range	-55°C to 125°C

DIMENSIONS AND CONNECTIONS



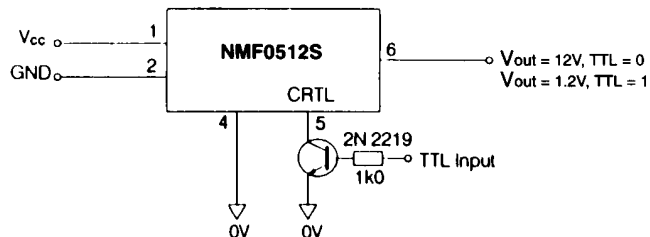
* 24 & 48 VDC Input 0.300 MAX.

Pins .01 x .02 inches



TYPICAL APPLICATIONS

FLASH PROM programming voltage control



Dimensions in inches.
Specifications subject to change.
Unit requires 10mm of air space.

Normal Isolated regulated output

