

## DESCRIPTION

The EV2481-H-00A is a Buck converter evaluation board for the MP2481, a wide input step-down converter designed for driving high-power white LEDs with up to 1A capability.

The MP2481 is a 1.2A output, 36V white LED driver suitable for either step-down or inverting step-up/down applications. It achieves 1.2A peak output current over a wide input supply range with excellent load and line regulation. Current mode operation provides fast transient response and eases loop stabilization. Fault condition protection includes thermal shutdown, cycle-by-cycle peak current limiting, open LED protection and output short circuit protection.

The MP2481 incorporates both DC and PWM dimming onto a single control pin. The separate input reference ground pin allows for direct enable and/or dimming control for a positive to negative power conversion.

The MP2481 requires a minimum number of readily available standard external components and is available in 8-pin MSOP8 packages.

## FEATURES

- Wide 6V to 36V Operating Input Range for Step-Down Applications
- Drives one 5W White LED
- Up to 87% Efficiency
- Analog and PWM Dimming
- Cycle-by-Cycle Over Current Protection
- Thermal Shutdown Protection
- Open Strings Protection
- Input Over Voltage Protection
- Output short circuit protection

## APPLICATIONS

- General LED Illumination

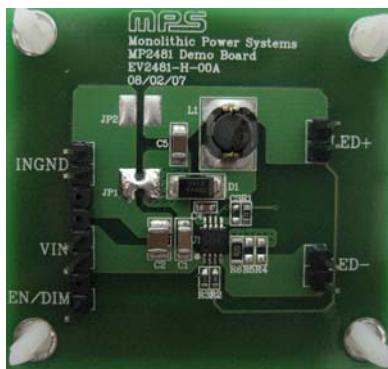
## ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Units
Input Voltage	$V_{IN}$	6-36	V
# of WLEDs		1	
LED Current	$I_{LED}$	1	A

All MPS parts are lead-free and adhere to the RoHS directive. For MPS green status, please visit MPS website under Products, Quality Assurance page.

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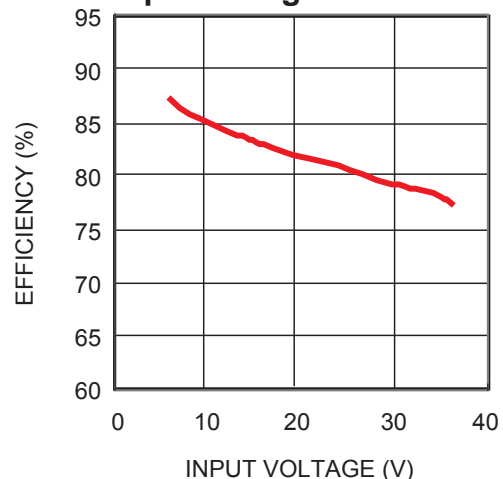
## EV2481-H-00A EVALUATION BOARD



(L x W x H) 2.0" x 1.8" x 0.2"  
(5.0cm x 4.5cm x 0.5cm)

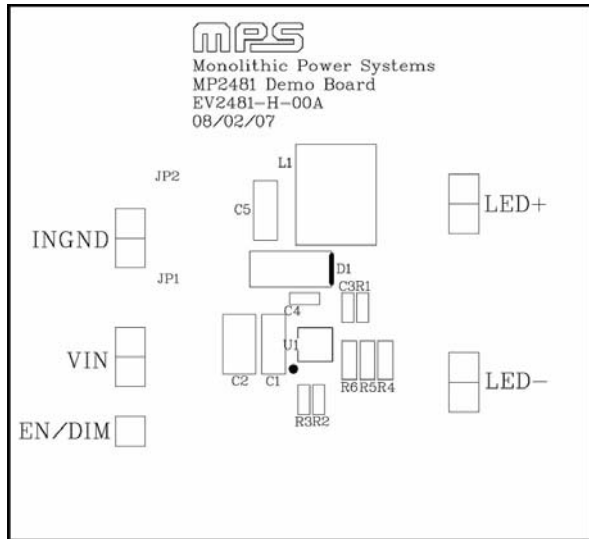
Board Number	MPS IC Number
EV2481-H-00A	MP2481DH

Efficiency vs.  
Input Voltage

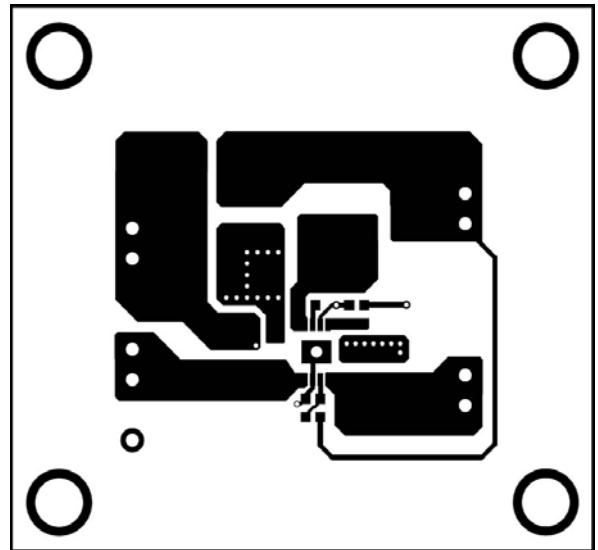




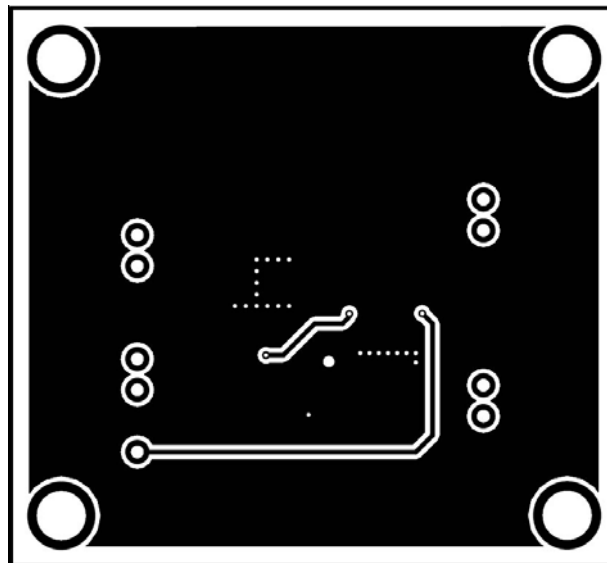
**PRINTED CIRCUIT BOARD LAYOUT**



**Figure 1—Top Silk Layer**



**Figure 2—Top Layer**



**Figure 3—Bottom Layer**