

### DESCRIPTION

The EV2370DJ-00A is an evaluation board for the MP2370DJ, a monolithic step-down white LED driver with a built-in power MOSFET. It is configured for driving one 3W white LED device.

The MP2370 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 cycle-by-cycle current limiting and thermal shutdown.

The MP2370 requires a minimum number of readily available standard external components.

The MP2370 is available in TSOT23-6 package.

### ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Units
Input Voltage	$V_{IN}$	6-24	V
Load Current	$I_{OUT}$	770	mA

### FEATURES

- Wide 4.5V to 24V Operating Input Range
- 1.2A Peak Output Current
- 0.35Ω Internal Power MOSFET Switch
- Up to 92% Efficiency
- Thermal Shutdown
- Cycle-by-Cycle Over Current Protection
- Available in TSOT23-6 Package
- Fully Assembled and Tested

### APPLICATIONS

- WLED Drivers
- Distributed Power Systems
- Battery Charger
- Pre-Regulator for Linear Regulators

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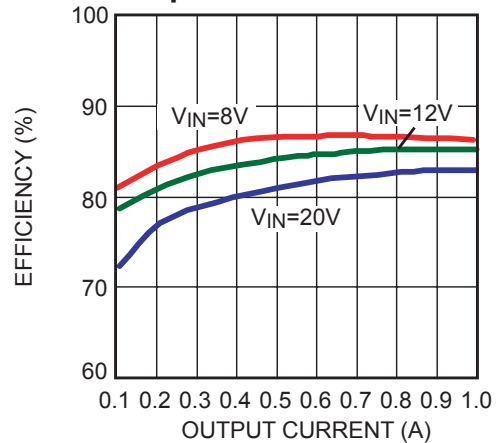
### EV2370DJ-00A EVALUATION BOARD



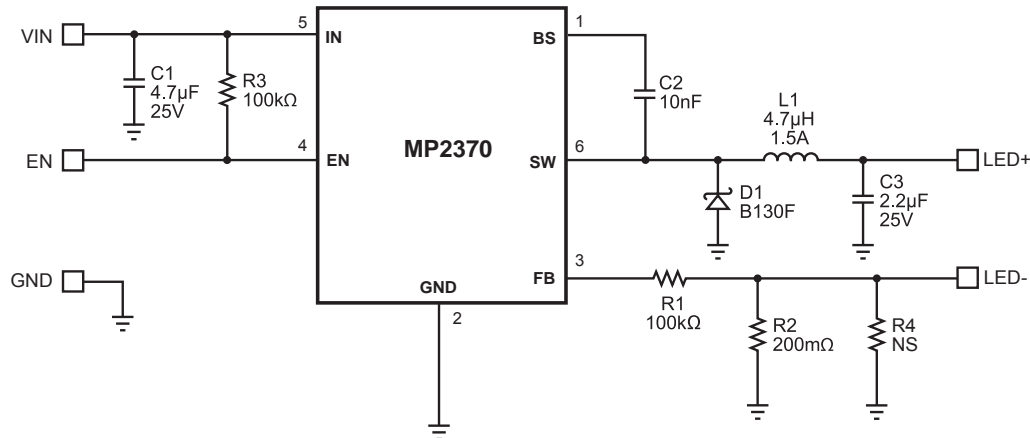
(L x W x H) 1.8" x 1.8" x 0.4"  
4.6cm x 4.6cm x 1.0cm

Board Number	MPS IC Number
EV2370DJ-00A	MP2370DJ

#### Efficiency vs Output Current



## EVALUATION BOARD SCHEMATIC



## EV2370DJ-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Part Number
1	C1	4.7µF	Ceramic Capacitor, 25V, X7R	1206	TDK	C3216X7R1E475K
1	C2	10nF	Ceramic Capacitor, 50V, X7R	0603	TDK	C1608X7R1H103K
1	C3	2.2µF	Ceramic Capacitor, 25V, X7R	0805	TDK	C2012X7R1E225K
1	D1		Diode Schottky, 30V, 1A	SMA	Diodes Inc	B130-F
1	L1	4.3µH	Inductor, 1.5A	SMD	Toko	#A920CY-4R3M
2	R1,R3	100kΩ	Resistor, 5%	0603	Any	
1	R2	200mΩ	Resistor, 1%	0805	KAMAYA	RLC20-R200F
1	R4	NS	Not Stuffed			
1	U1		White LED Driver	TSOT23-6	MPS	MP2370DJ

**PRINTED CIRCUIT BOARD LAYOUT**

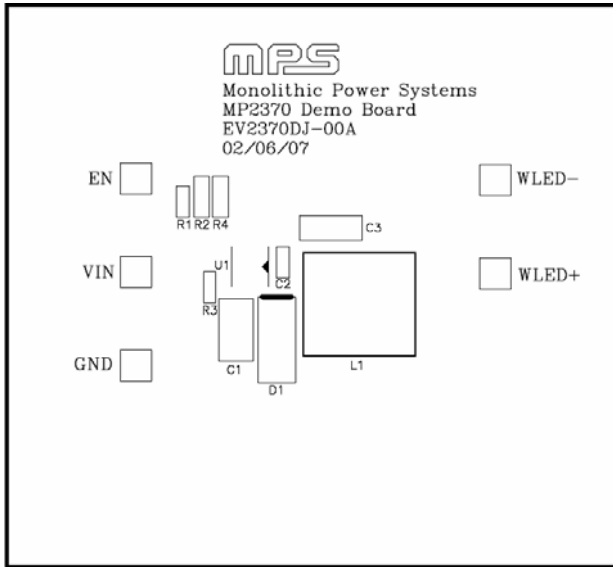


Figure 1—Top Silk Layer

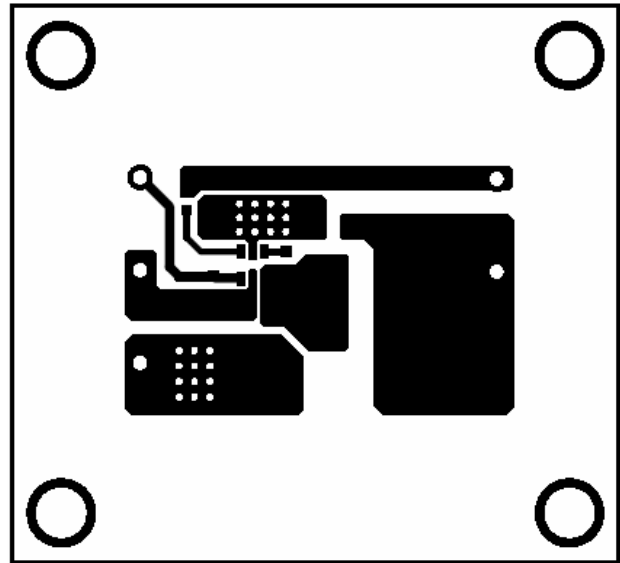


Figure 2—Top Layer

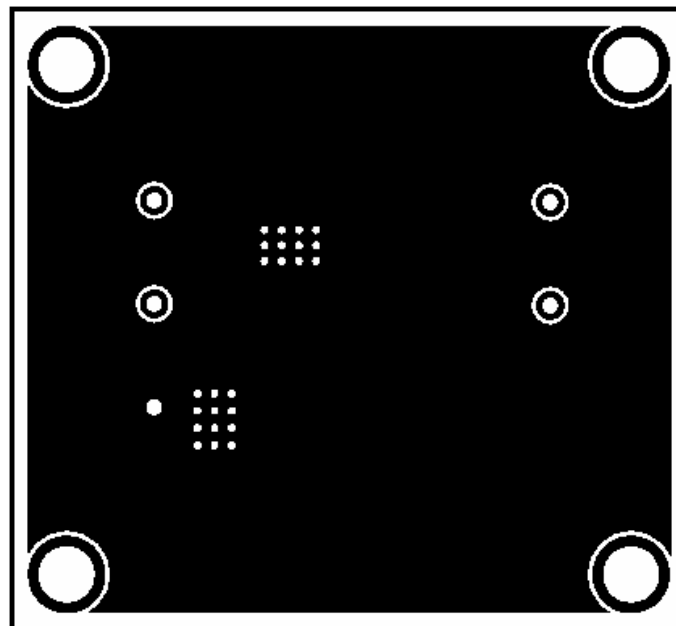


Figure 3—Bottom Layer