



## DESCRIPTION

The EV02W0303A-3-Y-00A is an evaluation board designed to demonstrate the capabilities of the MID02W0303AGY-3R, a regulated, isolated DC/DC converter module.

The MID02W0303AGY-3R integrates a power MOSFET, transformer, and feedback circuit all in one chip, supporting a 3kV<sub>DC</sub> isolation

voltage. This converter provides a small size and higher reliability operation compared to traditional isolated power modules.

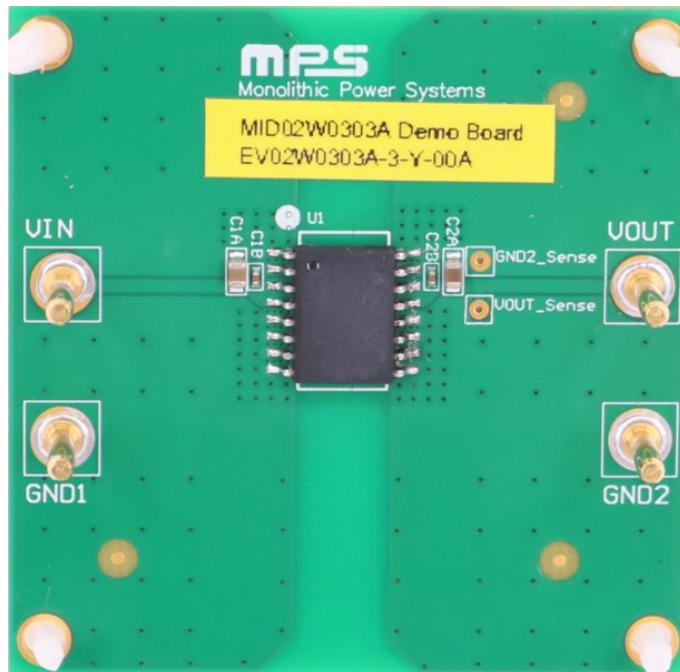
It is recommended to read the datasheet for the MID02W0303A prior to making any changes to the EV02W0303A-3-Y-00A.

## PERFORMANCE SUMMARY

Specifications are at  $T_A = 25^\circ\text{C}$ , unless otherwise noted.

Parameters	Conditions	Value
Input voltage ( $V_{IN}$ ) range		3V to 3.6V
Output voltage ( $V_{OUT}$ )	$V_{IN} = 3\text{V to } 3.6\text{V}$ , $I_{OUT} = 0\text{mA to } 75\text{mA}$	3.3V
Maximum output current ( $I_{OUT}$ )	$V_{IN} = 3\text{V to } 3.6\text{V}$	75mA

## EVALUATION BOARD

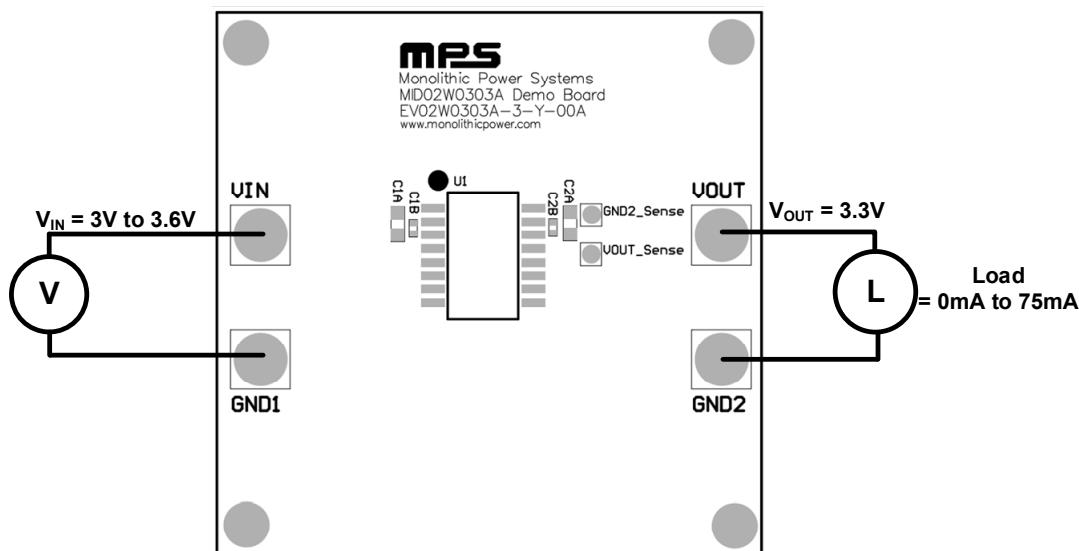


LxWxH (5.1cmx5.1cmx0.3cm)  
2 Layers, 1oz/1oz

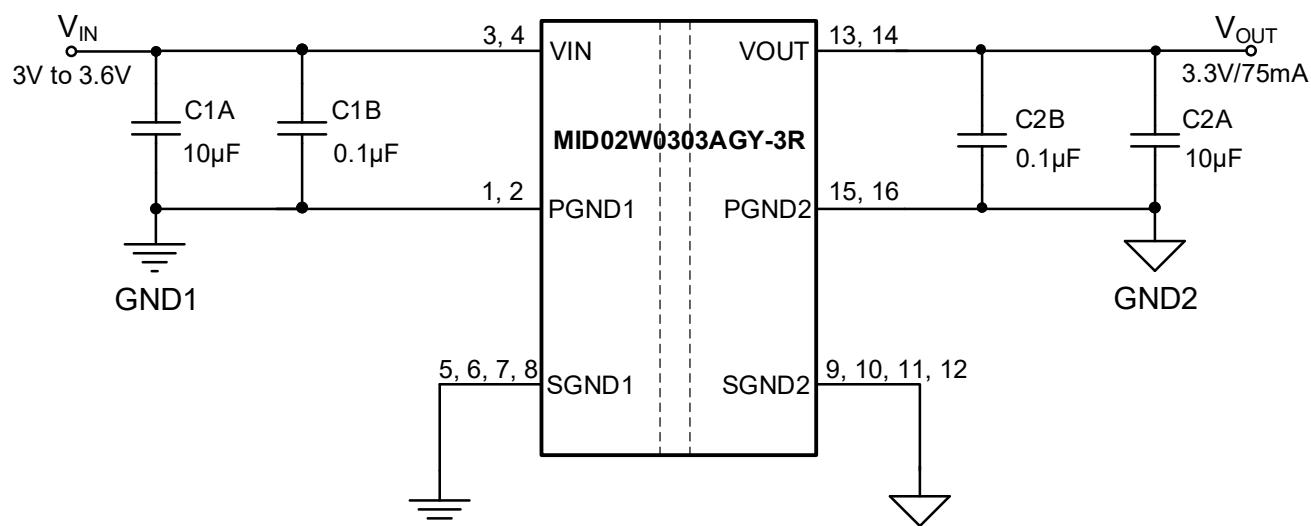
Board Number	MPS IC Number
EV02W0303A-3-Y-00A	MID02W0303AGY-3R

## QUICK START GUIDE

1. Preset the power supply ( $V_{IN}$ ) between 3V and 3.6V, then turn off the power supply.
2. Connect the power supply terminals to:
  - a. Positive (+):  $V_{IN}$
  - b. Negative (-):  $GND_1$
3. Connect the load terminals to:
  - a. Positive (+):  $V_{OUT}$
  - b. Negative (-):  $GND_2$
4. After making the connections, turn on the power supply. The board should automatically start up.



**Figure 1: Measurement Equipment Set-Up**

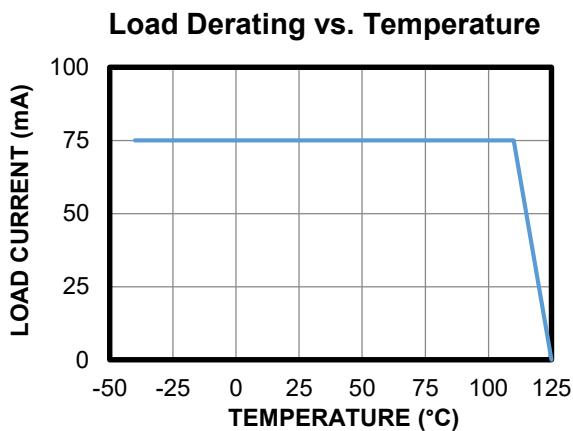
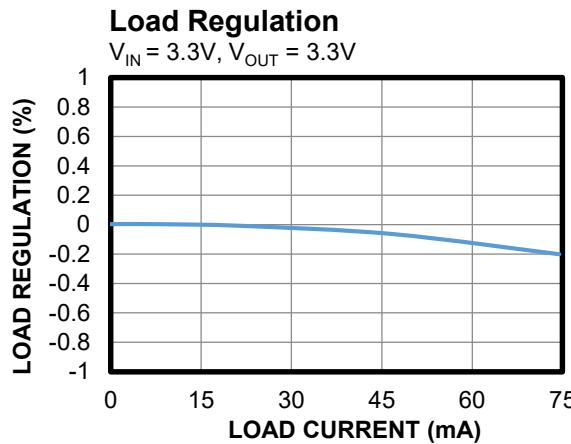
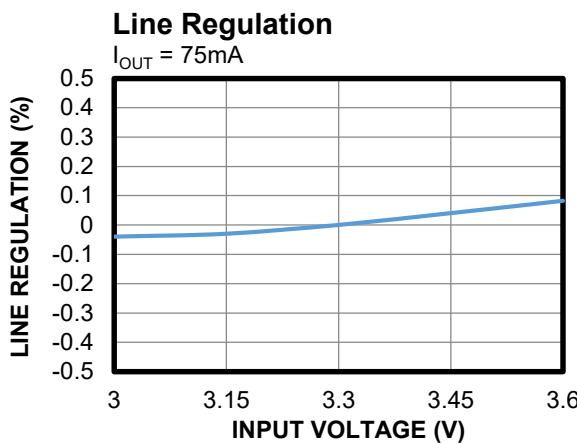
**EVALUATION BOARD SCHEMATIC****Figure 2: Evaluation Board Schematic**

**EV02W0303A-3-Y-00A BILL OF MATERIALS**

Qty	Ref	Value	Description	Package	Manufacturer	Manufacturer PN
2	C1A, C2A	10µF	Ceramic capacitor, 10V, X5R	0805	TDK	C2012X5R1A106KT000E
2	C2A, C2B	100nF	Ceramic capacitor, 16V, X7R	0402	Samsung	CL05B104KO5NNNC
1	U1	MID02W0303A	0.25W, 3kV <sub>DC</sub> isolated DC/DC converter module	SOIC-16 WB	MPS	MID02W0303AGY-3R-Z

## EVB TEST RESULTS

Performance curves and waveforms are tested on the evaluation board.  $V_{IN} = 3.3V$ ,  $V_{OUT} = 3.3V$ ,  $T_A = 25^\circ C$ ,  $I_{OUT} = 0mA$  to  $75mA$ ,  $C_{IN} = C_{OUT} = 0.1\mu F + 10\mu F$ , unless otherwise noted.

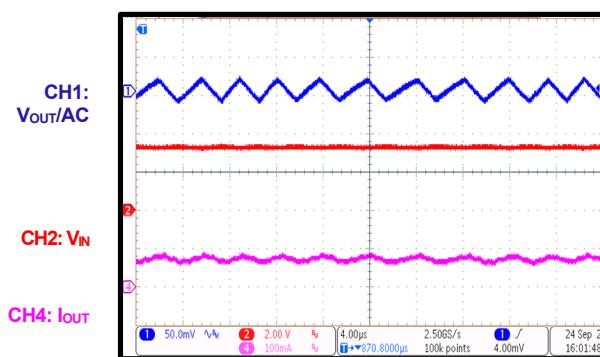


## EVB TEST RESULTS (*continued*)

Performance curves and waveforms are tested on the evaluation board.  $V_{IN} = 3.3V$ ,  $V_{OUT} = 3.3V$ ,  $T_A = 25^\circ C$ ,  $I_{OUT} = 0mA$  to  $75mA$ ,  $C_{IN} = C_{OUT} = 0.1\mu F + 10\mu F$ , unless otherwise noted.

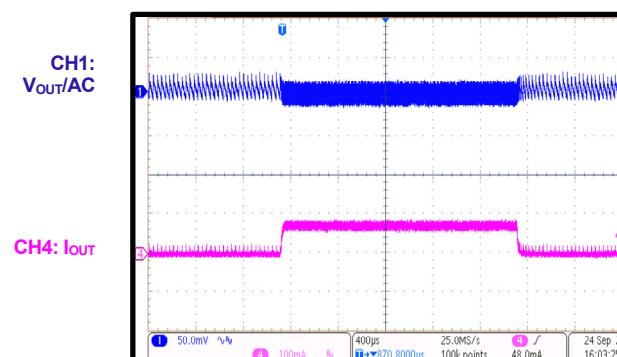
### Output Ripple

$I_{OUT} = 75mA$

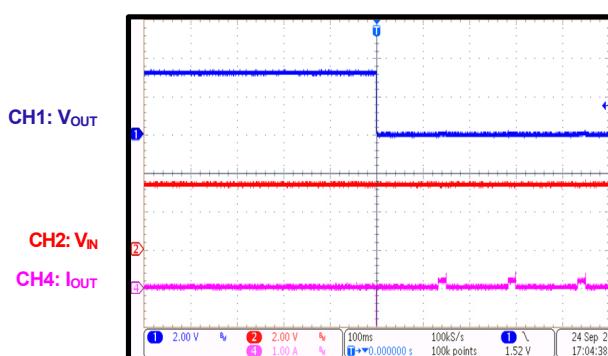


### Load Transient

$I_{OUT} = 0mA$  to  $75mA$



### SCP Entry



## PCB LAYOUT

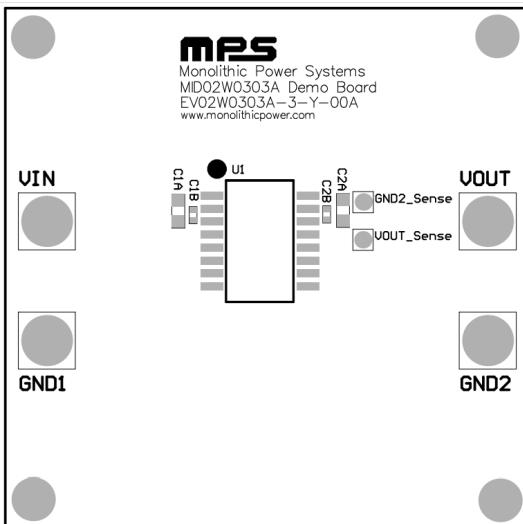


Figure 1: Top Silk

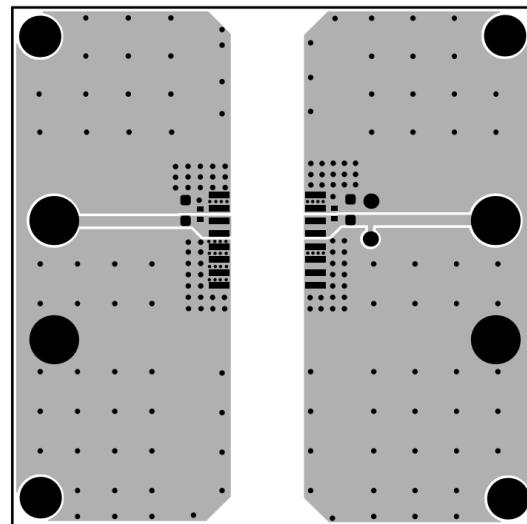


Figure 2: Top Layer

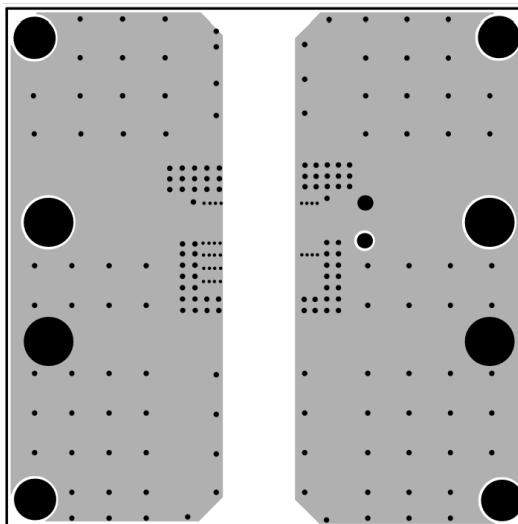


Figure 3: Bottom Layer

**REVISION HISTORY**

Revision #	Revision Date	Description	Pages Updated
1.0	8/2/2024	Initial Release	-

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