

#### mEZ Product Options:

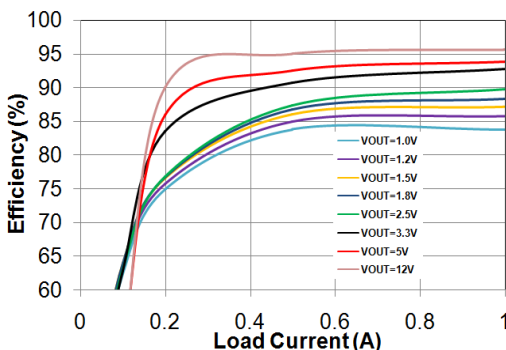
1. Ready-to-Use products
  2. Do-It-Yourself.
- Manufacture assistance is provided



Typical Application Circuit

#### Efficiency vs. Load Current

$V_{IN}=24V$ ,  $V_{OUT} = 1V - 12V$



#### FEATURES

- 4.5V to 36V Wide Operating Input
- 1A Load Current
- Hiccup Short-Circuit Protection
- Over-/Under-Voltage Protection
- Over-Current Protection
- Over-Temperature Protection
- Open Design Files and BOM

#### ORDERING INFORMATION

Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)
MEZD72401A-X	A - F: 4.5 - 36	1, 1.2, 1.5, 1.8, 2.5, 3.3, 5, 12	1
	G: 6.5 - 36		
<b>Output Voltage Options</b>			
A = 1.0V	B = 1.2V	C = 1.5V	D = 1.8V
E = 2.5V	F = 3.3V	G = 5.0V	H = 12V

#### mEZD724xx FAMILY PRODUCTS

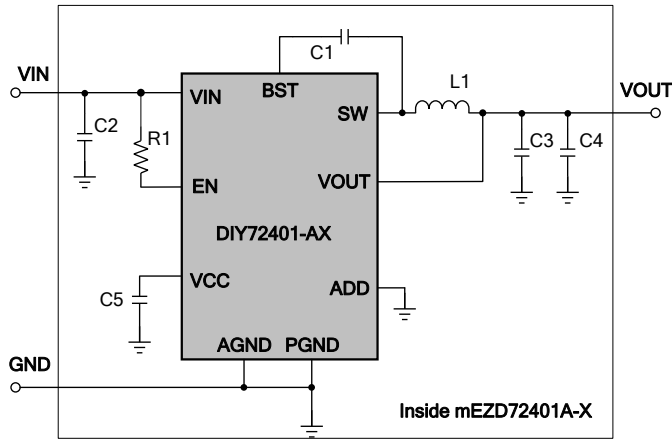
Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)
mEZD72401A-X	4.5-36	1,1.2,1.5,1.8, 2.5,3.3,5, 12	1
mEZD72402A-X	4.5-36	1,1.2,1.5,1.8, 2.5,3.3,5	2

#### ELECTRICAL CHARACTERISTICS

Input Voltage Range	$V_{IN\_MIN}$ higher than $V_{OUT}$ by 1V	4.5 or 6.5 to 36V
Output Voltage Set Accuracy		$\pm 2.5\%$ (Typ.)
Output Voltage Ripple	$V_{IN}=24V$ , $V_{OUT}=3.3V$ , Full Load	20mV
Line Regulation	$V_{IN}$ from MIN to MAX, $V_{OUT}=3.3V$	$\pm 1\%$ (Typ.)
Load Regulation	$I_{OUT}$ from MIN to MAX, $V_{OUT}=3.3V$	$\pm 1\%$ (Typ.)
Switching Frequency	Typical Switching Frequency	400kHz
Short-Circuit Protection	Short Output to Ground	Hiccup Mode
Operating Temperature Range		-40 to 85°C
Over-Temperature Protection	OTP	150°C
Rise Time	$V_{OUT}$ from 0% to 90%	0.75ms (Typ.)
Calculated MTBF	MIL-HDBK-217F	4185x10 <sup>3</sup> hrs

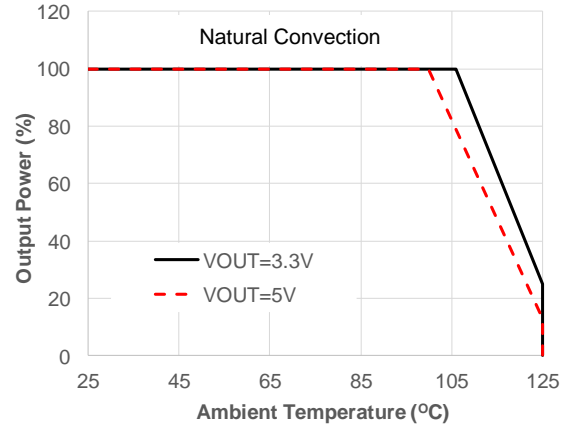
NOTE: All electrical characteristics are tested under 25°C ambient temperature,  $V_{IN}=24V$  unless otherwise noted.

#### DO-IT-YOURSELF SCHEMATIC



#### POWER DERATING

$V_{IN}=24V$ ,  $V_{OUT}=3.3V$  and  $5V$



#### BILL OF MATERIALS

Item	Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	1	C1	0.22µF	Ceramic Cap., 16V, X5R	0402	muRata	GRM155R61C224KA12D
2	1	C2	4.7µF	Ceramic Cap., 50V, X7R	1206	muRata	GRM31CR71H475KA12L
3	2	C3, C4	22µF	Ceramic Cap., 10V, X7T/X5R	0805	muRata	GRM21BD71A226ME44L/ GRM21BR61A226ME51L
4	1	C5	1µF	Ceramic Cap., 10V, X5R	0402	muRata	GRM155R61A105KE01D
5	1	L1*	10µH	Indc 2.3A, DCR 96m Ohm	5.5x5.2mm	Panasonics	ETQP3M100KVP
6	1	R1	499kΩ	Film Res., 5s%	0402	Yageo	RC0402JR-07499KL
7	1	P1	3-Pin	3-Pin Male Connector, Right Angle	Bulk	MYIC	MPS010SRRA-3
8	1	U1		Synchronous Step-Down Converter	QFN-16	MPS	DIY72401-AX**

\* Or equivalent. \*\* -X Output voltage options (A: 1.0V, B: 1.2V, C: 1.5V, D: 1.8V, E: 2.5V, F: 3.3V, G: 5.0V, H: 12V)

#### PRODUCT PACKAGE AND DIMENSIONS



Pin	Designation	Function
1	VIN	Input Voltage
2	GND	Power Ground
3	VOUT	Output Voltage

#### NOTE:

Contact factory for different sizes of the boards (Quantity>2k).

For more information, Gerber files, and PCB layout, please contact [mEZsupport@monolithicpower.com](mailto:mEZsupport@monolithicpower.com)