



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





### mEZ Product Options:

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

### FEATURES

- 7V to 36V Wide Operating Input
- 2.5A Load Current
- 5V Output Voltage
- Open Design Files and BOM
- Over-Current Protection
- Over-Temperature Protection
- Line Drop Compensation
- DCP for BC1.2, Divider Mode, and 1.2V/1.2V Mode

### ORDERING INFORMATION

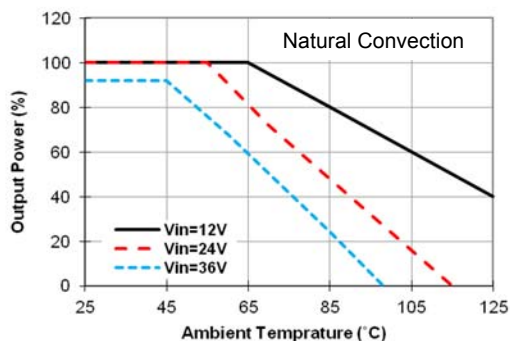
Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)	Efficiency
MEZS91202A	7 - 36	5	2.5	Up to 95%

### ELECTRICAL CHARACTERISTICS

Input Voltage Range	$V_{IN}$ Continuous	7V to 36V
Output Voltage Set Accuracy		±4% (Typ.)
Output Voltage Ripple	$V_{IN} = 12V$ , Full Load	13mV
Line Regulation	$V_{IN} = 24V$	±0.5% (Typ.)
Line Drop Compensation	Full Load	93%
Efficiency	$V_{IN} = 12V$ , Full Load	93%
Switching Frequency	Typical Switching Frequency	350kHz
Short-Circuit Protection	Short Output to Ground	Hiccup Mode
Operating Temperature Range		-40 to 85°C
Over-Temperature Protection	OTP	165°C
Rise Time	From 10% $V_{OUT}$ to 90% $V_{OUT}$	1.6ms (Typ.)
Calculated MTBF	MIL-HDBK-217F	4185x10 <sup>3</sup> hrs

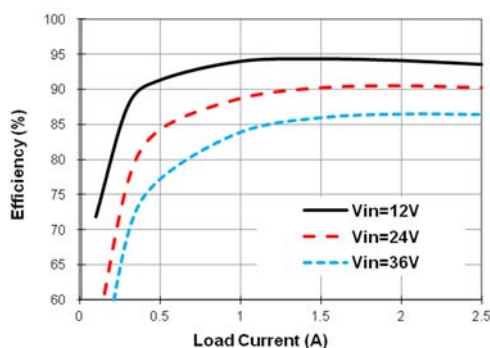
### Power Derating

$V_{IN} = 12V, 24V, \text{ and } 36V, V_{OUT} = 5V$



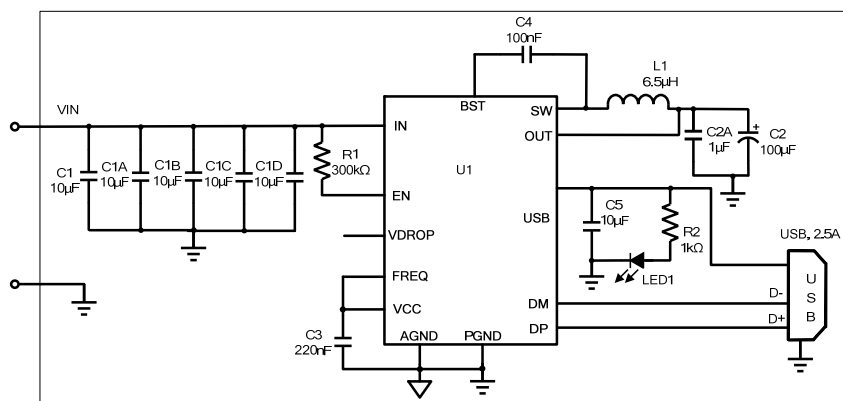
### Efficiency vs. Load Current

$V_{IN} = 12V, 24V, \text{ and } 36V, V_{OUT} = 5V$



**NOTE:** All electrical characteristics are tested under 25°C ambient temperature,  $V_{IN} = 12V$  unless otherwise noted.

### DO-IT-YOURSELF SCHEMATIC

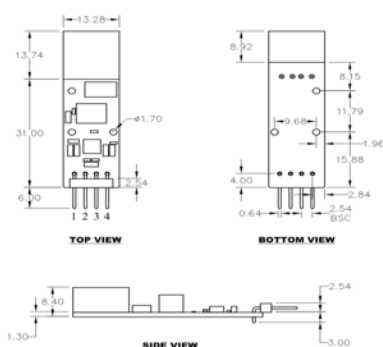


### BILL OF MATERIALS

Item	Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	5	C1, C1A, C1B, C1C, C1D	10 $\mu$ F	Ceramic Cap., 35V, X5R	0805	Murata	GRM21BR6YA106KE43L
2	1	C2	100 $\mu$ F	POSCAP, 6.3V, 15m $\Omega$ ESR	SMD, 7.3x4.3mm	Murata	ECASD40J107M015K00
3	1	C2A	1 $\mu$ F	Ceramic Cap., 10V, X5R	0402	Würth	885012105012
4	1	C3	0.22 $\mu$ F	Ceramic Cap., 16V, X5R	0402	Würth	885012105017
5	1	C4	0.1 $\mu$ F	Ceramic Cap., 10V, X7R	0402	Würth	885012205018
6	1	C5	10 $\mu$ F	Ceramic Cap., 6.3V, X5R	0603	Würth	885012106006
7	1	R1	300k $\Omega$	Item	0603	Yageo	RC0603FR-07300KL
8	1	R2	1k $\Omega$	Film Resistor, 1%	0402	Yageo	RC0402FR-071KL
9	1	LED	LED	LED, Green	0805	Kingbright	APHBM2012CGKSYKC
10	1	L1*	6.5 $\mu$ H	Inductor, DCR = 21.5m $\Omega$ , Isat = 6A	SMD, 7.0x6.9mm	Würth	744 314 650
11	1	USB	USB	Single USB Port	Tray	Würth	61400416021
12	1	Connector	4-Pin	2.54mm Pitch		Würth	613 004 110 21
13	1	U1	MP2496M	Step-Down Converter	QFN-26 (4mmx4mm)	MPS	MP2496MGR

\* Or equivalent

### PRODUCT PACKAGE AND DIMENSIONS



#### Pin Designation Function

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

#### 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)