



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

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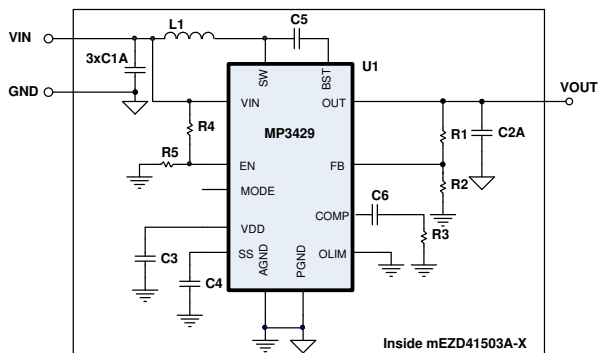
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





### mEZ Product Options:

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



**Block Diagram**

### FEATURES

- Up to 10V Input Voltage
- 5V, 12V Output Options
- 3A Continuous Output Current
- Open Design Files and BOM
- 600kHz Fixed Frequency
- High Efficiency
- Over-Temperature Protection

### ORDERING INFORMATION

Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)
MEZD41503A-A	2.7 - 4.2	5	3
MEZD41503A-B	2.7 - 10	12	3

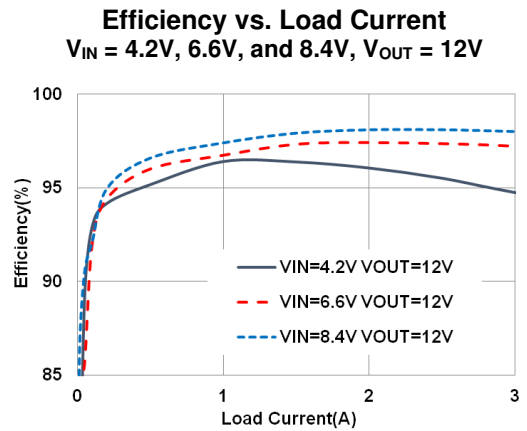
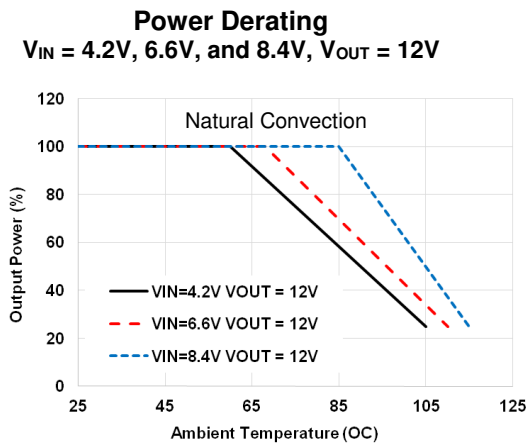
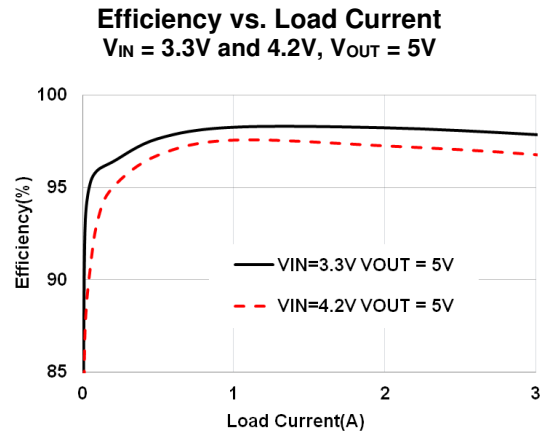
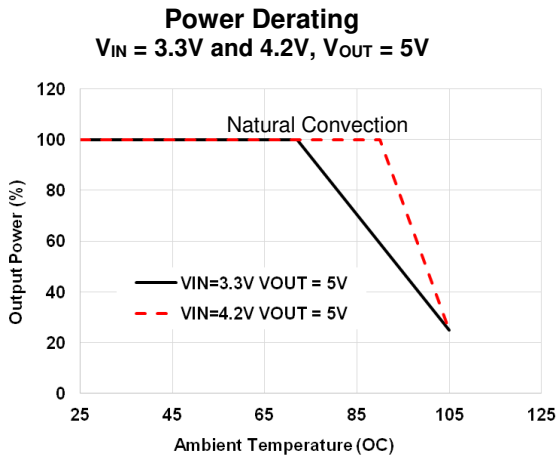
### mEZD4150x-x FAMILY PRODUCTS

Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)
mEZD41501A-X	2.7 - 13	5, 12, 15	1
mEZD41502A-X	2.7 - 13	5, 12, 15	2
mEZD41503A-X	2.7 - 10	5, 12	3

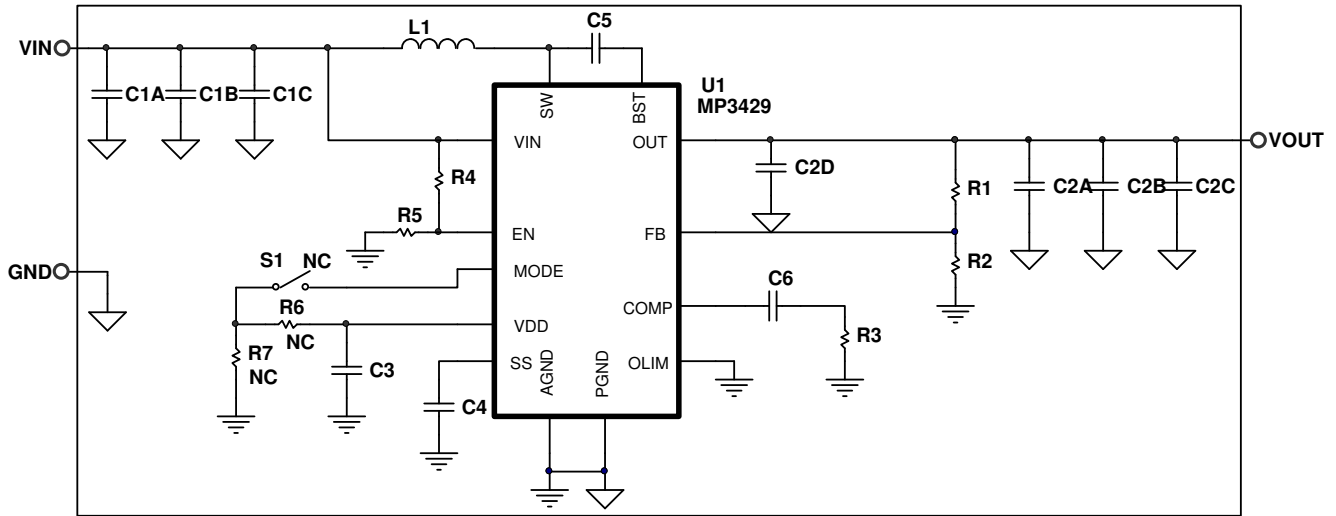
### ELECTRICAL CHARACTERISTICS

Parameter	Part Number	Value
Input Voltage Range	mEZD41503A-A	2.7V to 4.2V
	mEZD41503A-B	3.7V to 10V
Output Voltage Set Accuracy		±2.2%
Output Voltage Ripple	$V_{IN} = 3.3V, V_{OUT} = 5V, I_{OUT} = 3A$	37mV (Typ.)
	$V_{IN} = 6.6V, V_{OUT} = 12V, I_{OUT} = 3A$	80mV (Typ.)
Line Regulation	$V_{IN}$ from MIN to MAX, $I_{OUT} = 3A$	±0.2%
Load Regulation	$I_{OUT}$ from MIN to MAX, $V_{IN} = 6.6V$	±0.5%
Efficiency	$V_{IN} = 3.3V, V_{OUT} = 5V, I_{OUT} = 3A$	96.7%
	$V_{IN} = 6.6V, V_{OUT} = 15V, I_{OUT} = 3A$	97.2%
Switching Frequency	Typical switching frequency	600kHz
Short-Circuit Protection	No output short allowed	-
Operating Temperature Range		0 to 85°C
Over-Temperature Protection	OTP	150°C
Calculated MTBF	MIL-HDBK-217F	$4185 \times 10^3$ hrs

**TYPICAL PERFORMANCE CURVES**



**DO-IT-YOURSELF SCHEMATIC**



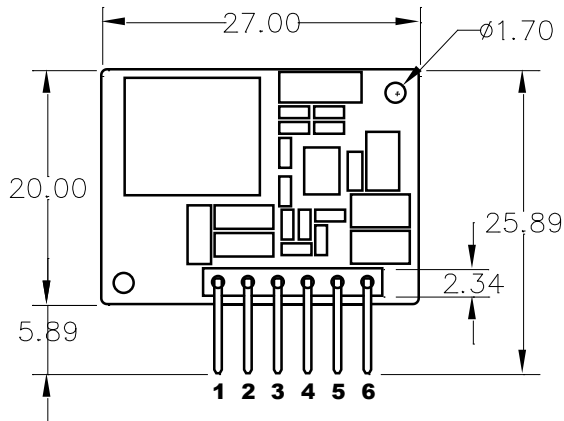
**BILL OF MATERIALS**

Item	Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	3	C1A, C1B, C1C	22μF	Ceramic Cap., 10V, X7R (A)	1206	Murata	GRM31CR71A226ME15L
				Ceramic Cap., 25V, X7R (B)	1206	Murata	GRM31ER71E226KE15L
2	3	C2A, C2B, C2C	22μF	Ceramic Cap., 10V, X7R (A)	1210	Murata	GRM32ER71A226KE20L
				Ceramic Cap., 25V, X7R (B)	1210	Murata	GRM32ER71E226KE15L
3	2	C2D, C5	100nF	Ceramic Cap., 25V, X7R	0603	Murata	GRM188R71E104KA01D
6	1	C3	4.7μF	Ceramic Cap., 6.3V, X5R	0603	Murata	GRM188R60J475KE19D
5	1	C4	22nF	Ceramic Cap., 25V, X7R	0603	Murata	GRM188R71E223JA01D
7	1	C6	8.2nF(A) 6.8nF(B)	Ceramic Cap., 50V, X7R	0603	Murata	GRM188R71H822KA01D GRM188R71H682KA01D
8	1	R1	750kΩ	Film Res, 1%	0603	YAGEO	RC0603FR-07750KL
9	1	R2	187kΩ(A) 68kΩ(B)	Film Res, 1%	0603	YAGEO	RC0603FR-07187KL RC0603FR-0768KL
10	1	R3	3kΩ(A) 10kΩ(B)	Film Res, 1%	0603	YAGEO	RC0603FR-073KL RC0603FR-0710KL
11	1	R4	30kΩ	Film Res, 1%	0603	YAGEO	RC0603FR-0730KL
12	1	R5	34.8kΩ	Film Res, 1%	0603	YAGEO	RC0603FR-0734K8L
13	0	R6, R7	NC				
14	1	L1*	1.5μH	Irms = 19A, RDC = 3.3mΩ	11.5x10mm	Sumida	104CDMCCDS-1R5MC-ND
15	0	S1	NC				
16	1	U1	MP3429	Boost Converter	QFN 3x4mm	MPS	MP3429GL
17	1	VIN,VOUT,GND	Connector	6-Pin Connector	2.54mm	Würth	

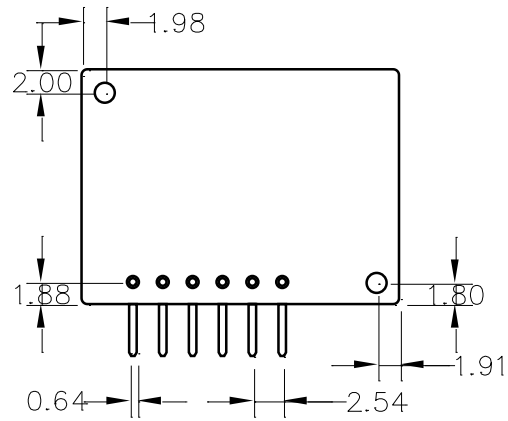
**NOTE:** A, B, C denote this value is specifically for mEZD41503A-A, mEZD41503A-B respectively.

\* Or equivalent

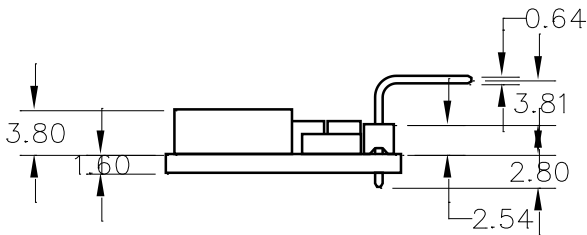
**PRODUCT PACKAGE AND DIMENSIONS**



**TOP VIEW**



**BOTTOM VIEW**



**SIDE VIEW**

Pin	Designation	Function
1, 2	VIN	Input Voltage
3, 4	GND	Power Ground
5, 6	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)