



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!



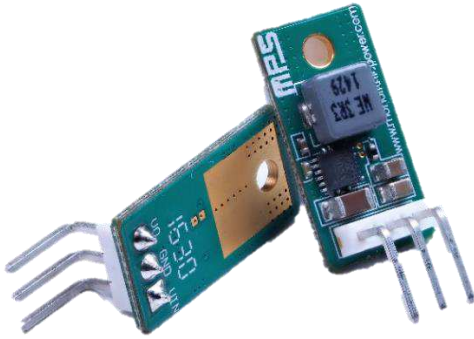
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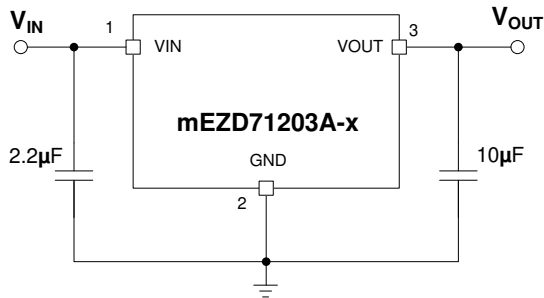
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





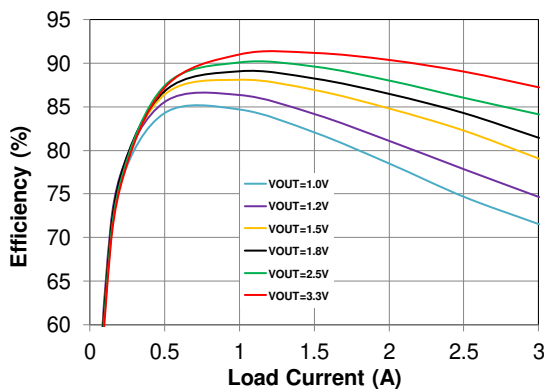
mEZ Product Options:

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



Typical Application Circuit

Efficiency vs. Load Current
 $V_{IN}=12V, V_{OUT}=1V-3.3V$



FEATURES

- 5V to 16V Wide Operating Input
- 3A 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) |
|-------------------------------|-------------------|----------------------------|--------------------|
| MEZD71203A-X | 5 - 16 | 1, 1.2, 1.5, 1.8, 2.5, 3.3 | 3 |
| Output Voltage Options | | | |
| A = 1.0V | B = 1.2V | C = 1.5V | D = 1.8V |
| E = 2.5V | F = 3.3V | | |

mEZD712xx FAMILY PRODUCTS

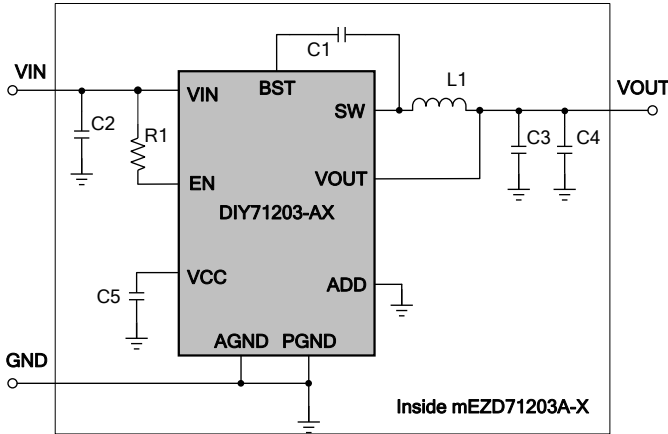
| Part Number | Input Voltage (V) | Output Voltage (V) | Output Current (A) |
|--------------|-------------------|-------------------------------|--------------------|
| mEZD71201A-X | 4.5 - 24 | 1, 1.2, 1.5, 1.8, 2.5, 3.3, 5 | 1 |
| mEZD71202A-X | 4.5 - 24 | 1, 1.2, 1.5, 1.8, 2.5, 3.3, 5 | 2 |
| mEZD71203A-X | 5 - 16 | 1, 1.2, 1.5, 1.8, 2.5, 3.3 | 3 |
| mEZD71210A-A | 4.5 - 17 | 1 | 10 |

ELECTRICAL CHARACTERISTICS

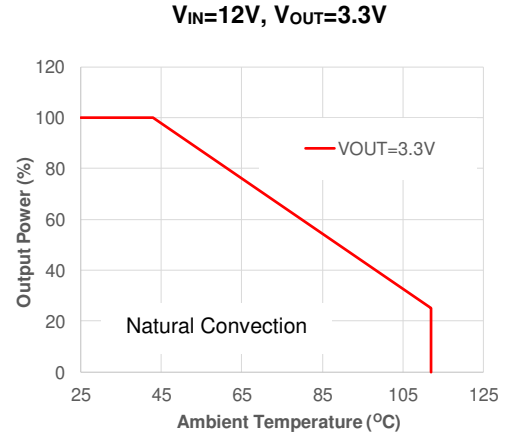
| | | |
|-----------------------------|---|--------------------------|
| Input Voltage Range | V_{IN_MIN} higher than V_{OUT} by 1V | 5 to 16V |
| Output Voltage Set Accuracy | | $\pm 2.5\%$ (Typ.) |
| Output Voltage Ripple | $V_{IN}=12V, V_{OUT}=3.3V$, Full Load | 30.4mV |
| Line Regulation | V_{IN} 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% | 0.8ms (Typ.) |
| Calculated MTBF | MIL-HDBK-217F | 4185x10 ³ hrs |

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

DO-IT-YOURSELF SCHEMATIC



POWER DERATING

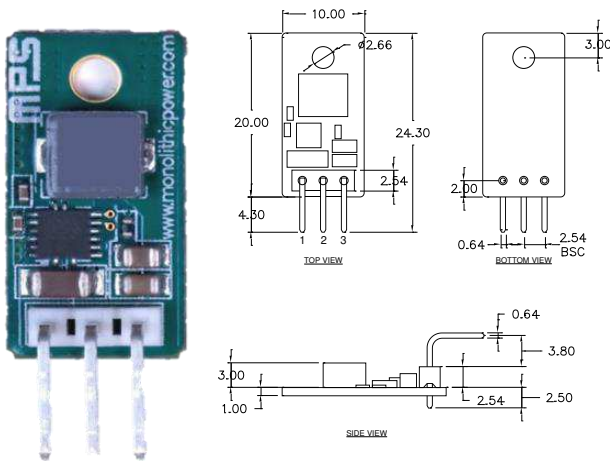


BILL OF MATERIALS

| Item | Qty | RefDes | Value | Description | Package | Manufacturer | Manufacturer P/N |
|------|-----|--------|---------------|-----------------------------------|-------------|--------------|---|
| 1 | 1 | C1 | 0.22 μ F | Ceramic Cap., 16V, X5R | 0402 | muRata | GRM155R61C224KA12D |
| 2 | 1 | C2 | 4.7 μ F | Ceramic Cap., 50V, X7R | 1206 | muRata | GRM31CR71H475KA12L |
| 3 | 2 | C3, C4 | 22 μ F | Ceramic Cap., 10V, X7T/X5R | 0805 | muRata | GRM21BD71A226ME44L/ GRM21BR61A226ME51L |
| 4 | 1 | C5 | 1 μ F | Ceramic Cap., 10V, X5R | 0402 | muRata | GRM155R61A105KE01D |
| 5 | 1 | L1* | 3.3 μ H | Indc 4.1A, DCR 27.3m Ω | 5.5x5x3mm | Panasonics | ETQP3M3R3KVP |
| 6 | 1 | R1 | 499k Ω | Film Res., 1% | 0402 | Yageo | RC0402FR-07499KL |
| 7 | 1 | P1 | 3-pin | 3-pin male connector, right angle | Bulk | MYIC | MPS010SRRA-3 |
| 8 | 1 | U1 | | Synchronous Step-Down Converter | FCQFN3x3-16 | MPS | DIY71203-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)

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