

# LM2596 Buck Converter Module

## FEATURES

- LM2596 DC-DC Buck Converter Step Down Module
- Input voltage range: DC 4V to 35V (Input voltage must be higher than the voltage output to 1.5V or more cannot be boosted.)
- Output voltage range: 1.25V to 30V DC voltage is continuously adjustable, high efficiency and maximum output current of 3A.
- Output current: Rated current 2A, maximum 3A. (Heat sink required.)
- Switching Frequency: 150kHz
- All solid capacitors and High-Q inductors.

## APPLICATIONS

- Simple high efficiency step-down regulator
- On-card switching regulator
- Efficient Pre-Regulator for Linear Regulators

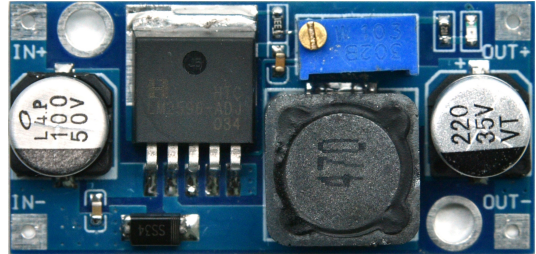
## DESCRIPTION

The LM2596 Buck Converter Module is a non-isolated step-down DC-DC converter with non-synchronous rectification.

## APPLICATION GUIDE

The power dissipation of the LM2596 Buck Converter Module is internally limited. Small sized PCB and thermal resistance of IC package have limited the power dissipation of the module.

Depending on the conversion condition, 3A full loading is not might possible due to the internally limited power dissipation.



## ORDERING INFORMATION

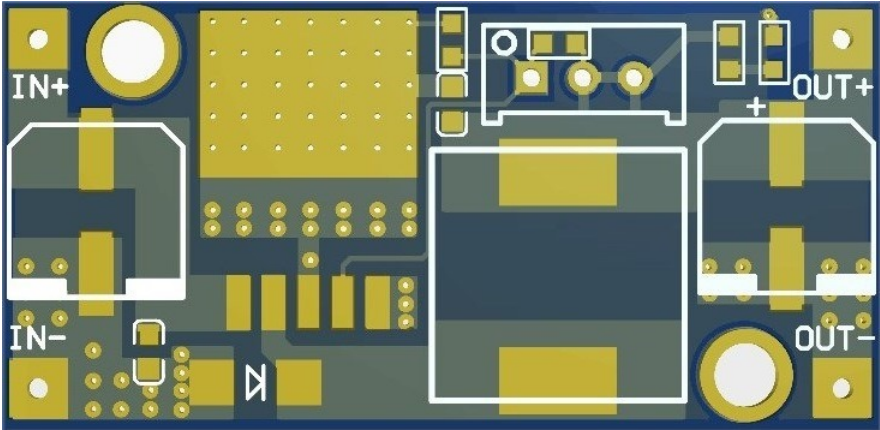
|             |                              |
|-------------|------------------------------|
| Part Number | MBC2596-01                   |
| Device      | LM2596 Buck Converter Module |
| Package     | Assembled Module             |

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## PARTS LIST & LAYOUT

| Name      | Description             | P/N                              | Qty. | Distributor |
|-----------|-------------------------|----------------------------------|------|-------------|
| PCB       | Printed Circuit Board   | Lead-Free PCB                    | 1    | TAEJIN      |
| IC        | LM2596-ADJ, TO-263-5L   | LM2596R-ADJ, LM2596GR-ADJ        | 1    | TAEJIN      |
| Diode     | Schottky Diode          | SS34, 1N5822, DO-214AC           | 1    | Generic     |
| Capacitor | 100μF Capacitor         | 100μF/50V Electrolytic Capacitor | 1    | Generic     |
| Capacitor | 220μF Capacitor         | 220μF/35V Electrolytic Capacitor | 1    | Generic     |
| Inductor  | 47μH Inductor           | 3A                               | 1    | Generic     |
| Resistor  | 1KΩ Resistor            | 1.0KΩ 5% Resistor                | 1    | Generic     |
| Resistor  | 330Ω Resistor           | 330Ω 5% Resistor                 | 1    | Generic     |
| LED       | LED for Power Indicator | 3mm LED, Red                     | 1    | Generic     |
| Capacitor | 10nF Capacitor          | 10nF/25V Ceramic Capacitor       | 1    | Generic     |
| Capacitor | 1μF Capacitor           | 1uF/16V Ceramic Capacitor        | 1    | Generic     |

## SCHEMATICS



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## LAYOUT



## I/O PORT CONFIGURATION AND DESCRIPTION

| Designator | Port Name       | Port Description                                  |
|------------|-----------------|---------------------------------------------------|
| IN+        | Input Positive  | Power In.                                         |
| IN-        | Input Negative  | Ground for Power In. Connect GND for normal use.  |
| OUT+       | Output Positive | Power Out.                                        |
| OUT-       | Output Negative | Ground for Power Out. Connect GND for normal use. |

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## REVISION NOTICE

The description in this datasheet is subject to change without any notice to describe its electrical characteristics properly.