

# STEP-UP / STEP-DOWN CONVERTER

WIDE 5–25 V INPUT RANGE WITH ADJUSTABLE 3–25 V OUTPUT AND UP TO 30 W POWER

JOY-IT

## SPECIAL FEATURES

- ✓ Step-Up & Step-Down
- ✓ Up to 30 W output power
- ✓ High efficiency up to 89 %
- ✓ Output enable/disable jumper for safe handling
- ✓ Compact design
- ✓ Ideal for battery-powered and embedded electronics



The SBC-BuckBoost02 is a compact and versatile DC-DC buck-boost converter that provides a stable output voltage which can be either higher or lower than the input voltage. With a wide input range of 5 – 25 V DC and an adjustable output voltage of 3 – 25 V DC, it is ideal for flexible power supply designs in embedded electronics, mobile devices, and battery applications.

Supporting 2 A maximum input current and delivering up to 30 W output power depending on input conditions, the module excels in both low- and mid-power DC systems. With conversion efficiencies of up to 89 %, the converter ensures strong performance with minimal heat generation, enhancing system runtime when used with batteries.

A jumper-controlled output enable function allows quick activation or deactivation of the output, making laboratory testing, prototyping, and integration safer and more convenient.

With its compact format (48 × 26 × 13 mm), lightweight design, and practical solder pads, the SBC-BuckBoost02 can be easily integrated into enclosures, PCB projects, or control modules.

Whether stepping up voltage to supply higher-voltage loads or stepping down from higher sources, the SBC-BuckBoost02 offers a reliable, efficient, and space-saving power conversion solution.

## TECHNICAL SPECIFICATIONS

|                      |                                       |
|----------------------|---------------------------------------|
| Input voltage        | 5 V - 25 V DC                         |
| Output voltage       | 3 V - 25 V DC                         |
| Input current        | 2 A                                   |
| Output current       | 2 A                                   |
| Input / output power | 30 W                                  |
| Special feature      | Jumper to enable / disable the output |

## BOOST EFFICIENCY

|                   |      |
|-------------------|------|
| 5 V to 12 V / 1A  | 83 % |
| 9 V to 12 V / 1A  | 88 % |
| 12 V to 18 V / 1A | 89 % |
| 18 V to 24 V / 1A | 88 % |

## BUCK EFFICIENCY

|                   |      |
|-------------------|------|
| 12 V to 5 V / 2A  | 83 % |
| 24 V to 12 V / 1A | 86 % |
| 24 V to 18 V / 1A | 87 % |

## ADDITIONAL INFORMATION

|                       |                         |
|-----------------------|-------------------------|
| Weight                | 14 g                    |
| Dimensions            | 48 x 26 x 13 mm         |
| Article no.           | SBC-BuckBoost02         |
| Items shipped         | 1x Buck-Boost converter |
| Customs tariff number | 8504403090              |
| EAN                   | 4250236830926           |