

Minimal derating in this size !

3A/6A/10A BST-M (SMD) Series

Low Cost, DOSA Compatible, POL DC-DC Converter

Input: +2.4V to +5.5V
Input: +6.0V to +14.0V

Output: +0.7525V (+0.7525V to +3.63V)
Output: +0.7525V (+0.7525V to +5.5V)

- Remote ON/OFF Control
- Industry Standard Package
- Surface Mount Package(SMD)
- High Efficiency
- Adjustable Output Voltage
- Over Current Protection
- Under Voltage Lock Out
- Operating Temp -40°C to +85°C
- Minimal Derating at surrounding temp 85°C
- Non-Isolated Converter
- RoHS Compliance
- DOSA Compatible

Voltage can be optionally set with an external resistors (ex. 1V, 1.2V, 1.5V, 1.8V, 2.5V, 3.3V, 5V)

Models	Input V Vdc	Output V Vdc	Output I A	Line Reg. % (typ.)	Load Reg. % (typ.)	Ripple Noise mVpp (typ.)	Efficiency % (typ.)
BST04M-0.7S06PDM	2.4 to 5.5	0.7525 (0.7525 to 3.63)	0 to 6	0.6	1.0	40	93.5
BST04M-0.7S10PDM			0 to 10				
BST12M-0.7S03PDM	6.0 to 14.0	0.7525 (0.7525 to 5.5)	0 to 3	0.2	0.6	20	94.0
BST12M-0.7S06PDM			0 to 6				
BST12M-0.7S10PDM			0 to 10				

*Note 1: Output voltage inside the () indicates the adjustable range.

*Note 2: Input/output voltage requires voltage difference.

BST04M : $V_{out} \leq 1.8V$, $V_{in} = 2.4$ to $5.5V$
 $1.8V < V_{out} \leq 2.5V$, $V_{in} = 3.3$ to $5.5V$
 $V_{out} > 2.5V$, $V_{in} = 4.5$ to $5.5V$
 BST12M : $V_{out} \leq 3.8V$, $V_{in} = 6$ to $14V$
 $V_{out} > 3.8V$, $V_{in} = 8$ to $14V$

*Note 3: Ripple noise and efficiency values are when they are under the following conditions.

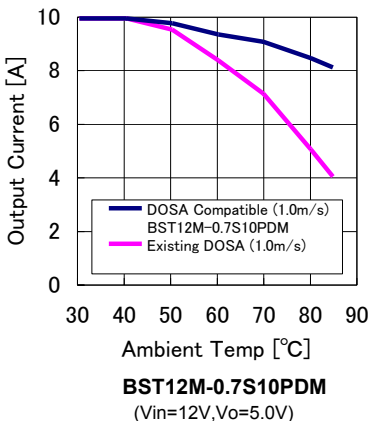
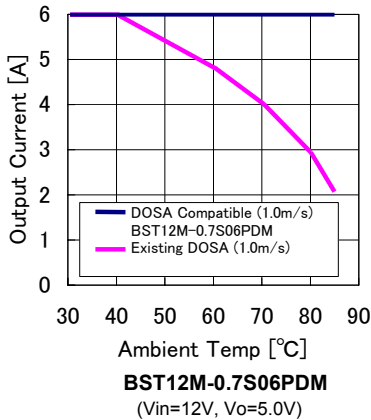
BST04M : Input voltage 5V, output voltage 3.3V, the rated load.
 BST12M : Input voltage 12V, output voltage 5V, the rated load.

*Note 4: Ripple noise is measured by 20MHz bandwidth, with the following ceramic capacitors.

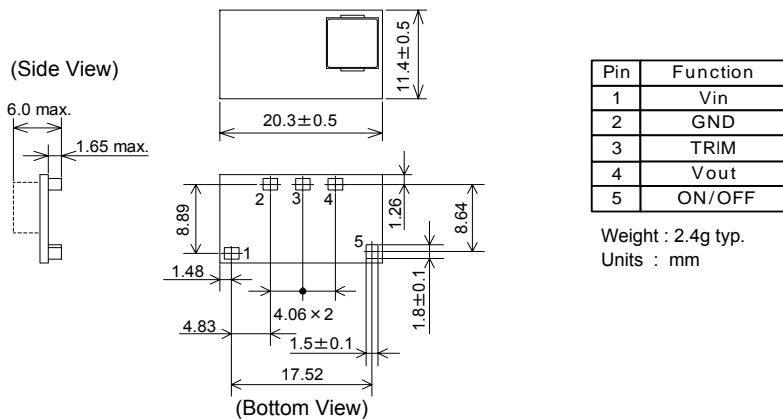
BST04M-6A : $47\mu F \times 4$ at input
 $47\mu F \times 2 + 1\mu F$ at output
 BST04M-10A : $47\mu F \times 6$ at input
 $47\mu F \times 4 + 1\mu F$ at output
 BST12M-3A/6A/10A : $47\mu F \times 2$ at input
 $47\mu F \times 2 + 1\mu F$ at output

*Note 5: Depending on the ambient temp condition, cooling air flow may be required.

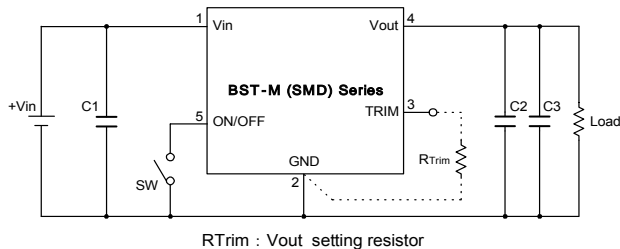
<Derating curve>



<Outline>



<Standard Connection Diagram>



- | | | |
|---|--|--|
| BST04M-6A
C1 : $47\mu F \times 4$ (Ceramic Capacitor)
C2 : $1\mu F$ (Ceramic Capacitor)
C3 : $47\mu F \times 2$ (Ceramic Capacitor) | BST04M-10A
C1 : $47\mu F \times 6$ (Ceramic Capacitor)
C2 : $1\mu F$ (Ceramic Capacitor)
C3 : $47\mu F \times 4$ (Ceramic Capacitor) | BST12M-3A/6A/10A
C1 : $47\mu F \times 2$ (Ceramic Capacitor)
C2 : $1\mu F$ (Ceramic Capacitor)
C3 : $47\mu F \times 2$ (Ceramic Capacitor) |
|---|--|--|

- ON/OFF : When short, the output switches off.
- Trim : When open, the output voltage is 0.7525V.
- When adjusting the output voltage, connect RTrim between Trim pin and GND.

- Note! This catalogue is an outline of the products. When designing, be sure to refer to the data sheets.