

Minimal derating in this size!

# 10A/16A/25A BST-L (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 (Temp Derating Required.)
- 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 BST-L (SMD) Series	Input V Vdc	Output V Vdc	Output I A	Line Reg. %(typ.)	Load Reg. %(typ.)	Ripple Noise mVpp(typ.)	Efficiency %(typ.)
BST04L-0.7S10PDM	2.4 to 5.5	0.7525 (0.7525 to 3.63)	0 to 10	0.6	1.0	40	95.5
BST04L-0.7S16PDM			0 to 16			35	96.0
BST04L-0.7S25PDM			0 to 25			50	94.0
BST12L-0.7S10PDM	6.0 to 14.0	0.7525 (0.7525 to 5.5)	0 to 10	0.2	0.8	25	94.5
BST12L-0.7S16PDM			0 to 16			40	93.5
BST12L-0.7S25PDM			0 to 25			75	94.5

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

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

BST04L :  $V_{out} \leq 1.8V$ ,  $V_{in} = 2.4$  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  $5.5V$

BST12L :  $V_{out} \leq 3.8V$ ,  $V_{in} = 6$  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.

BST04L : Input voltage 5V, output voltage 3.3V, the rated load.

BST12L : Input voltage 12V, output voltage 5V, the rated load.

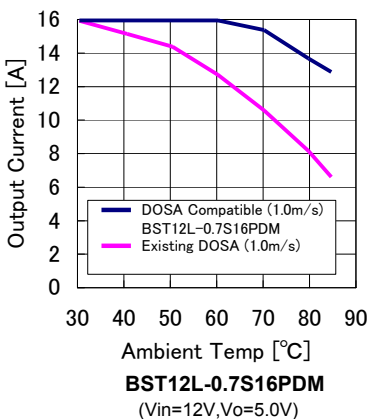
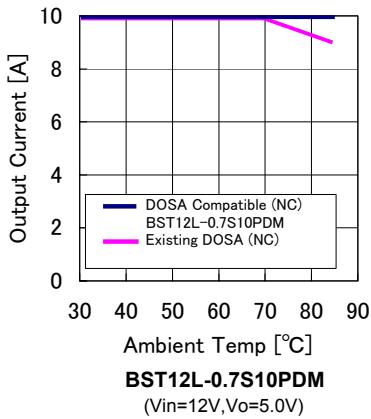
\*Note 4: Ripple noise is measured by 20MHz bandwidth, with the following ceramic capacitors.

BST04L-10A, BST12L-10A :  $47\mu F \times 4$  at input  
 $47\mu F \times 2 + 1\mu F$  at output

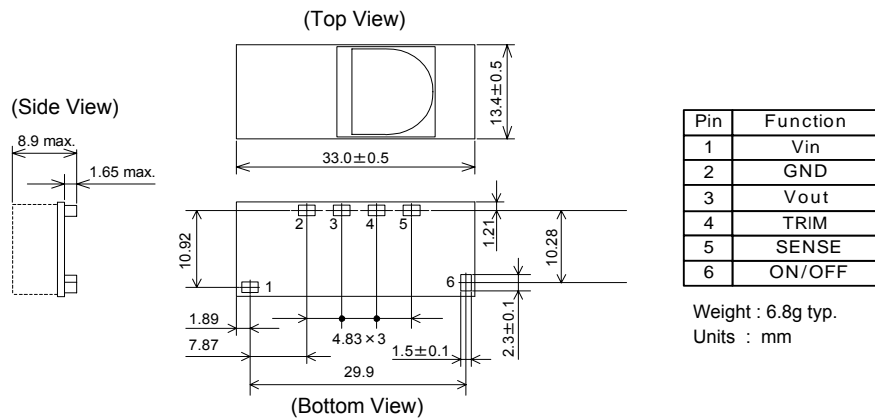
BST04L-16A/25A, BST12L-25A/16A :  
 $47\mu F \times 4$  at input  
 $47\mu F \times 4 + 1\mu F$  at output

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

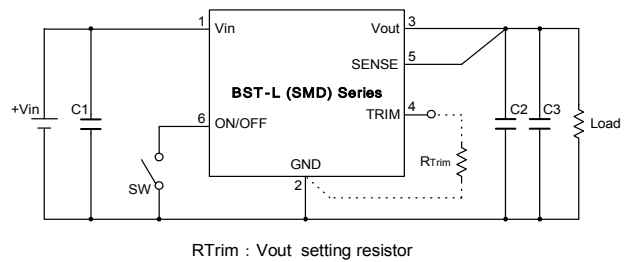
### <Derating curve>



### <Outline>



### <Standard Connection Diagram>



**BST04L-10A, BST12L-10A**  
 C1 :  $47\mu F \times 4$  (Ceramic Capacitor)  
 C2 :  $1\mu F$  (Ceramic Capacitor)  
 C3 :  $47\mu F \times 2$  (Ceramic Capacitor)

**BST04L-16A/25A, BST12L-25A/16A**  
 C1 :  $47\mu F \times 4$  (Ceramic Capacitor)  
 C2 :  $1\mu F$  (Ceramic Capacitor)  
 C3 :  $47\mu F \times 4$  (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.