

# BTS SERIES

## 80~100W DC/DC CONVERTERS Single Output



H12.8×W50×L118 (mm)

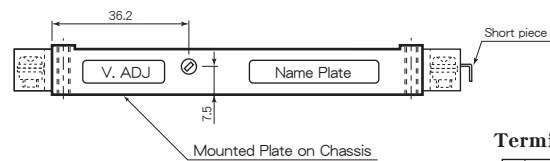
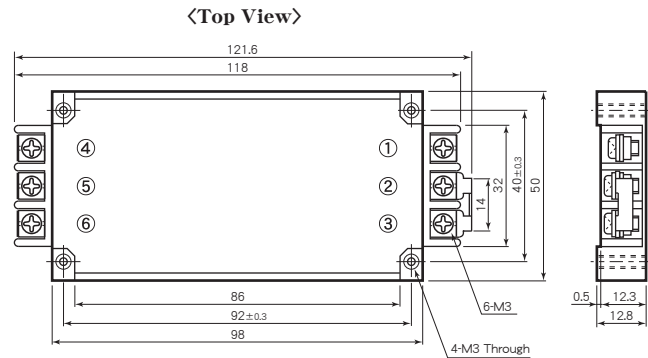
### Features

- Low Profile 12.8mm
  - Built-in Input Filter
  - Input-Output Isolation
  - High Efficiency 88~91%
  - Wide Input Voltage Range
  - High Reliability
  - 6 Sided Metal Shielding
  - Remote ON/OFF Control
  - Adjustable Output Voltage  $\pm 5\%$
  - Input Low Voltage Protection
  - Input Over Voltage Protection
  - Output Over Voltage Protection  
115~140% Operation
  - Thermal Protection  
 $+110^{\circ}\text{C} \sim +120^{\circ}\text{C}$
  - Operating Ambient Temperature  
 $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
  - Max. Case Temperature  $+105^{\circ}\text{C}$
  - Conformity to RoHS Directive
  - Not built-in aluminum and tantalum electrolytic capacitor
- 薄型 12.8mm
  - 入力フィルタ内蔵
  - 入出力間絶縁
  - 高効率 88~91%
  - 広範囲な入力電圧
  - 高信頼性
  - 6面メタルシールド
  - リモートON/OFFコントロール
  - 可変出力電圧  $\pm 5\%$
  - 入力低電圧保護回路内蔵
  - 入力過電圧保護回路内蔵
  - 出力過電圧保護回路内蔵  
115~140% 動作
  - 過熱保護回路内蔵  
 $+110^{\circ}\text{C} \sim +120^{\circ}\text{C}$
  - 動作周囲温度  
 $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
  - 最大ケース温度  $+105^{\circ}\text{C}$
  - RoHS指令対応
  - アルミ電解コンデンサ及びタンタルコンデンサ不使用

### General Characteristics

- Input Voltage, Range (at  $T_a : 25^{\circ}\text{C}$ , Full Load, Nominal  $V_{in}$ )  
DC12, 24, 48, 100V (See Table 1)
- Output Voltage, Current See Table 1
- Output Voltage Range  $\pm 5\%$  Adjustable
- Efficiency See Table 1
- Line Regulation  $\pm 0.3\%$  max. (at  $V_{in}$  Range)
- Load Regulation  $\pm 0.5\%$  max. (0~100% Load)
- Reflected Input Ripple, Noise (3%  $V_{in}$ ) Vp-p max.
- Output Ripple 40mVp-p max.
- Output Noise 100mVp-p max.
- Short Circuit Protection Built-in, Auto-restart (See Fig. 2)
- Over Voltage Protection 115~140% Output Voltage
- Remote ON/OFF Control ON : Short or 0~0.8V  
OFF : Open or 2~10V (Between terminal ② ~ ③)
- Temperature Coefficient 0.02%/ $^{\circ}\text{C}$  max.
- Operating Ambient Temp.  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$  (See Fig. 1)
- Max. Case Temperature  $+105^{\circ}\text{C}$
- Storage Temperature  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Isolation Voltage AC1500V 1 min.  
AC2000V 1 min. (100V  $V_{in}$  only)  
(Input-Output-Case)  
100M $\Omega$  min. (at DC1000V)  
(Input-Output-Case)
- Isolation Impedance Main Body : 170g max.  
20~95% RH
- Weight 490m/s<sup>2</sup> (11msec 3directions)
- Humidity 10~55Hz 98m/s<sup>2</sup>  
(30minutes 3directions)
- Shock 6 Sided Aluminum Case
- Vibration 400,000H  
( $T_a : 25^{\circ}\text{C}$ , 80% Load, Nominal  $V_{in}$ )
- Surface Structure 5 years
- MTBF
- Warranty

### Terminal Outs & Dimensions ( $\pm 0.5\text{mm}$ )



#### Terminal Outs

①	+Vdc in
②	0 Vdc in
③	ON/OFF Control
④	+Vdc out
⑤	0 Vdc out
⑥	No Connection

### Selection Guide

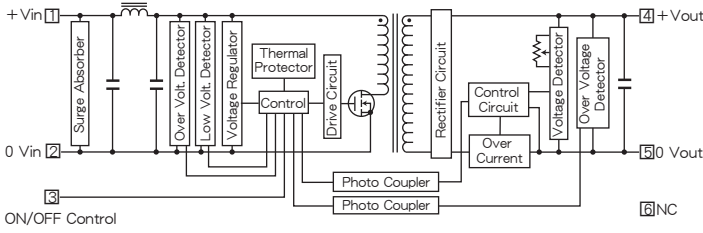
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%)	
				20% Load	80% Load
BTS 12-3.3S 24 A	12 (8~18)	3.3	24	88	88
BTS 12- 5S 20 A		5	20	87	89
BTS 12- 6S16.7A		6	16.7	87	89
BTS 12- 12S 8.4 A		12	8.4	87	89
BTS 12- 15S 6.7 A		15	6.7	86	89
BTS 12- 24S 4.2 A		24	4.2	85	89
BTS 24-3.3S 24 A	24 (16~36)	3.3	24	88	88
BTS 24- 5S 20 A		5	20	88	90
BTS 24- 6S16.7A		6	16.7	88	90
BTS 24- 12S 8.4 A		12	8.4	86	90
BTS 24- 15S 6.7 A		15	6.7	86	90
BTS 24- 24S 4.2 A		24	4.2	86	90
BTS 48-3.3S 24 A	48 (32~72)	3.3	24	87	88
BTS 48- 5S 20 A		5	20	87	90
BTS 48- 6S16.7A		6	16.7	87	90
BTS 48- 12S 8.4 A		12	8.4	87	91
BTS 48- 15S 6.7 A		15	6.7	86	91
BTS 48- 24S 4.2 A		24	4.2	86	91
BTS100-3.3S 24 A	100 (64~144)	3.3	24	85	88
BTS100- 5S 20 A		5	20	86	90
BTS100- 6S16.7A		6	16.7	86	90
BTS100- 12S 8.4 A		12	8.4	86	91
BTS100- 15S 6.7 A		15	6.7	86	91
BTS100- 24S 4.2 A		24	4.2	86	89

※ 上記仕様以外にも対応可能ですので お問い合わせ下さい。  
Please consult with us about other specification.

# BTS SERIES DATA SHEET

## Block Diagram



## Characteristic Curves

Fig. 1 Derating Curve

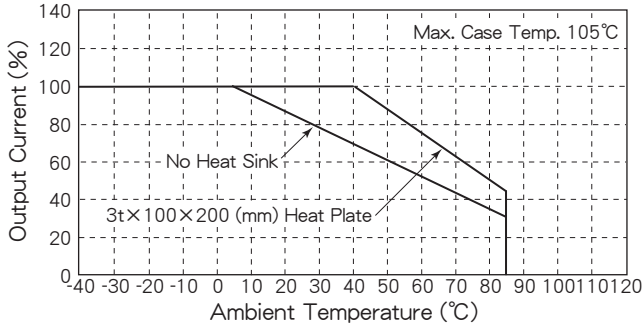


Fig. 2 Short Circuit Operating Area

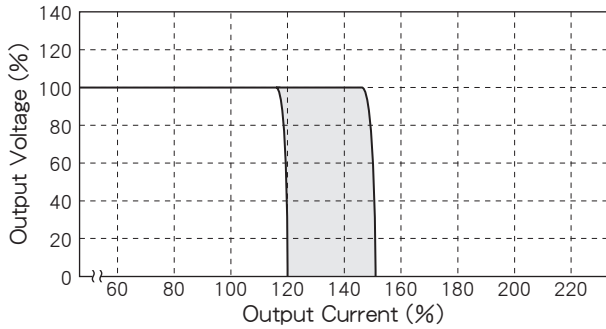


Fig. 3 Temperature Characteristic on Case Surface

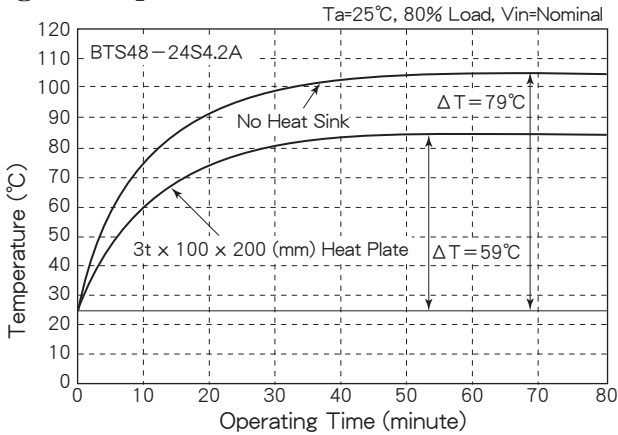


Fig. 4 Efficiency vs. Output Current (Vin=12V)

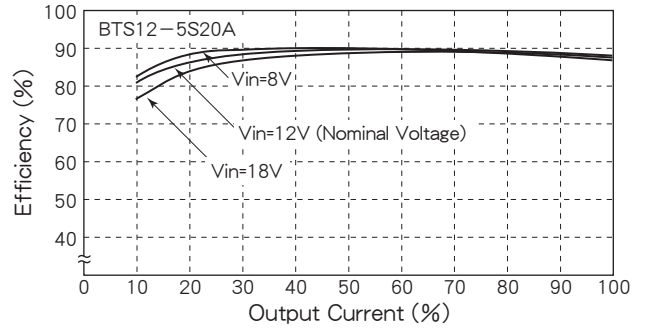


Fig. 5 Efficiency vs. Output Current (Vin=12V)

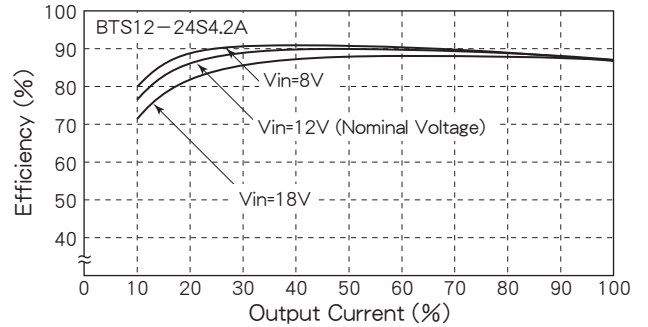


Fig. 6 Efficiency vs. Output Current (Vin=24V)

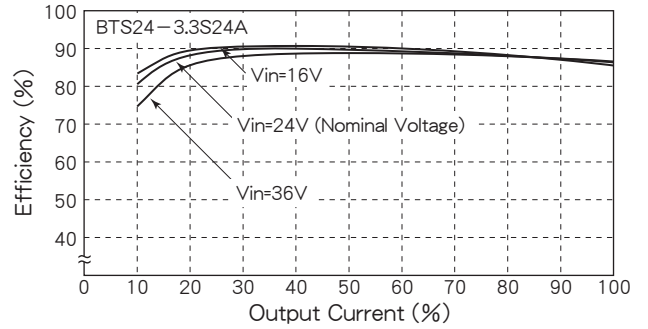


Fig. 7 Efficiency vs. Output Current (Vin=48V)

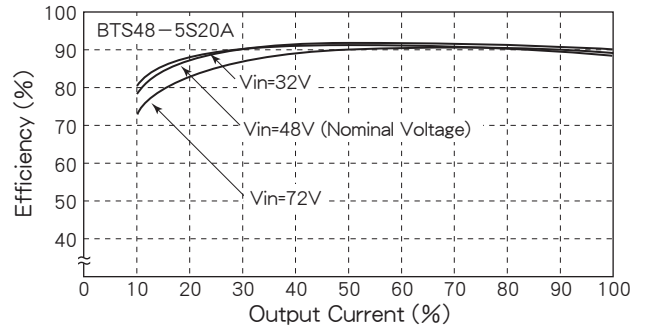


Fig. 8 Efficiency vs. Output Current (Vin=100V)

