

BTU SERIES

80~100W DC/DC CONVERTERS Single Output



Features

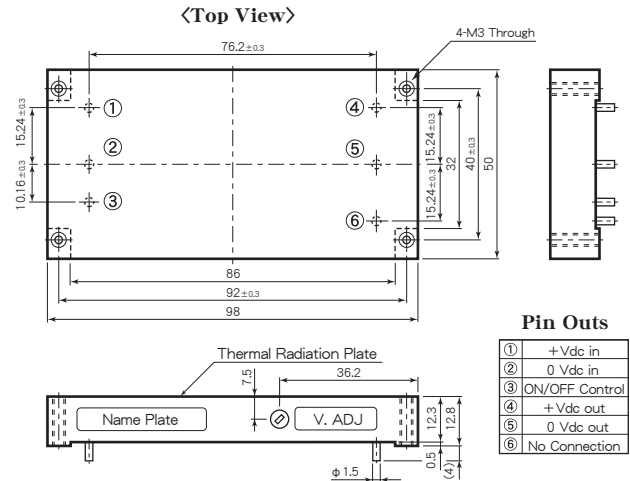
- Low Profile 12.8mm
 - Built-in Input Filter
 - Input-Output Isolation
 - High Efficiency 88~91%
 - Wide Input Voltage Range
 - High Reliability
 - 6 Sided Metal Shielding
 - Remote ON/OFF Control
 - Adjustable Output Voltage $\pm 5\%$
 - Input Low Voltage Protection
 - Input Over Voltage Protection
 - Output Over Voltage Protection 115~140% Operation
 - Thermal Protection +110°C~+120°C
 - Operating Ambient Temperature -40°C~+85°C
 - Max. Case Temperature +105°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°C~+120°C
 - 動作周囲温度 -40°C~+85°C
 - 最大ケース温度 105°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

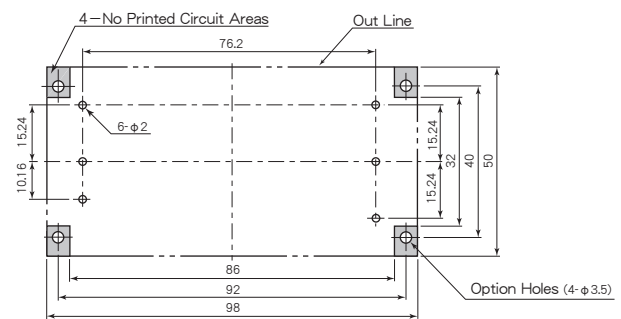
(at T_a : 25°C, Full Load, Nominal V_{in})

- Input Voltage, Range 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 pin ② ~ ③)
0.02%/°C max.
-40°C~+85°C (See Fig. 1)
+105°C
- Temperature Coefficient AC1500V 1 min.
AC2000V 1 min. (100V V_{in} only)
(Input-Output-Case)
- Isolation Impedance 100M Ω min. (at DC1000V)
(Input-Output-Case)
- Weight Main Body : 170g max.
Heat Sink : 73g max.
- Humidity 20~95% RH
- Shock 490m/s² (11msec 3directions)
- Vibration 10~55Hz 98m/s²
(30minutes 3directions)
- Surface Structure 6 Sided Aluminum Case
- Soldering Conditions Soldering DIP 260°C, for 15 seconds max.
Soldering iron 360°C, for 5 seconds max.
- MTBF 400,000H
(T_a : 25°C, 80% Load, Nominal V_{in})
- Warranty 5 years

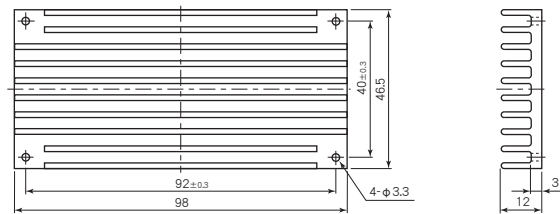
Pin Outs & Dimensions (± 0.5 mm)



Hole Configurations on P.C.B. (Top View)



Option Heat Sink



* Option Heat Sink Model : A3-7292

Selection Guide

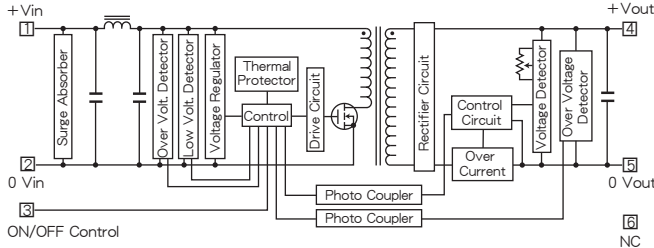
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%)	
				20% Load	80% Load
BTU 12-3.3S 24 A	12 (8~18)	3.3	24	88	88
BTU 12-5S 20 A		5	20	87	89
BTU 12-6S16.7A		6	16.7	87	89
BTU 12-12S 8.4 A		12	8.4	87	89
BTU 12-15S 6.7 A		15	6.7	86	89
BTU 12-24S 4.2 A		24	4.2	85	89
BTU 24-3.3S 24 A	24 (16~36)	3.3	24	88	88
BTU 24-5S 20 A		5	20	88	90
BTU 24-6S16.7A		6	16.7	88	90
BTU 24-12S 8.4 A		12	8.4	86	90
BTU 24-15S 6.7 A		15	6.7	86	90
BTU 24-24S 4.2 A		24	4.2	86	90
BTU 48-3.3S 24 A	48 (32~72)	3.3	24	87	88
BTU 48-5S 20 A		5	20	87	90
BTU 48-6S16.7A		6	16.7	87	90
BTU 48-12S 8.4 A		12	8.4	87	91
BTU 48-15S 6.7 A		15	6.7	86	91
BTU 48-24S 4.2 A		24	4.2	86	91
BTU100-3.3S 24 A	100 (64~144)	3.3	24	85	88
BTU100-5S 20 A		5	20	86	90
BTU100-6S16.7A		6	16.7	86	90
BTU100-12S 8.4 A		12	8.4	86	91
BTU100-15S 6.7 A		15	6.7	86	91
BTU100-24S 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.

BTU SERIES DATA SHEET

Block Diagram



Characteristic Curves

Fig. 1 Derating Curve

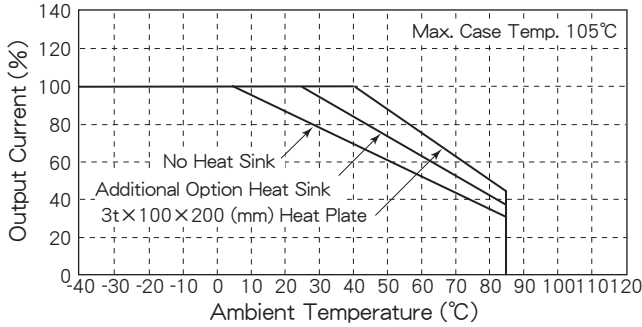


Fig. 2 Short Circuit Operating Area

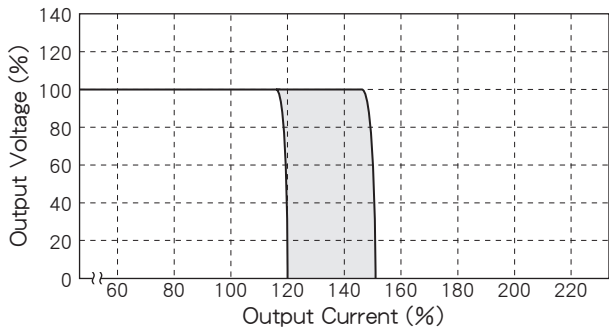


Fig. 3 Temperature Characteristic on Case Surface

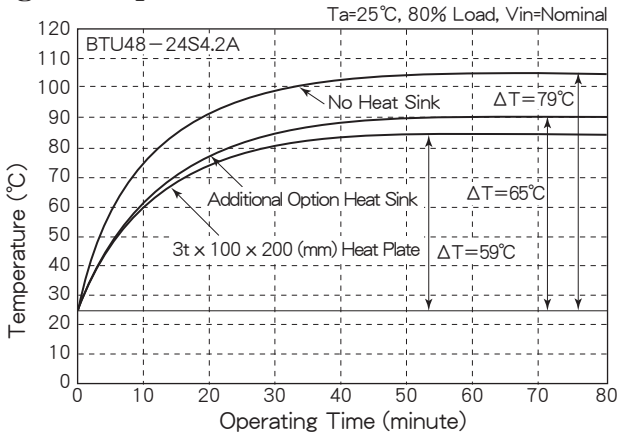


Fig. 4 Efficiency vs. Output Current (Vin=12V)

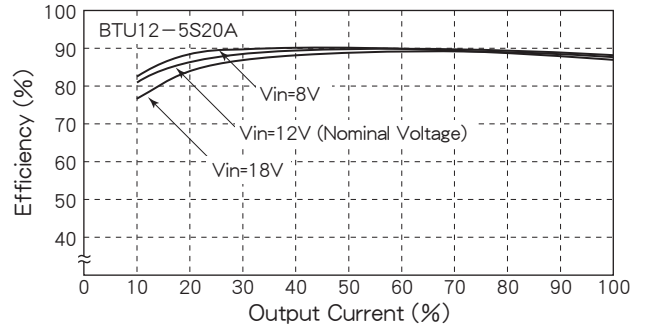


Fig. 5 Efficiency vs. Output Current (Vin=12V)

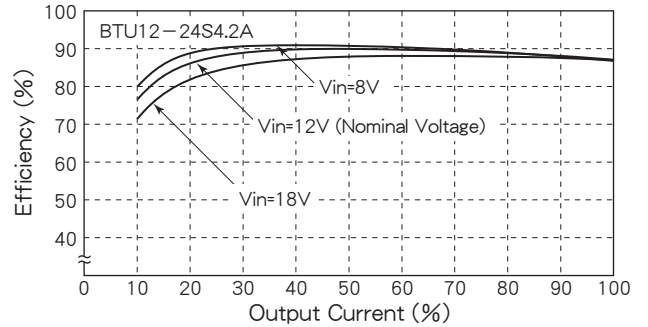


Fig. 6 Efficiency vs. Output Current (Vin=24V)

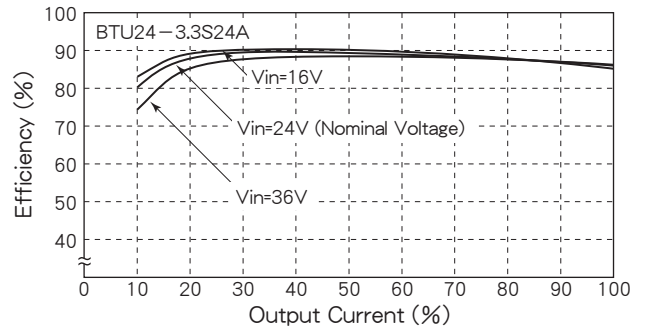


Fig. 7 Efficiency vs. Output Current (Vin=48V)

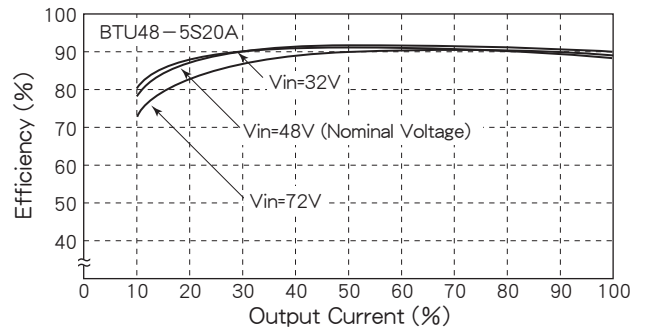


Fig. 8 Efficiency vs. Output Current (Vin=100V)

