BPS SERIES

20～50W DC/DC CONVERTERS
Single Output & Dual Outputs


H8.5×W50×L89 (mm)

■ Features

- ● Low Profile 8.5mm
- ● 6 Sided Metal Shielding
- ● Built-in Input Filter
- ● Wide Input Voltage Range
- ● Input-Output Isolation
- ● Adjustable Output Volt. ±5%
- ● High Efficiency 81～90%
- ● Remote ON/OFF Control
- ● Input Low Voltage Protection
- ● Input Over Voltage Protection
- ● Output Over Voltage Protection 115～140% Operation
- ● Thermal Protection +110℃～+120℃
- ● Operating Ambient Temperature −40℃～+85℃
- ● Max. Case Temperature +105℃
- ● High Reliability
- ● Conformity to RoHS Directive
- ● Not built-in aluminum and tantalum electrolytic capacitor

- ●薄型 8.5mm
- ● 6 面メタルシールド
- ●入力フィルタ内蔵
- ●広範囲な入力電圧
- ●入出力間絶縁
- ●可変出力電圧 ±5%
- ●高効率 81～90%
- ●ﾘﾓｰﾄON/OFFｺﾝﾄﾛｰﾙ
- ●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℃～+120℃
- ●動作周囲温度 −40℃～+85℃
- ●最大ケース温度 +105℃
- ●高信頼性
- ●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

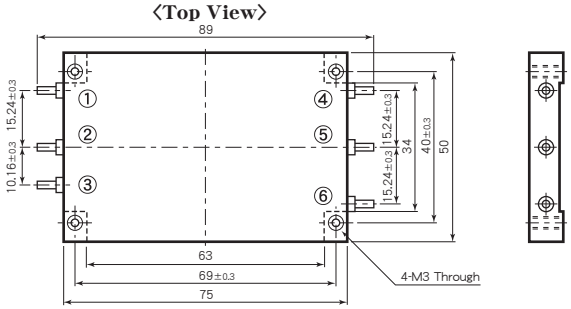
■ General Characteristics

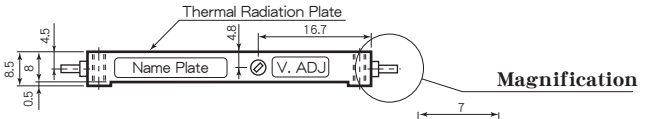
(at Ta:25℃, Full Load, Nominal Vin)

- ● Input Voltage,Range — DC12, 24, 48, 100V (See Table 1)
- ● Output Voltage,Current — See Table 1
- ● Output Volltage Range — See Table 1, ±5% Adjustable
- ● Efficiency — See Table 1
- ● Line Regulation — ±0.3% max. (at Vin Range)
- ● Load Regulation — Single : ±0.5% max. (0～100% Load)
  Dual : ±3% max. (10～100% Load)
- ● Reflected Input Ripple,Noise — (3% Vin)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)
- ● Temperature Coefficient — 0.02%／℃ max.
- ● Operating Ambient Temp. — −40℃～+85℃ (See Fig 1)
- ● Max. Case Temperature — +105℃
- ● Storage Temperature — −40℃～+115℃
- ● Isolation Voltage — AC1500V 1 min. (12V,24V,48V Input)
  AC2000V 1 min. (100V Input)
  (Input−Output−Case)
- ● Isolation Impedance — 100MΩ min. (at DC1000V)
  (Input−Output−Case)
- ● Weight — Main Body : 100g max.
  Heat Sink : 55g max.
- ● Humidity — 20～95% RH
- ● Shock — 490m/s² (11msec 3directions)
- ● Vibration — 10～55Hz 98m/s²
  (30minutes 3directions)
- ● Surface Structure — 6 Sided Aluminum Case
- ● MTBF — Single : 500,000H
  Dual : 600,000H
  (Ta:25℃, 80%Load, Nominal Vin)
- ● Warranty — 5 years

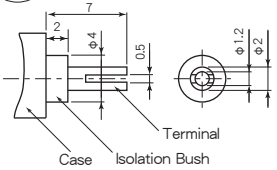
■ Pin Outs & Dimensions (±0.5mm)

〈Top View〉





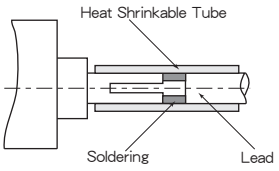
Magnification



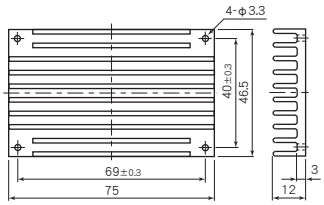
Pin Outs

	Single Output		Dual Outputs
①	+Vdc in	①	+Vdc in
②	0 Vdc in	②	0 Vdc in
③	ON/OFF Control	③	ON/OFF Control
④	+Vdc out	④	+Vdc out
⑤	0 Vdc out	⑤	Common
⑥	No Connection	⑥	−Vdc out

■ Soldering Method



■ Option Heat Sink



＊Option Heat Sink Model : A4-3079

■ Selection Guide

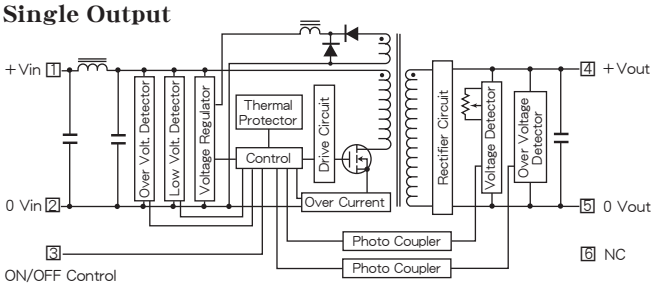
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%) 30% Load	80% Load
BPS12−3.3S 12A	12 (8～18)	3.3	12	87	85
BPS12− 5S 10A		5	10	86	89
BPS12− 6S8.4A		6	8.4	87	87
BPS12−12S4.2A		12	4.2	84	88
BPS12−15S3.3A		15	3.3	83	88
BPS12−24S2.1A		24	2.1	83	88
BPS12−3.3D 3A		± 3.3	±3	80	81
BPS12− 5D 3A		± 5	±3	80	82
BPS12−12D1.5A		±12	±1.5	81	83
BPS12−15D1.2A		±15	±1.2	81	84
BPS24−3.3S 12A	24 (16～36)	3.3	12	84	85
BPS24− 5S 10A		5	10	85	88
BPS24− 6S8.4A		6	8.4	87	89
BPS24−12S4.2A		12	4.2	84	89
BPS24−15S3.3A		15	3.3	85	89
BPS24−24S2.1A		24	2.1	84	89
BPS24−3.3D 3A		± 3.3	±3	80	81
BPS24− 5D 3A		± 5	±3	80	82
BPS24−12D1.5A		±12	±1.5	81	84
BPS24−15D1.2A		±15	±1.2	82	85
BPS48−3.3S 12A	48 (32～72)	3.3	12	85	86
BPS48− 5S 10A		5	10	85	88
BPS48− 6S8.4A		6	8.4	85	88
BPS48−12S4.2A		12	4.2	85	88
BPS48−15S3.3A		15	3.3	85	90
BPS48−24S2.1A		24	2.1	85	90
BPS48−3.3D 3A		± 3.3	±3	80	81
BPS48− 5D 3A		± 5	±3	80	82
BPS48−12D1.5A		±12	±1.5	81	84
BPS48−15D1.2A		±15	±1.2	82	85
BPS100−3.3S 12A	100 (64～144)	3.3	12	84	87
BPS100− 5S 10A		5	10	86	89
BPS100− 6S8.4A		6	8.4	84	89
BPS100−12S4.2A		12	4.2	85	90
BPS100−15S3.3A		15	3.3	85	90
BPS100−24S2.1A		24	2.1	85	90
BPS100−3.3D 3A		± 3.3	±3	80	81
BPS100− 5D 3A		± 5	±3	80	82
BPS100−12D1.5A		±12	±1.5	81	84
BPS100−15D1.2A		±15	±1.2	82	85

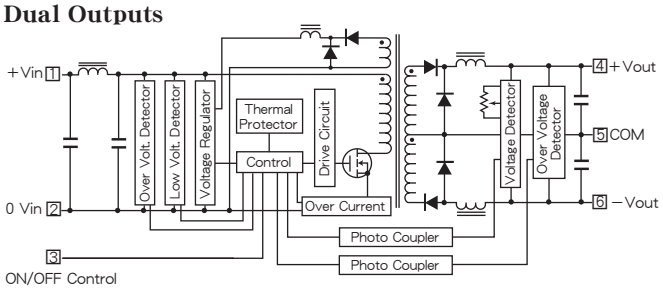
※ 上記仕様以外にも対応可能ですので お問い合わせ下さい。
Please consult with us about other specification.

■ Block Diagram

Single Output



Dual Outputs



■ Characteristic Curves

Fig 1 Derating Curve

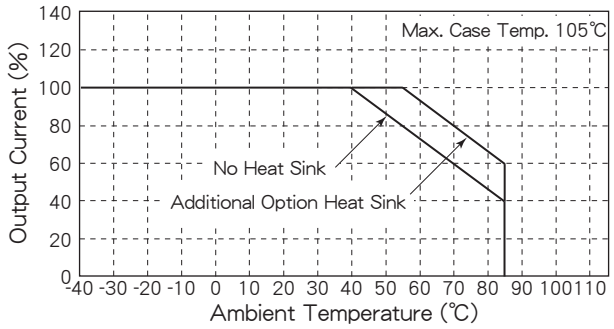


Fig 2 Short Circuit Operating Area

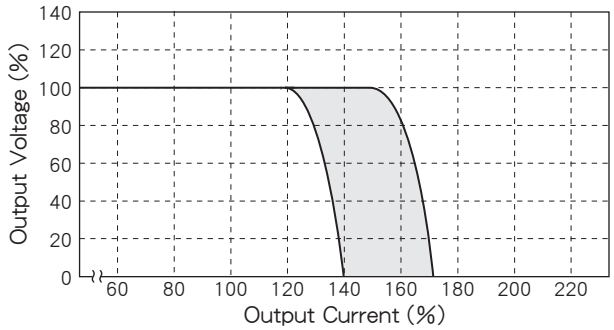


Fig 3 Temperature Characteristic on Case Surface

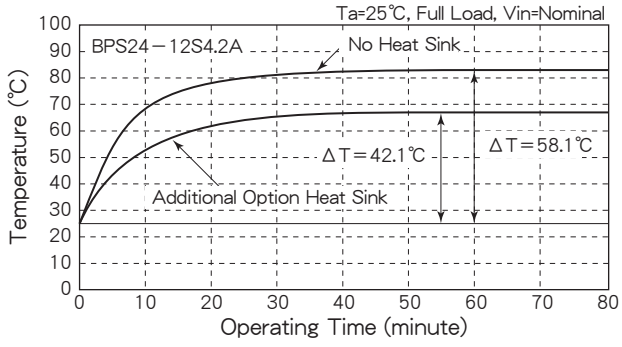


Fig 4 Efficiency vs. Output Current (Vin=12V)

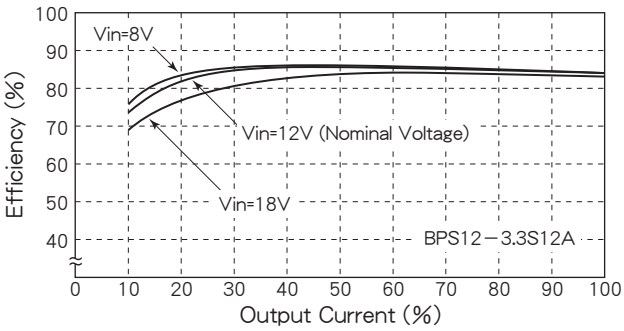


Fig 5 Efficiency vs. Output Current (Vin=24V)

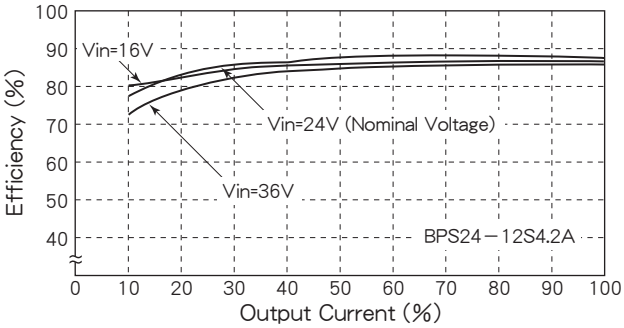


Fig 6 Efficiency vs. Output Current (Vin=100V)

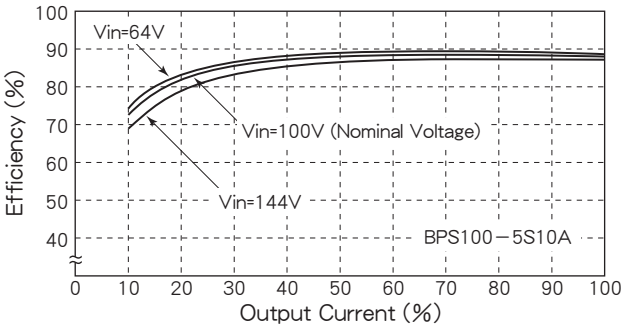


Fig 7 Efficiency vs. Output Current (Vin=100V)

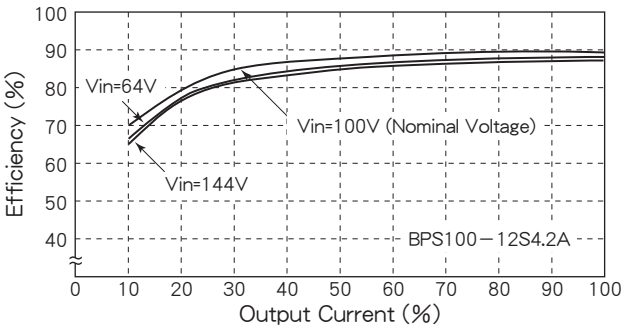


Fig 8 Efficiency vs. Output Current (Vin=12V)