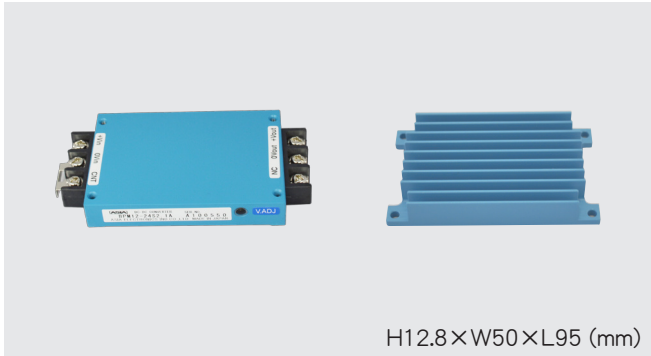


BPM SERIES

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



H12.8×W50×L95 (mm)

Features

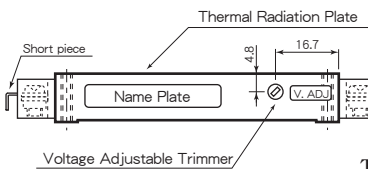
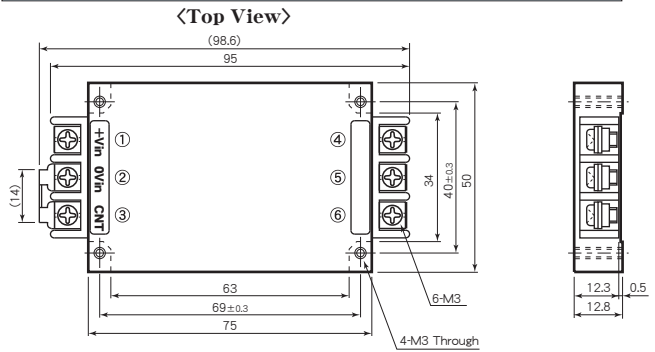
- Low Profile 12.8mm
 - 6 Sided Metal Shielding
 - Built-in Input Filter
 - Wide Input Voltage Range
 - Input-Output Isolation
 - Adjustable Output Volt. $\pm 5\%$
 - High Efficiency 81~90%
 - Remote ON/OFF Control
 - Input Low Voltage Protection
 - Input Over Voltage Protection
 - Output Over Voltage Protection
115~140% Operation
 - Thermal Protection
+110°C~+120°C
 - Operating Ambient Temperature
-40°C~+85°C
 - Max. Case Temperature +105°C
 - High Reliability
 - Conformity to RoHS2 Directive
 - Not built-in aluminum and tantalum electrolytic capacitor
- 薄型 12.8mm
 - 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 $\pm 5\%$
 - 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°C~+120°C
 - 動作周囲温度
-40°C~+85°C
 - 最大ケース温度 +105°C
 - 高信頼性
 - RoHS2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
 - Output Voltage, Current
 - Output Voltage Range
 - Efficiency
 - Line Regulation
 - Load Regulation
- (at $T_a = 25^\circ\text{C}$, Full Load, Nominal V_{in})
DC12, 24, 48, 100V (See Table 1)
See Table 1
 $\pm 5\%$ Adjustable
See Table 1
 $\pm 0.3\%$ max. (at V_{in} Range)
Single : $\pm 0.5\%$ max. (0~100% Load)
Dual : $\pm 3\%$ max. (10~100% Load)
(3% V_{in}) Vp-p max.
40mVp-p max.
100mVp-p max.
Built-in, Auto-restart (See Fig. 2)
115~140% Output Voltage
ON : Short or 0~0.8V
OFF : Open or 2~10V
(Between terminal ② ~ ③)
0.02%/°C max.
-40°C~+85°C (See Fig. 1)
+105°C
-40°C~+115°C
AC1500V 1 min.
AC2000V 1 min. (100V V_{in} only)
(Input-Output-Case)
100M Ω min. (at DC1000V)
(Input-Output-Case)
 - Reflected Input Ripple, Noise
 - Output Ripple
 - Output Noise
 - Short Circuit Protection
 - Over Voltage Protection
 - Remote ON/OFF Control
 - Temperature Coefficient
 - Operating Ambient Temp.
 - Max. Case Temperature
 - Storage Temperature
 - Isolation Voltage
 - Isolation Impedance
 - Weight
 - Humidity
 - Shock
 - Vibration
 - Surface Structure
 - MTBF
 - Warranty

Main Body : 150g max.
Heat Sink : 55g max.
20~95% RH
490m/s² (11msec 3directions)
10~55Hz 98m/s²
(30minutes 3directions)
6 Sided Aluminum Case
Single : 500,000H
Dual : 600,000H
($T_a = 25^\circ\text{C}$, 80% Load, Nominal V_{in})
5 years

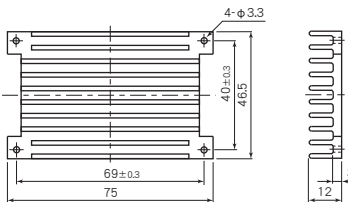
Terminal Outs & Dimensions ($\pm 0.5\text{mm}$)



Terminal 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

Option Heat Sink



* Option Heat Sink Model : A3-13987

Selection Guide

Table 1

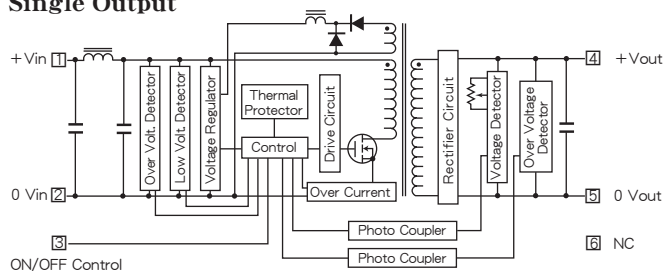
Model Number	Input Voltage (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (typ.) (%)		
				30% Load	80% Load	
BPM12-3.3S 12A	12 (8~18)	3.3	12	87	85	
BPM12-5S 10A		5	10	86	89	
BPM12-6S 8.4A		6	8.4	87	87	
BPM12-12S 4.2A		12	4.2	84	88	
BPM12-15S 3.3A		15	3.3	83	88	
BPM12-24S 2.1A		24	2.1	83	88	
BPM12-3.3D 3A		± 3.3	± 3	80	81	
BPM12-5D 3A		± 5	± 3	80	82	
BPM12-12D 1.5A		± 12	± 1.5	81	83	
BPM12-15D 1.2A		± 15	± 1.2	81	84	
BPM24-3.3S 12A		24 (16~36)	3.3	12	84	85
BPM24-5S 10A			5	10	85	88
BPM24-6S 8.4A	6		8.4	87	89	
BPM24-12S 4.2A	12		4.2	84	89	
BPM24-15S 3.3A	15		3.3	85	89	
BPM24-24S 2.1A	24		2.1	84	89	
BPM24-3.3D 3A	± 3.3		± 3	80	81	
BPM24-5D 3A	± 5		± 3	80	82	
BPM24-12D 1.5A	± 12		± 1.5	81	84	
BPM24-15D 1.2A	± 15		± 1.2	82	85	
BPM48-3.3S 12A	48 (32~72)		3.3	12	85	86
BPM48-5S 10A			5	10	85	88
BPM48-6S 8.4A		6	8.4	85	88	
BPM48-12S 4.2A		12	4.2	85	88	
BPM48-15S 3.3A		15	3.3	85	90	
BPM48-24S 2.1A		24	2.1	85	90	
BPM48-3.3D 3A		± 3.3	± 3	80	81	
BPM48-5D 3A		± 5	± 3	80	82	
BPM48-12D 1.5A		± 12	± 1.5	81	84	
BPM48-15D 1.2A		± 15	± 1.2	82	85	
BPM100-3.3S 12A		100 (64~144)	3.3	12	84	87
BPM100-5S 10A			5	10	86	89
BPM100-6S 8.4A	6		8.4	84	89	
BPM100-12S 4.2A	12		4.2	85	90	
BPM100-15S 3.3A	15		3.3	85	90	
BPM100-24S 2.1A	24		2.1	85	90	
BPM100-3.3D 3A	± 3.3		± 3	80	81	
BPM100-5D 3A	± 5		± 3	80	82	
BPM100-12D 1.5A	± 12		± 1.5	81	84	
BPM100-15D 1.2A	± 15		± 1.2	81	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.

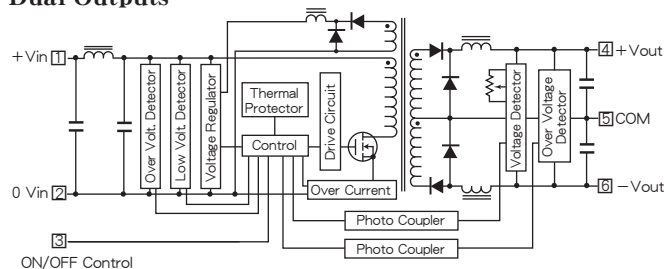
BPM SERIES DATA SHEET

Block Diagram

Single Output



Dual Outputs



Characteristic Curves

Fig. 1 Derating Curve

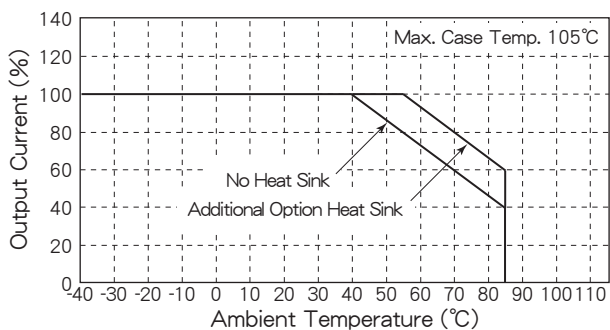


Fig. 2 Short Circuit Operating Area

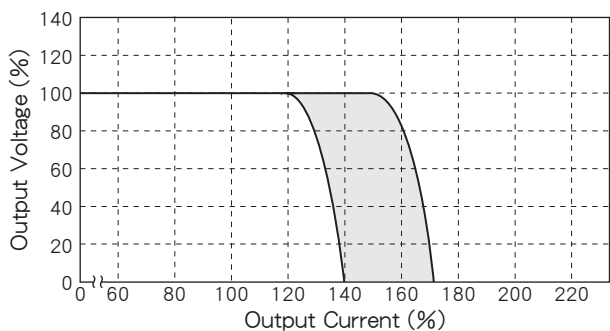


Fig. 3 Temperature Characteristic on Case Surface

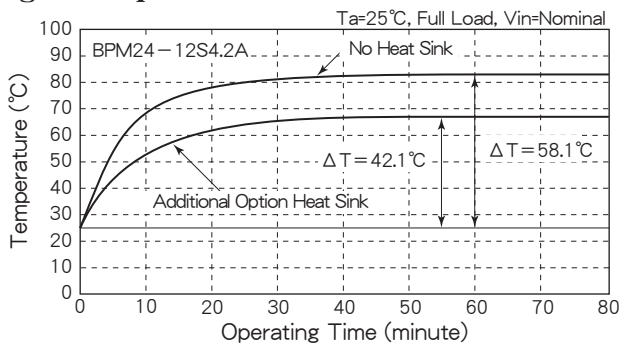


Fig. 4 Efficiency vs. Output Current

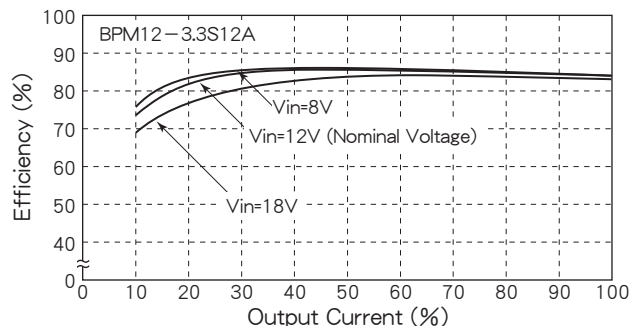


Fig. 5 Efficiency vs. Output Current

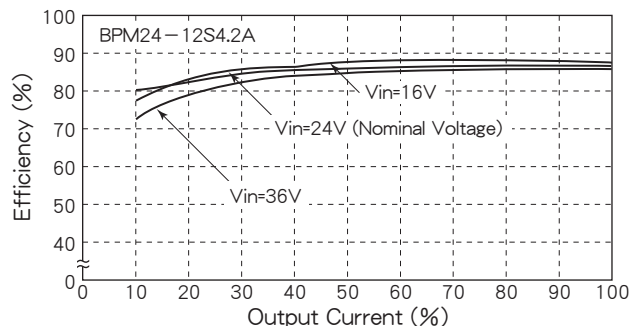


Fig. 6 Efficiency vs. Output Current

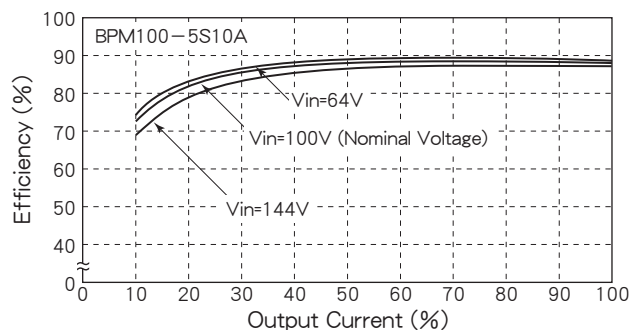


Fig. 7 Efficiency vs. Output Current

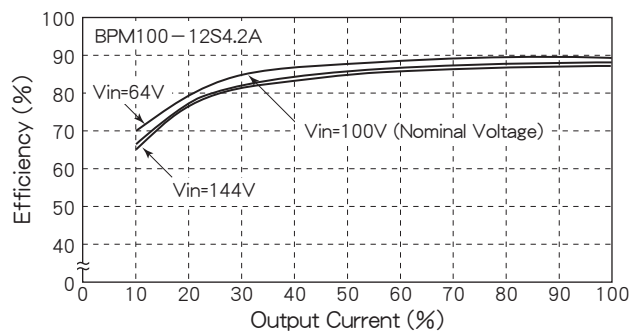


Fig. 8 Efficiency vs. Output Current

