

BHM SERIES

7~15W DC/DC CONVERTERS Single Output & Dual Outputs



H12.8×W50×L75 (mm)

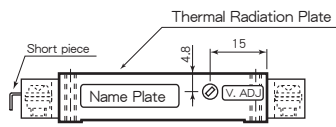
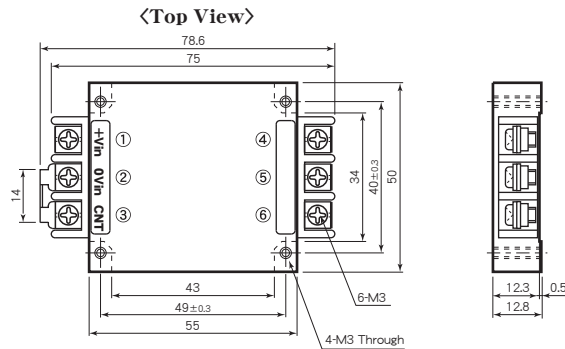
Features

- Low Profile 12.8mm
- Built-in Input Filter
- Input-Output Isolation
- High Efficiency 77~88%
- Wide Input Voltage Range
- High Reliability
- 6 Sided Metal Shielding
- Remote ON/OFF Control
- Adjustable Output Volt. ±5%
- Output Over Voltage Protection 115~140% Operation
- Operating Ambient Temperature -40°C~+85°C
- Max. Case Temperature +105°C
- Conformity to RoHS2 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 77~88%
- 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 ±5%
- 出力過電圧保護回路内蔵 115~140% 動作
- 動作周囲温度 -40°C~+85°C
- 最大ケース温度 +105°C
- 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 DC5, 12, 24, 48V (See Table 1)
- Output Voltage, Current See Table 1
- Output Voltage Range ±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. 40mVp-p max.
- Output Ripple 100mVp-p max. (48V Vout only)
- Output Noise 100mVp-p max. 200mVp-p max. (48V Vout only)
- 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%/°C max.
- Operating Ambient Temp. -40°C~+85°C (See Fig. 1)
- -30°C~+85°C (5V Vin only)
- Max. Case Temperature +105°C
- Storage Temperature -40°C~+115°C
- Isolation Voltage AC1500V one minute (Input-Output-Case)
- Isolation Impedance 100MΩ min. (at DC1000V) (Input-Output-Case)
- Weight Main Body : 100g max. Heat Sink : 40g 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 : 1,000,000H
- Dual : 700,000H (Ta : 25°C, 80% Load, Nominal Vin)
- Warranty 5 years

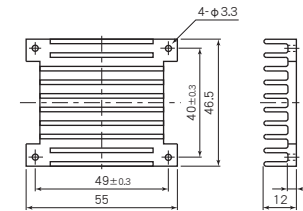
Terminal Outs & Dimensions (±0.5mm)



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 : A3-13988

Selection Guide

Table 1

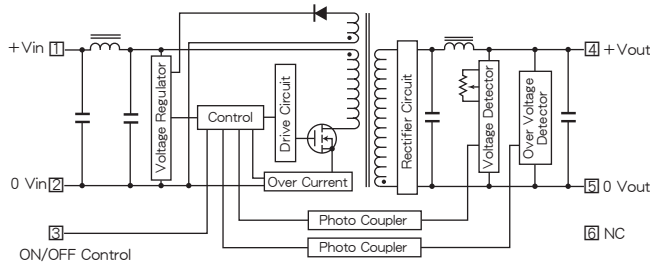
Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical) (%)
BHM 5-3.3 S 2A	5 (4.5~9)	3.3	2	83
BHM 5-5 S 2A		5	2	82
BHM 5-6 S 1.8A		6	1.8	82
BHM 5-1.2 S 1A		12	1	84
BHM 5-1.5 S 0.8A		15	0.8	83
BHM 5-2.4 S 0.5A		24	0.5	83
BHM 5-2.8 S 0.4A		28	0.4	83
BHM 5-5 D 1A		±5	±1	77
BHM 5-1.2 D 0.5A		±12	±0.5	81
BHM 5-1.5 D 0.4A		±15	±0.4	81
BHM 12-3.3 S 2.4A	12 (8~18)	3.3	2.4	83
BHM 12-5 S 2.4A		5	2.4	85
BHM 12-6 S 2.2A		6	2.2	85
BHM 12-1.2 S 1.3A		12	1.3	85
BHM 12-1.5 S 1A		15	1	85
BHM 12-2.4 S 0.65A		24	0.65	85
BHM 12-2.8 S 0.5A		28	0.5	85
BHM 12-4.8 S 0.3A		48	0.3	85
BHM 12-5 D 1.2A		±5	±1.2	78
BHM 12-1.2 D 0.65A		±12	±0.65	83
BHM 12-1.5 D 0.5A	±15	±0.5	83	
BHM 24-3.3 S 2.4A	24 (16~36)	3.3	2.4	84
BHM 24-5 S 2.4A		5	2.4	86
BHM 24-6 S 2.2A		6	2.2	86
BHM 24-1.2 S 1.3A		12	1.3	86
BHM 24-1.5 S 1A		15	1	86
BHM 24-2.4 S 0.65A		24	0.65	86
BHM 24-2.8 S 0.5A		28	0.5	86
BHM 24-4.8 S 0.3A		48	0.3	85
BHM 24-5 D 1.2A		±5	±1.2	78
BHM 24-1.2 D 0.65A		±12	±0.65	83
BHM 24-1.5 D 0.5A	±15	±0.5	83	
BHM 48-3.3 S 2.4A	48 (32~76)	3.3	2.4	83
BHM 48-5 S 2.4A		5	2.4	86
BHM 48-6 S 2.2A		6	2.2	86
BHM 48-1.2 S 1.3A		12	1.3	88
BHM 48-1.5 S 1A		15	1	88
BHM 48-2.4 S 0.65A		24	0.65	86
BHM 48-2.8 S 0.5A		28	0.5	86
BHM 48-5 D 1.2A		±5	±1.2	80
BHM 48-1.2 D 0.65A		±12	±0.65	85
BHM 48-1.5 D 0.5A		±15	±0.5	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.

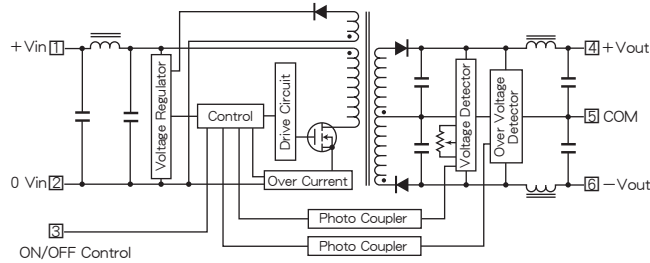
BHM SERIES DATA SHEET

Block Diagram

Single Output



Dual Outputs



Characteristic Curves

Fig. 1 Derating Curve

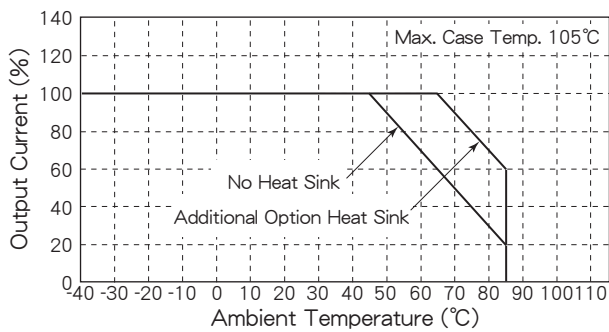


Fig. 2 Short Circuit Operating Area

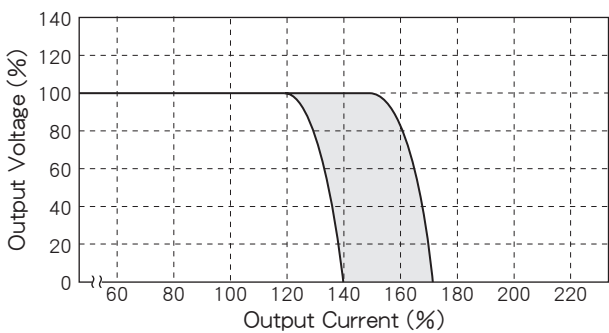


Fig. 3 Temperature Characteristic on Case Surface

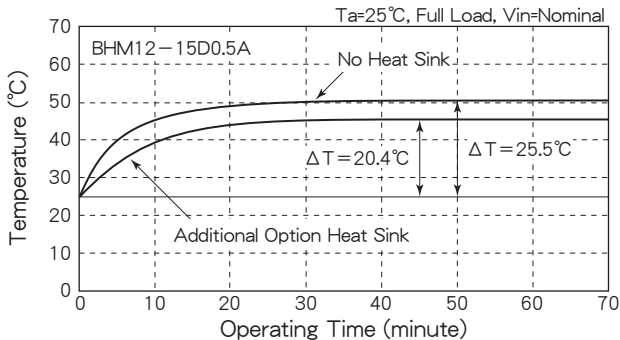


Fig. 4 Efficiency vs. Output Current

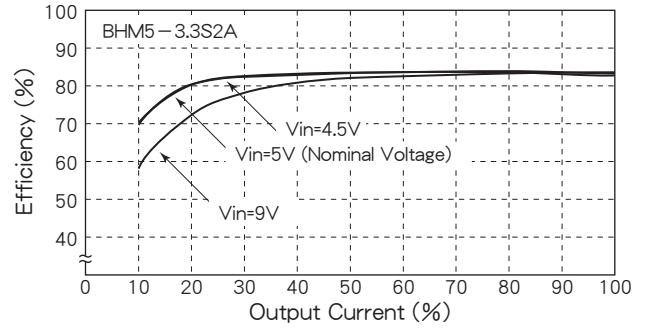


Fig. 5 Efficiency vs. Output Current

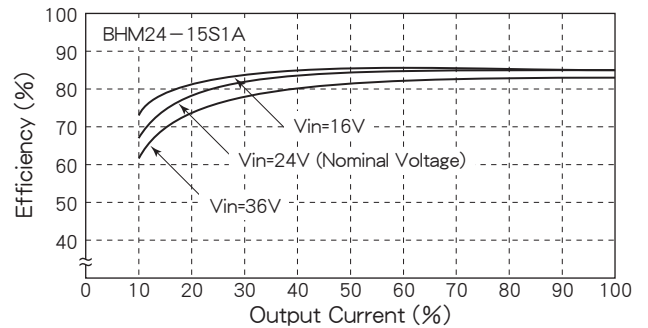


Fig. 6 Efficiency vs. Output Current

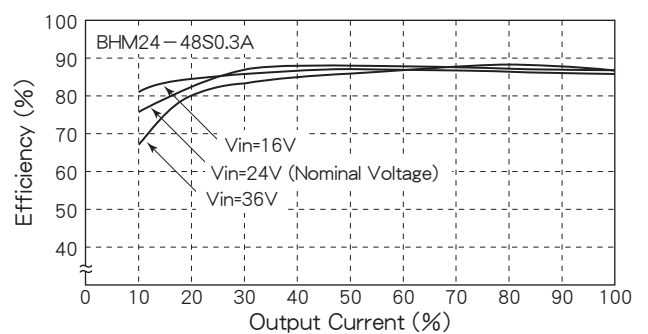


Fig. 7 Efficiency vs. Output Current

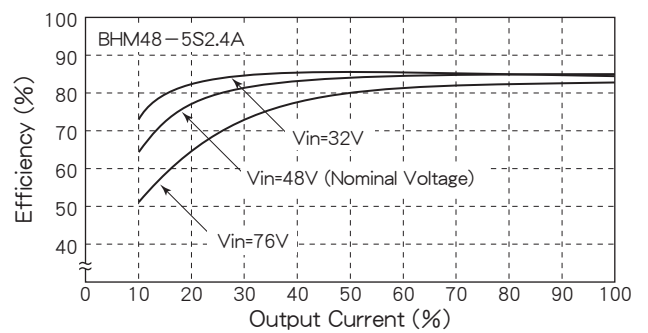


Fig. 8 Efficiency vs. Output Current

