

KMP SERIES

105~200W DC/DC CONVERTERS

Single Output



H20×W60×L105 (mm)

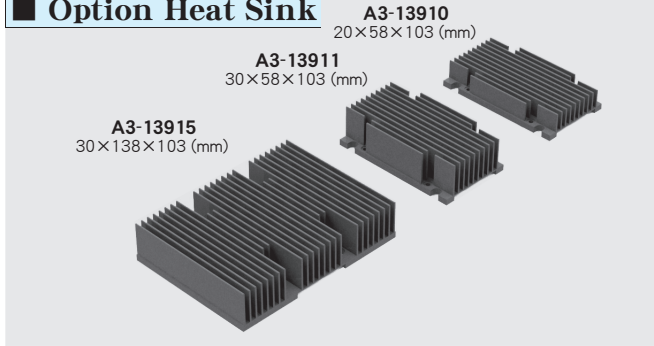
Features

- Built-in Input Filter
- Input-Output Isolation
- High Efficiency 87~91%
- Wide Input Voltage Range
- High Reliability
- 6 Sided Metal Shielding
- Adjustable Output Volt. $\pm 8\%$
- Input Low Voltage Protection
- Input Over Voltage Protection
- Output Over Voltage Protection
- Thermal Protection
+110°C~+120°C
- Remote ON/OFF Control
- Operating Ambient Temperature
-40°C~+85°C
- Conformity to RoHS2 Directive
- Not built-in aluminum and tantalum electrolytic capacitor
- 入力フィルタ内蔵
- 入出力間絶縁
- 高効率 87~91%
- 広範囲な入力電圧
- 高信頼性
- 6面メタルシールド
- 可変出力電圧 $\pm 8\%$
- 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
- 過熱保護回路内蔵
+110°C~+120°C
- リモートON/OFFコントロール
- 動作周囲温度
-40°C~+85°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 (at T_a : 25°C, Full Load, Nominal V_{in})
DC12, 24, 48, 100, 140V (See Table 1)
- Output Voltage, Current See Table 1
- Output Voltage Accuracy $\pm 2\%$
 $\pm 3\%$ (3.3, 5, 6V V_{out} only)
 $\pm 8\%$ Adjustable (Used trimmer)
- Efficiency See Table 1
- Line Regulation $\pm 0.3\%$ max. (at V_{in} Range)
- Load Regulation $\pm 1\%$ max.
 $\pm 1.5\%$ max. (3.3, 5, 6V V_{out} only)
(0~100% Load)
- Reflected Input Ripple, Noise (5% V_{in}) V_p -p max.
80mV V_p -p max.
- Output Ripple (0.5% V_{out} +100mV) p-p max.
- Output Noise Built-in, Auto-restart (See Fig. 5)
- Short Circuit Protection 115~140% Output Voltage
- Over Voltage Protection ON : Short or 0~0.8V
OFF : Open or 2~10V
(Between pin ② ~ ③)
- Remote ON/OFF Control 0.02%/°C max.
-40°C~+85°C (See Fig. 1)
- Temperature Coefficient +105°C
- Operating Ambient Temp. AC2000V one minute
(Input-Output-Case)
- Max. Case Temperature 100M Ω min. (at DC1000V)
(Input-Output-Case)
- Storage Temperature Main Body : 300g max.
Heat Sink
- Isolation Voltage A3-13910 : 135g max.
A3-13911 : 175g max.
A3-13915 : 425g max.
- Isolation Impedance 20~95% RH
- Weight 490m/s² (11msec 3directions)
10~55Hz 98m/s²
(30minutes 3directions)
- Humidity Aluminum Case
- Shock 260°C, for 15 seconds max.
360°C, for 5 seconds max.
- Vibration 400,000H
(T_a : 25°C, 80% Load, Nominal V_{in})
- Surface Structure 5 years
- Soldering Conditions
- Soldering DIP
- Soldering iron
- MTBF
- Warranty

Option Heat Sink



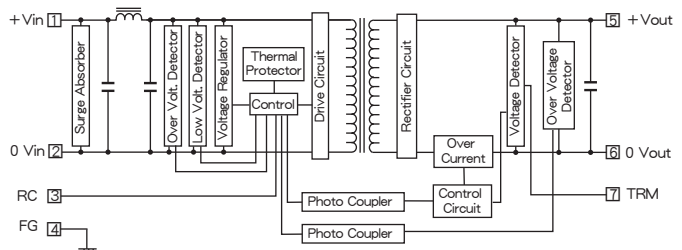
Selection Guide

Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%)		
				20% Load	50% Load	80% Load
KMP12 - 3.3S 32A	12 (8~18) at 50% Load (9~18) at 100% Load	3.3	32	85	88	87
KMP12 - 5S 28A		5	28	86	90	88
KMP12 - 6S23.3A		6	23.3	86	90	88
KMP12 - 12S13.4A		12	13.4	87	90	89
KMP12 - 13.8S11.6A		13.8	11.6	87	90	89
KMP12 - 15S10.7A		15	10.7	87	90	89
KMP12 - 24S 6.7A		24	6.7	87	90	89
KMP12 - 28S 5.8A		28	5.8	87	90	89
KMP12 - 48S 3.4A		48	3.4	87	90	89
KMP24 - 3.3S 40A		24 (16~36)	3.3	40	88	91
KMP24 - 5S 32A	5		32	90	92	91
KMP24 - 6S26.6A	6		26.6	90	92	91
KMP24 - 12S16.7A	12		16.7	90	92	91
KMP24 - 13.8S14.5A	13.8		14.5	90	92	91
KMP24 - 15S13.4A	15		13.4	90	92	91
KMP24 - 24S 8.4A	24		8.4	90	92	91
KMP24 - 28S 7.2A	28		7.2	90	92	91
KMP24 - 48S 4.2A	48		4.2	90	92	91
KMP48 - 3.3S 40A	48 (36~76)		3.3	40	88	91
KMP48 - 5S 32A		5	32	91	92	91
KMP48 - 6S26.6A		6	26.6	91	92	91
KMP48 - 12S16.7A		12	16.7	91	92	91
KMP48 - 13.8S14.5A		13.8	14.5	91	92	91
KMP48 - 15S13.4A		15	13.4	91	92	91
KMP48 - 24S 8.4A		24	8.4	91	92	91
KMP48 - 28S 7.2A		28	7.2	91	92	91
KMP48 - 48S 4.2A		48	4.2	91	92	91
KMP100 - 3.3S 40A		100 (64~144)	3.3	40	85	91
KMP100 - 5S 32A	5		32	87	92	91
KMP100 - 6S26.6A	6		26.6	87	92	91
KMP100 - 12S16.7A	12		16.7	87	92	91
KMP100 - 13.8S14.5A	13.8		14.5	87	92	91
KMP100 - 15S13.4A	15		13.4	87	92	91
KMP100 - 24S 8.4A	24		8.4	87	92	91
KMP100 - 28S 7.2A	28		7.2	87	92	91
KMP100 - 48S 4.2A	48		4.2	87	92	91
KMP140 - 3.3S 40A	140 (90~200)		3.3	40	85	91
KMP140 - 5S 32A		5	32	87	92	91
KMP140 - 6S26.6A		6	26.6	87	92	91
KMP140 - 12S16.7A		12	16.7	87	92	91
KMP140 - 13.8S14.5A		13.8	14.5	87	92	91
KMP140 - 15S13.4A		15	13.4	87	92	91
KMP140 - 24S 8.4A		24	8.4	87	92	91
KMP140 - 28S 7.2A		28	7.2	87	92	91
KMP140 - 48S 4.2A		48	4.2	87	92	91

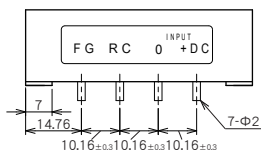
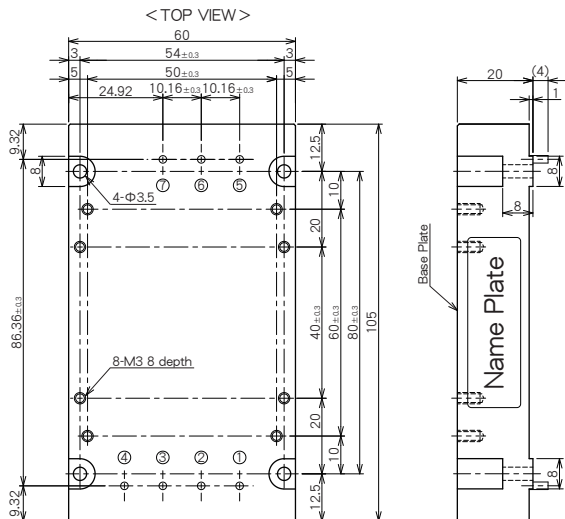
* 上記仕様以外にも対応可能ですのでお問い合わせください。
Please consult with us about other specification.

Block Diagram



KMP SERIES DATA SHEET

Pin Outs & Dimensions (±0.5mm)

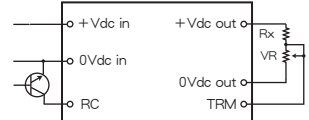


Pin Outs

①	+Vdc in
②	0 Vdc in
③	RC
④	FG
⑤	+Vdc out
⑥	0 Vdc out
⑦	TRM

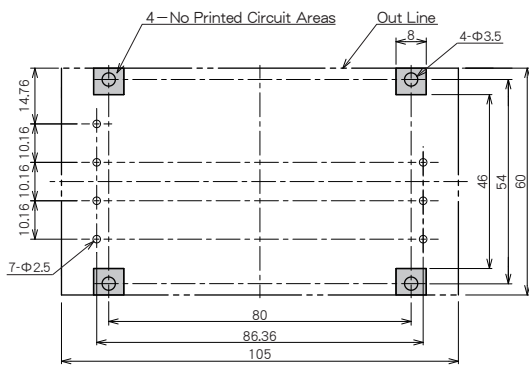
Application

ON/OFF Control and Vout Adjustment



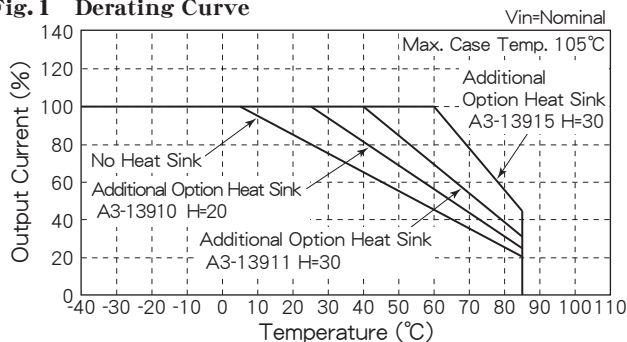
Vout (V)	3.3V	5V	6V	12V	13.8V	15V	24V	28V	48V
VR (Ω)	50k	50k	50k	50k	50k	50k	50k	50k	50k
Rx (Ω)	6.2k	3k	6.8k	13k	16k	20k	39k	51k	150k

Holes on PCB (Top View)



Characteristic Curves

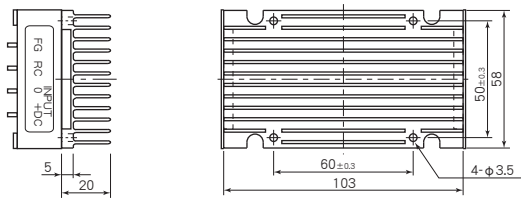
Fig. 1 Derating Curve



Option Heat Sink

Fig. 2 Temperature Characteristic on Case Surface

* Option Heat Sink Model : A3-13910



KMP24-12S16.7A Additional Heat Sink A3-13910
Ta=25°C, 100% Load, Vin=Nominal

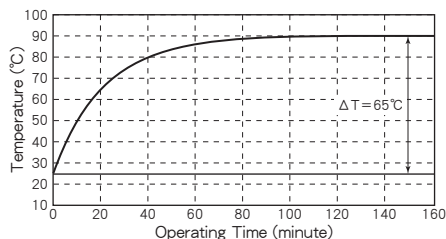
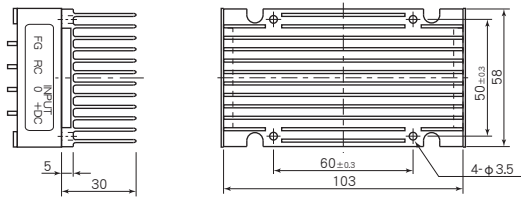


Fig. 3 Temperature Characteristic on Case Surface

* Option Heat Sink Model : A3-13911



KMP24-12S16.7A Additional Heat Sink A3-13911
Ta=25°C, 100% Load, Vin=Nominal

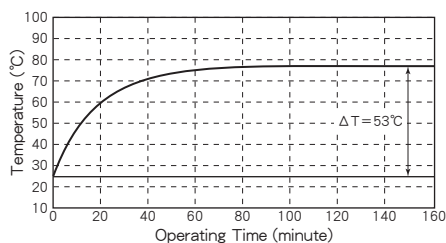
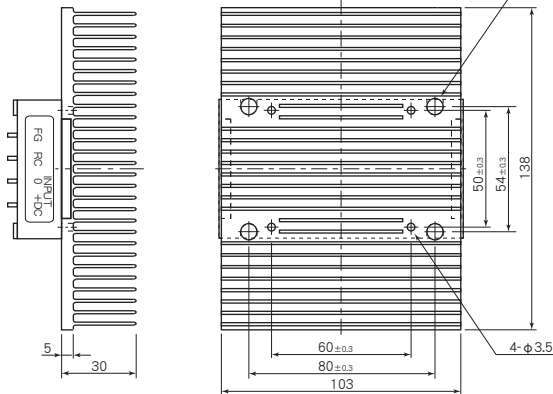
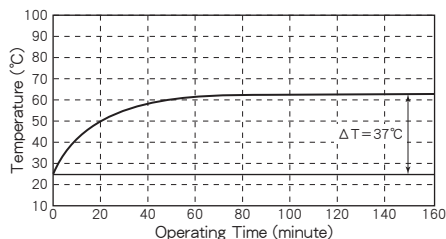


Fig. 4 Temperature Characteristic on Case Surface

* Option Heat Sink Model : A3-13915



KMP24-12S16.7A Additional Heat Sink A3-13915
Ta=25°C, 100% Load, Vin=Nominal



KMP SERIES DATA SHEET

Fig. 5 Short Circuit Operating Area

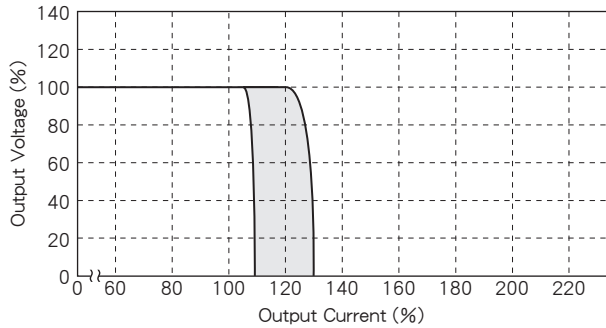


Fig. 6 Efficiency vs. Output Current

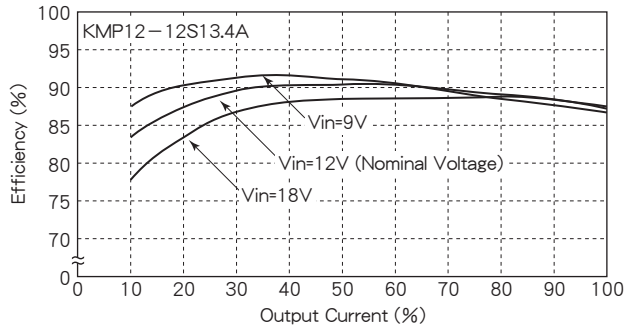


Fig. 7 Efficiency vs. Output Current

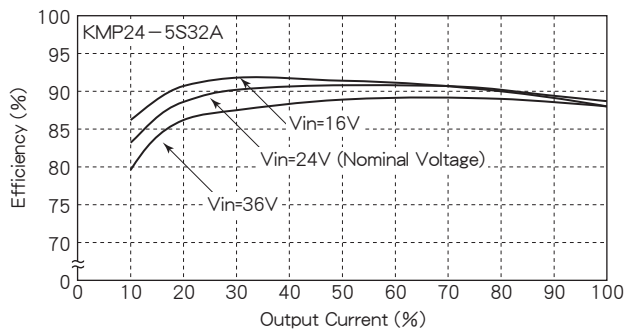


Fig. 8 Efficiency vs. Output Current

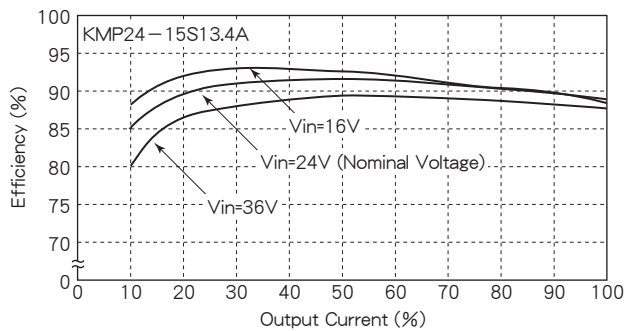


Fig. 9 Efficiency vs. Output Current

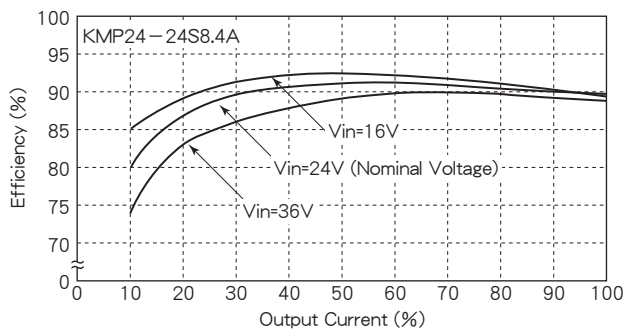


Fig. 10 Efficiency vs. Output Current

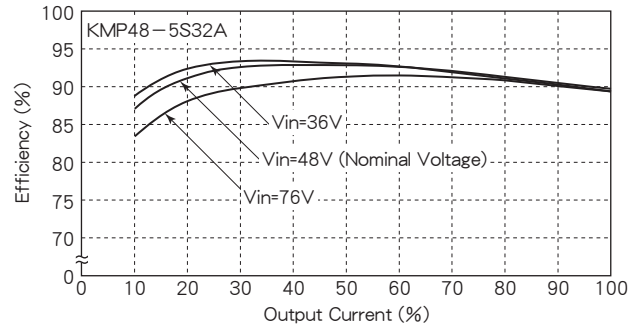


Fig. 11 Efficiency vs. Output Current

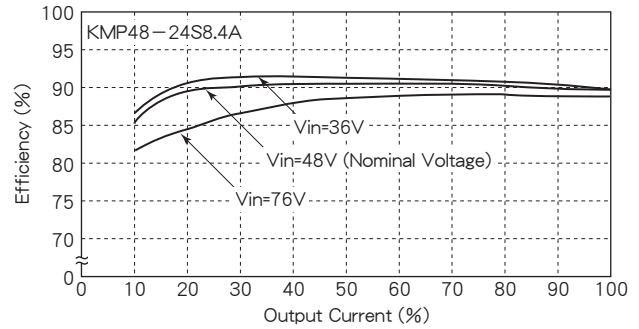
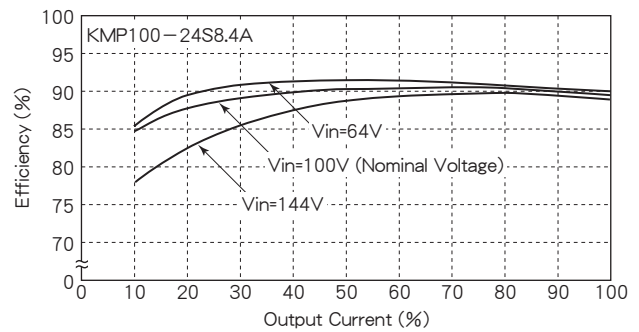


Fig. 12 Efficiency vs. Output Current



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