

LM30 SERIES

2.6~3W DC/DC CONVERTERS Single Output & Dual Outputs



H19.5×W6×L23.5(mm)

■ Features

- Transfer Molding Package, and Washable after Soldering
- Remote ON/OFF Control
- Input-Output Isolated AC3000V
- High Efficiency 80%~85% typ.
- Low Output Ripple and Noise 30mVp-p (0~100MHz)
- Conformity to RoHS Directive
- Please add external Fuse
- トランスファモールドにより基板洗浄可能
- リモートON/OFFコントロール
- 入出力間絶縁 AC3000V
- 高効率 80%~85% typ.
- 低出力リップルノイズ 30mVp-p (0~100MHz)
- RoHS指令対応
- 保護のため入力にヒューズを接続して入力にヒューズを接続して下さい

■ General Characteristics

- Input Voltage, Range (at Ta : 25°C, Full Load, Nominal Vin)
DC5, 12, 24, 48, 100, 140V (See Table 1)
- Output Voltage, Current DC3.3, 5, 6, 12, 15, 24V
±5, ±12, ±15V (See Table 1)
- Output Voltage Accuracy ±3%
- Efficiency See Table 1
- Line Regulation 0.3% max. (at Vin Range)
- Load Regulation Single : ±0.5% max. (0~100% Load)
Dual : ±3% max.
±5% max. (±5V Vout only) (10~100% Load)
- Reflected Input Ripple (2% Vin)Vp-p max.
- Reflected Input Noise (2% Vin)Vp-p max.
- Output Ripple 20mVp-p max. (0~100MHz)
- Output Noise 30mVp-p max. (0~100MHz)
- Short Circuit Protection Built-in, Auto-restart
- Remote ON/OFF Control ON : Short or 0~0.8V
OFF : Open or 2~10V (Between pin②~③)
- Temperature Coefficient 0.02%/°C max.
- Operating Ambient Temp. -40°C~+85°C (See Fig. 1)
-30°C~+85°C (5V Vin only)
-40°C~+100°C
- Storage Temperature
- Isolation Voltage AC3000V or DC6000V one minute (Input-Output)
- Isolation Impedance 100MΩ min. (at DC1000V) (Input-Output)
- Isolation Capacitance 10pF max.
- Switching Frequency 400kHz typ.
- Weight 5.7g max.
- Humidity 20~95% RH
- Shock 490m/s² (11msec 3directions)
- Vibration 10~55Hz 98m/s² (30minutes 3directions)
- Soldering Conditions Soldering DIP 260°C, for 15 seconds max.
Soldering iron 360°C, for 5 seconds max.
- MTBF Single : 1,200,000H
Dual : 1,000,000H (Ta : 25°C, 80% Load, Nominal Vin)
- Warranty 5 years

■ Selection Guide

Table 1

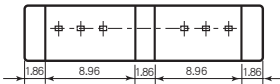
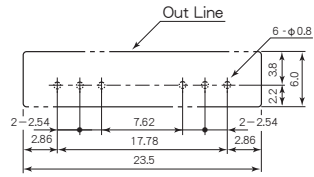
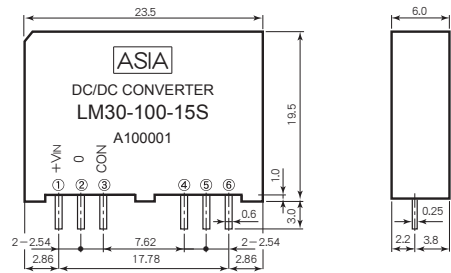
Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical) (%)
LM30-5-3.3 S	5 (4.5~9)	3.3	0.8	80
LM30-5-5 S		5	0.6	81
LM30-5-6 S		6	0.5	81
LM30-5-12 S		12	0.25	83
LM30-5-15 S		15	0.2	83
LM30-5-24 S		24	0.125	83
LM30-5-5 D		±5	±0.3	81
LM30-5-12 D		±12	±0.125	83
LM30-5-15 D		±15	±0.1	83
LM30-12-3.3 S		12 (8~18)	3.3	0.8
LM30-12-5 S	5		0.6	82
LM30-12-6 S	6		0.5	82
LM30-12-12 S	12		0.25	85
LM30-12-15 S	15		0.2	85
LM30-12-24 S	24		0.125	85
LM30-12-5 D	±5		±0.3	82
LM30-12-12 D	±12		±0.125	85
LM30-12-15 D	±15		±0.1	85
LM30-24-3.3 S	24 (16~36)		3.3	0.8
LM30-24-5 S		5	0.6	82
LM30-24-6 S		6	0.5	82
LM30-24-12 S		12	0.25	85
LM30-24-15 S		15	0.2	85
LM30-24-24 S		24	0.125	85
LM30-24-5 D		±5	±0.3	82
LM30-24-12 D		±12	±0.125	85
LM30-24-15 D		±15	±0.1	85
LM30-48-3.3 S		48 (32~72)	3.3	0.8
LM30-48-5 S	5		0.6	82
LM30-48-6 S	6		0.5	82
LM30-48-12 S	12		0.25	85
LM30-48-15 S	15		0.2	85
LM30-48-24 S	24		0.125	85
LM30-48-5 D	±5		±0.3	82
LM30-48-12 D	±12		±0.125	85
LM30-48-15 D	±15		±0.1	85
LM30-100-3.3 S	100 (64~144)		3.3	0.8
LM30-100-5 S		5	0.6	82
LM30-100-6 S		6	0.5	82
LM30-100-12 S		12	0.25	85
LM30-100-15 S		15	0.2	85
LM30-100-24 S		24	0.125	85
LM30-100-5 D		±5	±0.3	82
LM30-100-12 D		±12	±0.125	85
LM30-100-15 D		±15	±0.1	85
LM30-140-3.3 S		140 (90~200)	3.3	0.8
LM30-140-5 S	5		0.6	82
LM30-140-6 S	6		0.5	82
LM30-140-12 S	12		0.25	85
LM30-140-15 S	15		0.2	85
LM30-140-24 S	24		0.125	85
LM30-140-5 D	±5		±0.3	82
LM30-140-12 D	±12		±0.125	85
LM30-140-15 D	±15		±0.1	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.

LM30 SERIES DATA SHEET

Pin Outs & Dimensions ($\pm 0.3\text{mm}$)

Hole Configurations on PCB (Top View)



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	No Connection	④	+Vdc out
⑤	+Vdc out	⑤	Common
⑥	0 Vdc out	⑥	-Vdc out

Characteristic Curves

Fig. 1 Derating Curve

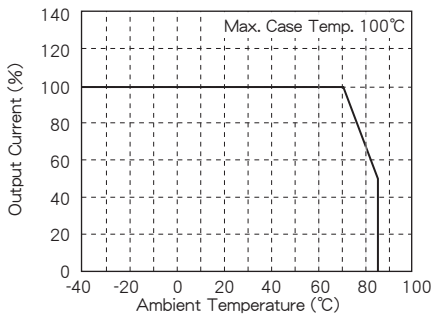


Fig. 2 Temperature Characteristic on Case Surface

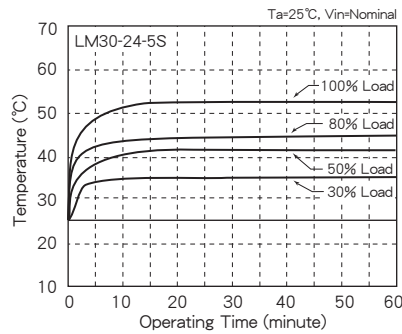


Fig. 3 Output Ripple and Noise

Fig. 3.1

BW(0~100MHz)

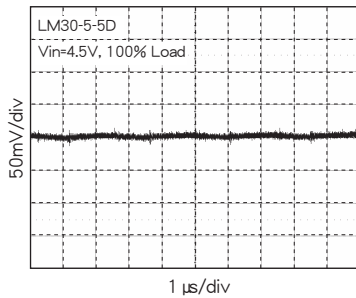


Fig. 3.2

BW(0~100MHz)

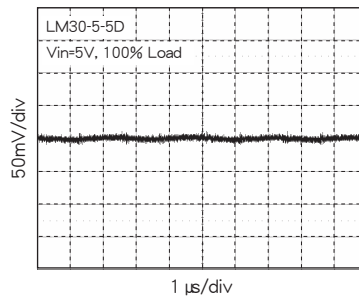


Fig. 3.3

BW(0~100MHz)

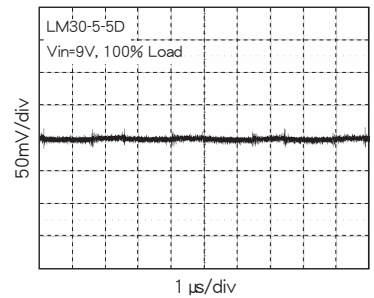


Fig. 4 Reflected Input Ripple and Noise

Fig. 4.1

BW(0~100MHz)

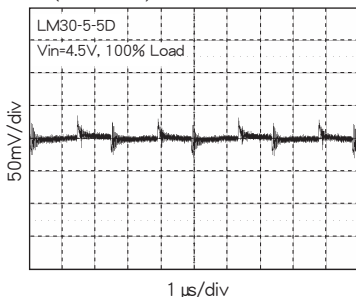


Fig. 4.2

BW(0~100MHz)

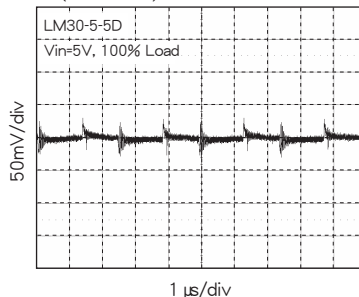


Fig. 4.3

BW(0~100MHz)

