

# Communication Line – MAB06 Series

3 W 2 : 1 SINGLE & DUAL OUTPUT DC / DC CONVERTER

## Features

- 3W isolated output
- 24-pin DIP package
- Efficiency to 82%
- 2:1 input range
- Regulated outputs
- Pi input filter
- Continuous short circuit protection
- RoHS compliant



## Specifications

### INPUT

Input voltage range	5V	4.5-6V
	12V	9-18V
	24V	18-36V
	48V	36-72V
Input filter	Pi type.	

### OUTPUT

Voltage accuracy	±2.0% max.	
Voltage balance (dual)	±1.0% max.	
Temperature coefficient	±0.05%/°C.	
Ripple and noise <sup>20MHz BW</sup>	3.3V/5V	100mV p-p max.
	12V/15V	1% p-p max.
Short circuit protection	Continuous.	
Line regulation <sup>1</sup>	Single/Dual	±0.5% max.
Load regulation	Single <sup>2</sup>	±0.5% max.
	Dual <sup>3</sup>	±1.0% max.

### Note:

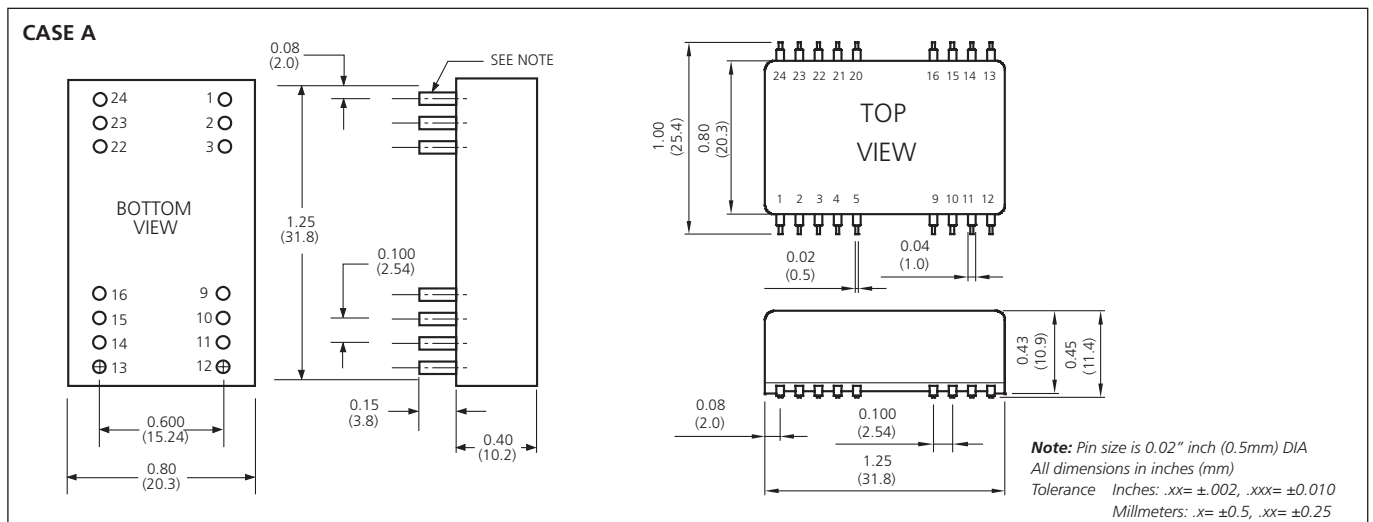
1. Measured from high line to low line.
2. Measured from full load to 10% load.
3. Measured from full load to 1/4 load.
4. Non-conductive black plastic only.
5. Suffix "HM" 1.5kVDC instead of 3kVDC isolation.
6. Suffix "S" to the model number with SMD packages.
7. Max case temperature under any operating conditions should not be exceeded 95°C (plastic case), 100°C (copper case).

### ENVIRONMENTAL

Operating ambient temp.	-25 to +71°C.
Derating above 71°C	Linearly to zero power at 95°C (plastic case).
	Linearly to zero power at 100°C (copper case).
Case temperature <sup>9</sup>	95°C max (plastic case).
	100°C max (copper case).
Cooling	Natural convection.
Storage temperature	-40 to +100°C.

### GENERAL

Efficiency	See table.
Isolation voltage <sup>4</sup>	Standard models: 500VDC min.
	Suffix "H" models: 3kVDC min.
Isolation resistance	10 <sup>9</sup> ohms.
Switching frequency	100KHz, min.
Dimensions	DIP: 31.8 x 20.3 x 10.2 mm.
	SMD: 31.8 x 20.3 x 11.4 mm.
Weight	12.5g.
Case material	Standard models: Non-conductive black plastic.
	Suffix "M" <sup>5</sup> models: Black coated copper with non-conductive base.



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MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		EFFICIENCY	CASE
				NO LOAD	FULL LOAD		
MAB 06 003	4.5-6 VDC	3.3 VDC	600 mA	15 mA	582 mA	68%	A
MAB 06 006	4.5-6 VDC	5 VDC	600 mA	15 mA	800 mA	75%	A
MAB 06 009	4.5-6 VDC	12 VDC	250 mA	15 mA	759 mA	79%	A
MAB 06 012	4.5-6 VDC	15 VDC	200 mA	15 mA	779 mA	77%	A
MAB 06 015	4.5-6 VDC	±5 VDC	±300 mA	25 mA	779 mA	77%	A
MAB 06 018	4.5-6 VDC	±12 VDC	±125 mA	25 mA	789 mA	76%	A
MAB 06 021	4.5-6 VDC	±15 VDC	±100 mA	25 mA	800 mA	75%	A
MAB 06 024	9-18 VDC	3.3 VDC	600 mA	7.5 mA	229 mA	72%	A
MAB 06 027	9-18 VDC	5 VDC	600 mA	7.5 mA	325 mA	77%	A
MAB 06 030	9-18 VDC	12 VDC	250 mA	7.5 mA	313 mA	80%	A
MAB 06 033	9-18 VDC	15 VDC	200 mA	7.5 mA	316 mA	79%	A
MAB 06 036	9-18 VDC	±5 VDC	±300 mA	12 mA	325 mA	77%	A
MAB 06 039	9-18 VDC	±12 VDC	±125 mA	12 mA	325 mA	77%	A
MAB 06 042	9-18 VDC	±15 VDC	±100 mA	12 mA	316 mA	79%	A
MAB 06 045	18-36 VDC	3.3 VDC	600 mA	5 mA	111 mA	74%	A
MAB 06 048	18-36 VDC	5 VDC	600 mA	5 mA	158 mA	79%	A
MAB 06 051	18-36 VDC	12 VDC	250 mA	5 mA	156 mA	80%	A
MAB 06 054	18-36 VDC	15 VDC	200 mA	5 mA	152 mA	82%	A
MAB 06 057	18-36 VDC	±5 VDC	±300 mA	7.5 mA	162 mA	77%	A
MAB 06 060	18-36 VDC	±12 VDC	±125 mA	7.5 mA	158 mA	79%	A
MAB 06 063	18-36 VDC	±15 VDC	±100 mA	7.5 mA	154 mA	81%	A
MAB 06 066	36-72 VDC	3.3 VDC	600 mA	3 mA	57 mA	72%	A
MAB 06 069	36-72 VDC	5 VDC	600 mA	2 mA	78 mA	79%	A
MAB 06 072	36-72 VDC	12 VDC	250 mA	2 mA	78 mA	80%	A
MAB 06 075	36-72 VDC	15 VDC	200 mA	2 mA	78 mA	80%	A
MAB 06 078	36-72 VDC	±5 VDC	±300 mA	3 mA	80 mA	78%	A
MAB 06 081	36-72 VDC	±12 VDC	±125 mA	3 mA	80 mA	78%	A
MAB 06 084	36-72 VDC	±15 VDC	±100 mA	3 mA	80 mA	78%	A

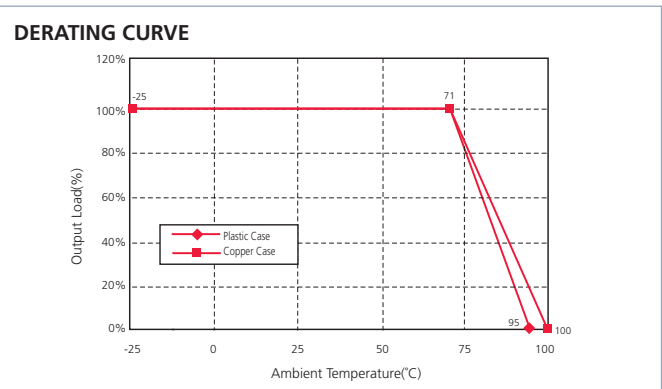
**Note:**

1. Nominal input voltages 24 or 48 VDC.

500VDC					1.5K & 3K VDC				
PIN	SINGLE OUTPUT		DUAL OUTPUT		PIN	SINGLE OUTPUT		DUAL OUTPUT	
	DIP	SDM	DIP	SMD		DIP	SDM	DIP	SMD
1,24	+V Input		+V Input		1,24	NP	NC	NP	NC
2,23	NC		-V Input		2,3	-V Input		-V Input	
3,22	NC		Common		4,5	NP	NC	NP	NC
4	NP	NC	NP	NC	9	NC		Common	
5	NP	NC	NP	NC	10,15	NC		NC	
9	NP	NC	NP	NC	11	NC		-V Output	
10,15	-V Output		Common		12,13	NP	NC	NP	NC
11,14	+V Output		+V Output		14	+V Output		+V Output	
12,13	-V Input		-V Input		16	-V Output		Common	
16	NP	NC	NP	NC	20,21	NP	NC	NP	NC
20,21	NP	NC	NP	NC	22,23	+V Input		+V Input	

\*NP-No

\*NC-No Connection with pin



All specifications typical at nominal line, full load and 25°C unless otherwise noted.