



# Communication Line – MAB05 Series

3W 4:1 SINGLE & DUAL OUTPUT DC/DC CONVERTER

## Specifications

### INPUT

Input voltage range	24V	9-36V
	48V	18-72V
Input filter	Pi type.	

### OUTPUT

Voltage accuracy	±2.0% max.	
Voltage balance (dual)	±1.0% max.	
Temperature coefficient	±0.05%/°C.	
Ripple and noise <small>20MHz BW</small>	Single & ±5V	100mV p-p max.
	Dual	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.

### 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>a</sup>	95°C max (plastic case). 100°C max (copper case).	
Cooling	Natural convection.	
Storage temperature	-40 to +100°C.	

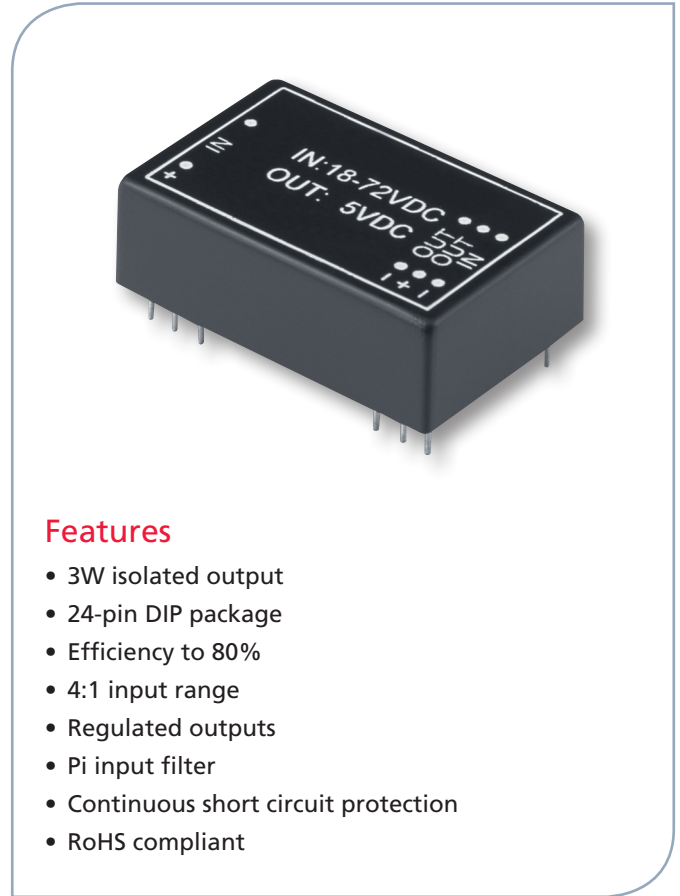
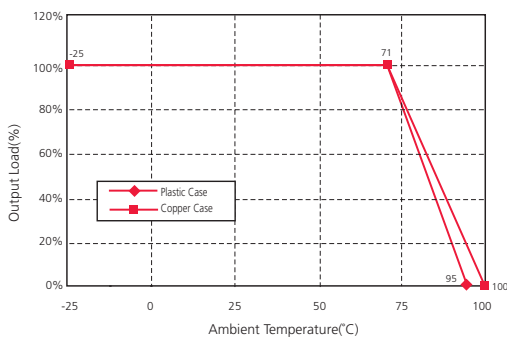
### GENERAL

Efficiency	See table.	
Isolation voltage <sup>4</sup>	Standard models: 500VDC min. Suffix "H" models: 3kVDCmin.	
Isolation resistance	10 <sup>9</sup> ohms.	
Switching frequency	100KHz, min.	
Dimensions	31.8 x 20.3 x 10.2 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.	

#### Note:

1. Measured from high line to low line.
2. Measured from full load to 10% load.
3. Suffix "S" to the model number with SMD packages.
4. Max case temperature under any operating conditions should not be exceeded 100°C.

## Derating Curve



## Features

- 3W isolated output
- 24-pin DIP package
- Efficiency to 80%
- 4:1 input range
- Regulated outputs
- Pi input filter
- Continuous short circuit protection
- RoHS compliant

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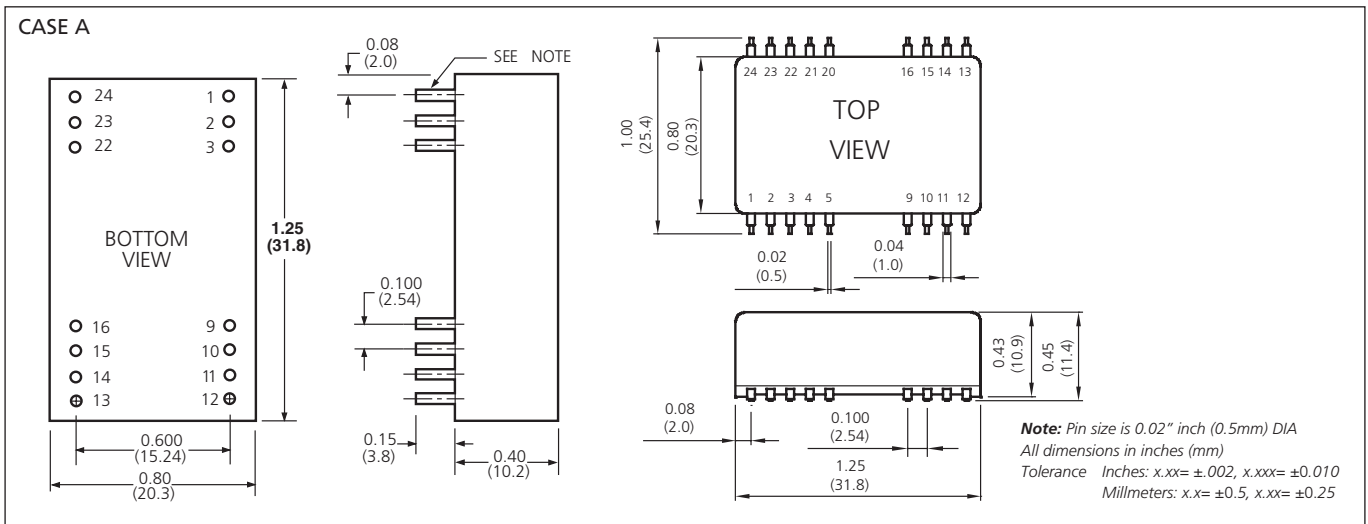
3 W 4:1 SINGLE & DUAL OUTPUT DC/DC CONVERTER

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		EFFICIENCY	CASE
				NO LOAD	FULL LOAD		
MAB 05 003	9-36 VDC	3.3 VDC	600 mA	15 mA	117 mA	70%	A
MAB 05 006	9-36 VDC	5 VDC	600 mA	15 mA	117 mA	72%	A
MAB 05 009	9-36 VDC	12 VDC	250 mA	15 mA	165 mA	76%	A
MAB 05 012	9-36 VDC	15 VDC	200 mA	15 mA	165 mA	76%	A
MAB 05 015	9-36 VDC	±5 VDC	±300 mA	25 mA	179 mA	70%	A
MAB 05 018	9-36 VDC	±12 VDC	±125 mA	25 mA	174 mA	72%	A
MAB 05 021	9-36 VDC	±15 VDC	±100 mA	25 mA	174 mA	72%	A
MAB 05 024	18-72 VDC	3.3 VDC	600 mA	7.5 mA	58 mA	70%	A
MAB 05 027	18-72 VDC	5 VDC	600 mA	7.5 mA	87 mA	72%	A
MAB 05 030	18-72 VDC	12 VDC	250 mA	7.5 mA	81 mA	77%	A
MAB 05 033	18-72 VDC	15 VDC	200 mA	7.5 mA	81 mA	77%	A
MAB 05 036	18-72 VDC	±5 VDC	±300 mA	12 mA	88 mA	71%	A
MAB 05 039	18-72 VDC	±12 VDC	±125 mA	12 mA	87 mA	72%	A
MAB 05 042	18-72 VDC	±15 VDC	±100 mA	12 mA	87 mA	72%	A

**Note:**

1. Nominal input voltages 24 or 48 VDC.

## Mechanical



PIN	500VDC				1.5K & 3K VDC				
	SINGLE OUTPUT	DUAL OUTPUT	SINGLE OUTPUT	DUAL OUTPUT	SINGLE OUTPUT	DUAL OUTPUT	SINGLE OUTPUT	DUAL OUTPUT	
	DIP	SDM	DIP	SMD	PIN	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

Specifications are subject to change without notice.