



# Communication Line – MAA02 Series

1.5 W SINGLE & DUAL OUTPUT DC/DC CONVERTER

## Specifications

### INPUT

Input voltage range	±10%.
Input filter	Pi type.

### OUTPUT

Voltage accuracy	±4.0% max.
Temperature coefficient	±0.02%/°C.
Ripple and noise <sub>20MHz BW</sub>	50mV p-p max.
Short circuit protection	Momentary.
Line regulation	±0.3%.
Load regulation	±0.5%.

### 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>2</sup>	95°C max (plastic case). 100°C max (copper case).
Cooling	Natural convection.
Storage temperature	-40 to +100°C.

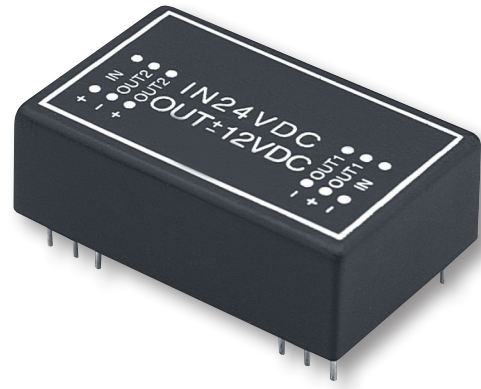
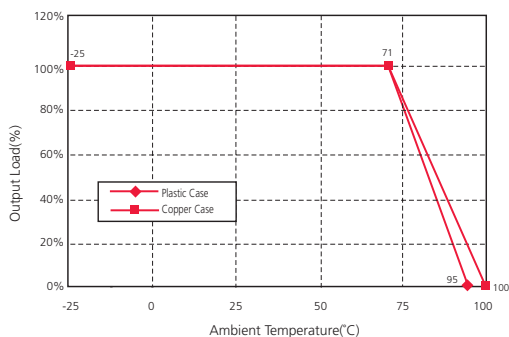
### GENERAL

Efficiency	50%.
Isolation voltage <sup>4</sup>	Standard models: 500VDC min. Suffix "M" models: 3kVDCmin.
Isolation capacitance	30pF.
Isolation resistance	10 <sup>9</sup> ohms.
Switching frequency	20KHz, min.
Dimensions	31.8 x 20.3 x 10.2 mm.
Weight	12.5g.
Case material	Standard models: Non-conductive black plastic. Suffix "M" models: Black coated copper with non-conductive base.

### Note:

1. Suffix "S" to the model number with SMD packages.
2. Max case temperature under any operating conditions should not be exceeded 95°C (plastic case), 100°C (copper case).

## Derating Curve



## Features

- 24-pin DIP package
- Regulated outputs
- 50% efficiency
- Pi input filter
- Low ripple and noise
- RoHS compliant



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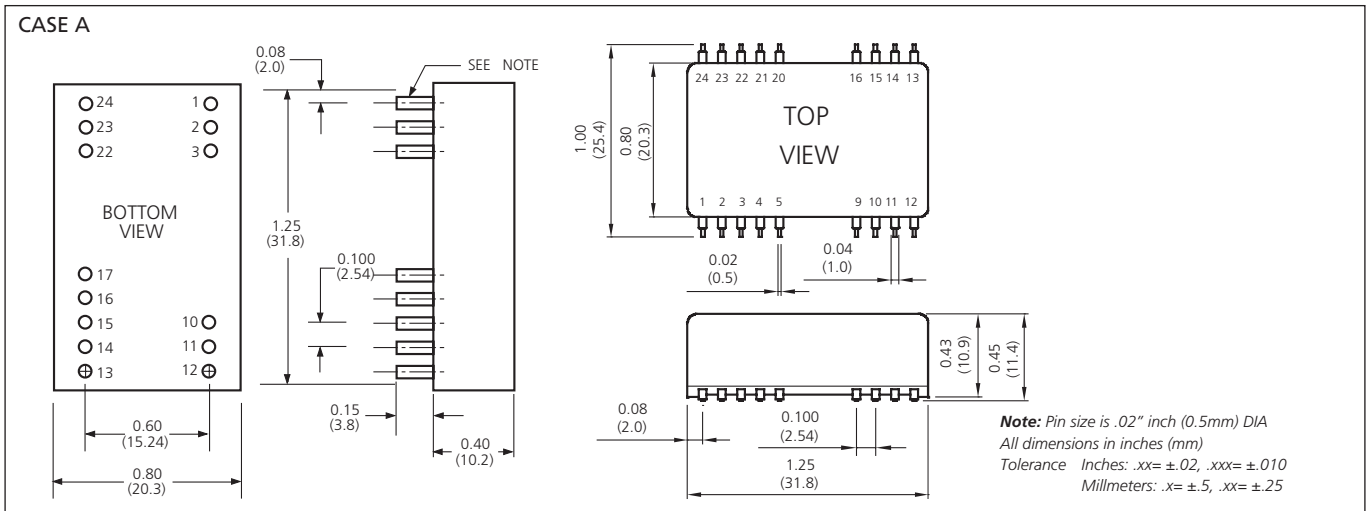
## 1.5 W SINGLE & DUAL OUTPUT DC/DC CONVERTER

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		CASE
				NO LOAD	FULL LOAD	
MAA 02 003	5 VDC	5 VDC	300 mA	110 mA	620 mA	A
MAA 02 006	5 VDC	12 VDC	125 mA	110 mA	550 mA	A
MAA 02 009	5 VDC	15 VDC	100 mA	110 mA	550 mA	A
MAA 02 012	5 VDC	±12 VDC	±60 mA	110 mA	550 mA	A
MAA 02 015	5 VDC	±15 VDC	±50 mA	110 mA	550 mA	A
MAA 02 018	12 VDC	5 VDC	300 mA	40 mA	260 mA	A
MAA 02 021	12 VDC	12 VDC	125 mA	40 mA	215 mA	A
MAA 02 024	12 VDC	15 VDC	100 mA	40 mA	215 mA	A
MAA 02 027	12 VDC	±12 VDC	±60 mA	40 mA	215 mA	A
MAA 02 030	12 VDC	±15 VDC	±50 mA	40 mA	215 mA	A
MAA 02 033	24 VDC	5 VDC	300 mA	20 mA	130 mA	A
MAA 02 036	24 VDC	12 VDC	125 mA	20 mA	115 mA	A
MAA 02 039	24 VDC	15 VDC	100 mA	20 mA	115 mA	A
MAA 02 042	24 VDC	±12 VDC	±60 mA	20 mA	115 mA	A
MAA 02 045	24 VDC	±15 VDC	±50 mA	20 mA	115 mA	A
MAA 02 063	28 VDC	5 VDC	300 mA	20 mA	110 mA	A
MAA 02 066	28 VDC	12 VDC	125 mA	20 mA	100 mA	A
MAA 02 069	28 VDC	15 VDC	100 mA	20 mA	100 mA	A
MAA 02 072	28 VDC	±12 VDC	±60 mA	20 mA	100 mA	A
MAA 02 075	28 VDC	±15 VDC	±65 mA	20 mA	100 mA	A
MAA 02 048	48 VDC	5 VDC	300 mA	15 mA	65 mA	A
MAA 02 051	48 VDC	12 VDC	125 mA	15 mA	60 mA	A
MAA 02 054	48 VDC	15 VDC	100 mA	15 mA	60 mA	A
MAA 02 057	48 VDC	±12 VDC	±60 mA	15 mA	60 mA	A
MAA 02 060	48 VDC	±15 VDC	±50 mA	15 mA	60 mA	A

**Note:**

1. Nominal input voltages 5 or 12 VDC.

### Mechanical



PIN	500VDC				1.5K & 3K VDC			
	SINGLE OUTPUT	DUAL OUTPUT	SINGLE OUTPUT	DUAL OUTPUT	SINGLE OUTPUT	DUAL OUTPUT	SINGLE OUTPUT	DUAL OUTPUT
1,24	+V Input	+V Input	1,2,3	+V Input	+V Input			
2,23	NC	-V Input	22,23,24	-V Input	-V Input			
3,22	NC	Common	4	NP	NC	NP	NC	
4,5	NP	NC	NP	NC	5	NP	NC	NP
9	NP	NC	NP	NC	9	NP	NC	NP
10	-V Output	Common	10,11	NP	NC	NC	Go Output	
11	+V Output	+V Output	12	-V Output	-TP			
12,13	-V Input	-V Input	13	+V Output	-V Output			
14	+V Output	+V Output	14	NP	NC	NP	NC	
15	-V Output	Common	15	NP	NC	+V Output		
16	NP	NC	NP	NC	16	NP	NC	+TP
17	NP	NP	NP	NP	17	+TP	NP	NP
20,21	NP	NC	NP	NC	20,21	NP	NC	NP

\*NP-No

\*NC-No Connection with pin

\*TP-Test Point

\*Go\_Ground

Specifications are subject to change without notice.