

# AM3N-D Series

## 3 watt dc-dc converters

Picture Available Soon

- DUAL REGULATED OUTPUTS
- 24 PIN DIP PACKAGE
- LOW RIPPLE & NOISE
- HIGH EFFICIENCY UP TO 80%
- LOW PROFILE PACKAGING
- INPUT/OUTPUT ISOLATION: 1000, 3000 & 5200VDC
- 5200VDC ISOLATION, PLASTIC CASE
- OPERATING TEMPERATURE: -25°C ... +71°C
- CONTINUOUS SHORT CIRCUIT PROTECTION
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

## GENERAL DESCRIPTION

Our AM3N-D series is a family of cost effective 3W dual output DC/DC converters. These converters combines miniature package in a 24-pin DIP compatible case with high performance features such as 1000, 3000 & 5200VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line/load

regulation. Seventy two models operate from input voltages of 5, 12 & 24VDC with producing output voltage levels of  $\pm 3.3$ ,  $\pm 5$ ,  $\pm 7.2$ ,  $\pm 9$ ,  $\pm 12$ ,  $\pm 15$ ,  $\pm 18$  &  $\pm 24$ VDC. Full SMD-design and a 100% production test of parameters ensures a high reliability in this product.

## ELECTRICAL SPECIFICATIONS

Specifications typical at +25°C, nominal input voltage, rated output current unless otherwise specified

### Input Specifications:

|               |                    |
|---------------|--------------------|
| Voltage range | $\pm 10\%$         |
| Filter        | $\pi$ (Pi) Network |

### Isolation Specifications:

|               |                       |
|---------------|-----------------------|
| Rated voltage | 1000, 3000 or 5200VDC |
| Resistance    | > 1000M $\Omega$      |
| Capacitance   | 60pF, typ.            |

### General Specifications:

|                     |                        |
|---------------------|------------------------|
| Efficiency          | 66% to 80%             |
| Switching Frequency | 250kHz, typ. 100% load |

### Physical Specifications:

|                         |   |
|-------------------------|---|
| Dimensions              | 31.75x20.32x10.16 mm<br>1.25x0.8x0.4 inches |
| Weight                  | 14.5 g                                      |
| Case material           | Nickel-Coated Copper                        |
| Case material @ 5200VDC | Plastic                                     |

### Output Specifications:

|                              |                                      |
|------------------------------|--------------------------------------|
| Voltage accuracy             | $\pm 2\%$ , max.                     |
| Voltage balance              | $\pm 1\%$                            |
| Ripple & noise (at 20MHz BW) | 75mVp-p, max.                        |
| Short circuit protection     | Continuous                           |
| Short circuit restart        | Automatic                            |
| Line voltage regulation      | $\pm 0.5\%$ , max.                   |
| Load voltage regulation      | $\pm 0.5\%$ , max.                   |
| Temperature Coefficient      | $\pm 0.02\%/^{\circ}\text{C}$ , typ. |

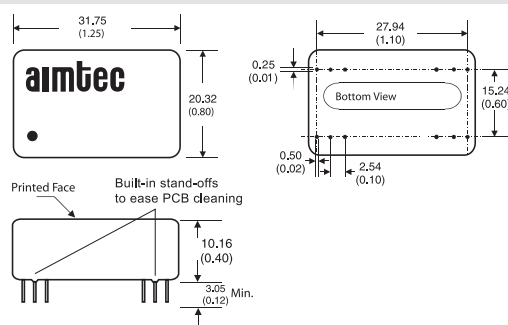
### Environmental Specifications:

|                                 |                     |
|---------------------------------|---------------------|
| Operating temperature (ambient) | -25°C ... +71°C     |
| Storage temperature             | -40°C ... +125°C    |
| Case Temperature                | +90°C, max.         |
| Derating                        | None required       |
| Humidity (non-condensing)       | Up to 90%           |
| Cooling                         | Free-air Convection |

MTBF: > 1,000,000 hrs (MIL-HDBK-217F, Ground Benign,  $t=+25^{\circ}\text{C}$ )

Specifications are subject to change without notification

## OUTLINE DIMENSIONS & PIN CONNECTIONS



| Pin | 1000VDC   | 3000 & 5200VDC |
|-----|-----------|----------------|
| 1   | +V Input  | +V Input       |
| 2   | -V Output | +V Input       |
| 3   | Common.   | Omitted        |
| 10  | Common    | Common         |
| 11  | +V Output | Common         |
| 12  | -V Input  | Omitted        |
| 13  | -V Input  | -V Output      |
| 14  | +V Output | Omitted        |
| 15  | Common    | +V Output      |
| 22  | Common    | Omitted        |
| 23  | -V Output | -V Input       |
| 24  | +V Input  | -V Input       |

TO ORDER CALL 1-888-9-AIMTEC

# AM3N-D Series

## MODELS

| Models            |                   |                   | Input Voltage | Output Voltage | Output Current max. |
|-------------------|-------------------|-------------------|---------------|----------------|---------------------|
| Isolation 1000VDC | Isolation 3000VDC | Isolation 5200VDC |               |                |                     |
| AM3N-0503D-R      | AM3N-0503DH30-R   | AM3N-0503DH52-R   | 5V±10%        | ±3.3VDC        | ±400mA              |
| AM3N-0505D-R      | AM3N-0505DH30-R   | AM3N-0505DH52-R   |               | ±5VDC          | ±300mA              |
| AM3N-0507D-R      | AM3N-0507DH30-R   | AM3N-0507DH52-R   |               | ±7.2VDC        | ±208mA              |
| AM3N-0509D-R      | AM3N-0509DH30-R   | AM3N-0509DH52-R   |               | ±9VDC          | ±167mA              |
| AM3N-0512D-R      | AM3N-0512DH30-R   | AM3N-0512DH52-R   |               | ±12VDC         | ±125mA              |
| AM3N-0515D-R      | AM3N-0515DH30-R   | AM3N-0515DH52-R   |               | ±15VDC         | ±100mA              |
| AM3N-0518D-R      | AM3N-0518DH30-R   | AM3N-0518DH52-R   |               | ±18VDC         | ±84mA               |
| AM3N-0524D-R      | AM3N-0524DH30-R   | AM3N-0524DH52-R   |               | ±24VDC         | ±63mA               |
| AM3N-1203D-R      | AM3N-1203DH30-R   | AM3N-1203DH52-R   | 12V±10%       | ±3.3VDC        | ±400mA              |
| AM3N-1205D-R      | AM3N-1205DH30-R   | AM3N-1205DH52-R   |               | ±5VDC          | ±300mA              |
| AM3N-1207D-R      | AM3N-1207DH30-R   | AM3N-1207DH52-R   |               | ±7.2VDC        | ±208mA              |
| AM3N-1209D-R      | AM3N-1209DH30-R   | AM3N-1209DH52-R   |               | ±9VDC          | ±167mA              |
| AM3N-1212D-R      | AM3N-1212DH30-R   | AM3N-1212DH52-R   |               | ±12VDC         | ±125mA              |
| AM3N-1215D-R      | AM3N-1215DH30-R   | AM3N-1215DH52-R   |               | ±15VDC         | ±100mA              |
| AM3N-1218D-R      | AM3N-1218DH30-R   | AM3N-1218DH52-R   |               | ±18VDC         | ±84mA               |
| AM3N-1224D-R      | AM3N-1224DH30-R   | AM3N-1224DH52-R   |               | ±24VDC         | ±63mA               |
| AM3N-2403D-R      | AM3N-2403DH30-R   | AM3N-2403DH52-R   | 24V±10%       | ±3.3VDC        | ±400mA              |
| AM3N-2405D-R      | AM3N-2405DH30-R   | AM3N-2405DH52-R   |               | ±5VDC          | ±300mA              |
| AM3N-2407D-R      | AM3N-2407DH30-R   | AM3N-2407DH52-R   |               | ±7.2VDC        | ±208mA              |
| AM3N-2409D-R      | AM3N-2409DH30-R   | AM3N-2409DH52-R   |               | ±9VDC          | ±167mA              |
| AM3N-2412D-R      | AM3N-2412DH30-R   | AM3N-2412DH52-R   |               | ±12VDC         | ±125mA              |
| AM3N-2415D-R      | AM3N-2415DH30-R   | AM3N-2415DH52-R   |               | ±15VDC         | ±100mA              |
| AM3N-2418D-R      | AM3N-2418DH30-R   | AM3N-2418DH52-R   |               | ±18VDC         | ±84mA               |
| AM3N-2424D-R      | AM3N-2424DH30-R   | AM3N-2424DH52-R   |               | ±24VDC         | ±63mA               |

DC-DC CONVERTERS