

## 15 watt dc-dc converters

Picture  
Available  
Soon

- FULL SMD TECHNOLOGY
- WIDE 2:1 INPUT RANGE
- HIGH EFFICIENCY UP TO 92%
- LOW PROFILE METAL PACKAGE
- INPUT/OUTPUT ISOLATION: 1500VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- CONTINUOUS SHORT CIRCUIT PROTECTION
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

### GENERAL DESCRIPTION

Our AM15E series is a family of cost effective 15W single and dual outputs DC/DC converters. These converters combine nickel-coated copper package with high performance features such as 1500VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Wide range devices operate over 2:1 input voltage range providing stable output voltage. Input voltages of 12, 24 and 48VDC with output voltages of 3.3, 5, 7.2, 9, 12, 15,

18, 24,  $\pm 3.3$ ,  $\pm 5$ ,  $\pm 7.2$ ,  $\pm 9$ ,  $\pm 12$ ,  $\pm 15$ ,  $\pm 18$  or  $\pm 24$ VDC. High performance features include high efficiency operation up to 92% and output voltage accuracy of  $\pm 1\%$  maximum. All models are package in a low profile 50.8x25.4x10.16mm nickel-coated copper case. Operation is specified over the full operating temperature range of -40°C to +85°C with no derating required. Cooling is by free-air convection.

### ELECTRICAL SPECIFICATIONS

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

#### Input Specifications:

Voltage range	12VDC, 9~18VDC 24VDC, 18~36VDC 48VDC, 36~72VDC
Filter	Capacitor

#### Isolation Specifications:

Rated voltage (60 sec)	1500VDC
Resistance	> 1000MOhm
Capacitance	500pF, typ.

#### Environmental Specifications:

Operating temperature (ambient)	-40°C ... +85°C
Storage temperature	-40°C ... +125°C
Case Temperature	+100°C, max.
Derating	None required
Humidity (non-condensing)	Up to 90%
Cooling	Free-air Convection

#### General Specifications:

Efficiency	83% to 92%
Switching frequency	200KHz, typ. 100% load

#### Output Specifications:

Voltage accuracy	$\pm 1\%$ , max.
Voltage balance (Dual Output)	$\pm 1\%$
Ripple and noise (at 20MHz BW)	$\pm 100$ mVp-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.
Over load protection	130%, typ. 100% load

#### Physical Specifications:

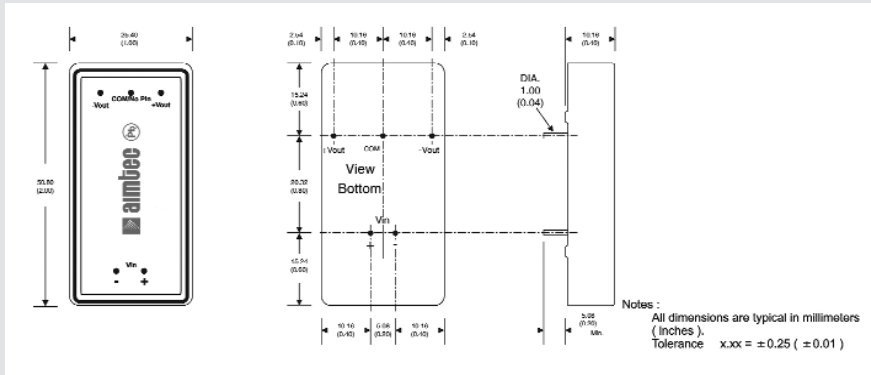
Dimensions	50.8x25.4x10.16mm 2.00x1.00x0.40inches
Weight	46g
Case material	Nickel-Coated Copper

MTBF: > 780,000 hrs @ 25°C (MIL-HDBK-217F)

Specifications are subject to change without notification

Continued on next page

## OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	Single	Dual
1	-V Input	-V Input
2	+V Input	+V Input
3	-V Output	-V Output
4	No Pin	Common
5	+V Output	+V Output

## MODELS

### Single output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM15E-1203S	9 - 18VDC	3.3VDC	4000mA
AM15E-1205S		5VDC	3000mA
AM15E-1207S		7.2VDC	2000mA
AM15E-1209S		9VDC	1666mA
AM15E-1212S		12VDC	1250mA
AM15E-1215S		15VDC	1000mA
AM15E-1218S		18VDC	800mA
AM15E-1224S	18 - 36VDC	24VDC	625mA
AM15E-2403S		3.3VDC	4000mA
AM15E-2405S		5VDC	3000mA
AM15E-2407S		7.2VDC	2000mA
AM15E-2409S		9VDC	1666mA
AM15E-2412S		12VDC	1250mA
AM15E-2415S		15VDC	1000mA
AM15E-2418S	18VDC	800mA	
AM15E-2424S	24VDC	625mA	
AM15E-4803S	36 - 72VDC	3.3VDC	4000mA
AM15E-4805S		5VDC	3000mA
AM15E-4807S		7.2VDC	2000mA
AM15E-4809S		9VDC	1666mA
AM15E-4812S		12VDC	1250mA
AM15E-4815S		15VDC	1000mA
AM15E-4818S		18VDC	800mA
AM15E-4824S	24VDC	625mA	

## MODELS

Dual output

DC-DC CONVERTERS

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM15E-1203D	9 - 18VDC	±3.3VDC	±2000mA
AM15E-1205D		±5VDC	±1500mA
AM15E-1207D		±7.2VDC	±1000mA
AM15E-1209D		±9VDC	±833mA
AM15E-1212D		±12VDC	±625mA
AM15E-1215D		±15VDC	±500mA
AM15E-1218D		±18VDC	±400mA
AM15E-1224D		±24VDC	±312mA
AM15E-2403D		18 - 36VDC	±3.3VDC
AM15E-2405D	±5VDC		±1500mA
AM15E-2407D	±7.2VDC		±1000mA
AM15E-2409D	±9VDC		±833mA
AM15E-2412D	±12VDC		±625mA
AM15E-2415D	±15VDC		±500mA
AM15E-2418D	±18VDC		±400mA
AM15E-2424D	±24VDC		±312mA
AM15E-4803D	36 - 72VDC		±3.3VDC
AM15E-4805D		±5VDC	±1500mA
AM15E-4807D		±7.2VDC	±1000mA
AM15E-4809D		±9VDC	±833mA
AM15E-4812D		±12VDC	±625mA
AM15E-4815D		±15VDC	±500mA
AM15E-4818D		±18VDC	±400mA
AM15E-4824D		±24VDC	±312mA

Temperature Derating Graph

