



## 6 watt dc-dc converters

- 24 PIN DIP PACKAGE
- WIDE 2:1 INPUT RANGE
- HIGH EFFICIENCY UP TO 86%
- SHIELDED METAL PACKAGE
- INPUT/OUTPUT ISOLATION OF 1500VDC
- OPERATING TEMPERATURE: -40°C ... +71°C
- CONTINUOUS SHORT CIRCUIT PROTECTION
- PIN-COMPATIBLE WITH MULTIPLE MANUFACTURERS

### GENERAL DESCRIPTION

Our AM6T-N series is a family of cost effective 6W single and dual output DC/DC converters. These converters combine a shielded metal package in a 24-pin DIP compatible case and includes high performance features such as a 1500VDC input/output isolation voltage, continuous short circuit protection and a tight line / load regulation. Wide range devices operate over a 2:1 input voltage range continuously providing a stable output voltage.

27 models operate from input voltages of 12, 24 and 48VDC with output voltages of 3.3, 5, 12, 15, 24,  $\pm 5$ ,  $\pm 12$ ,  $\pm 15$  &  $\pm 24$ VDC. High performance features include high efficiency operation up to 86% and output voltage accuracy of  $\pm 1\%$ . All models are packaged in a low profile 31.75 x 20.32 x 10.16mm case. Operation is specified over the full operating temperature range of -40°C to +71°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.

Voltage range	12VDC, 9~18VDC 24VDC, 18~36VDC 48VDC, 36~72VDC	<b>General Specifications:</b>	Efficiency	76% to 86%
Filter	$\pi$ (Pi) Network		Switching frequency	300KHz, typ., 100% load
<b>Isolation Specifications:</b>		<b>Output Specifications:</b>		
Rated voltage (60 sec)	1500VDC	Voltage accuracy (Single)	$\pm 1\%$ , typ.	
Resistance	> 1000M $\Omega$	Voltage accuracy (Dual)	$\pm 1\%$ p. & $\pm 3\%$ n., typ.	
Capacitance	120pF, typ.	Ripple	30m Vp-p, typ.	
<b>Environmental Specifications:</b>		Noise (at 20MHz BW)	100mVp-p, typ.	
Operating temperature (ambient)	-40°C ... +71°C	Short circuit protection	Continuous	
Storage temperature	-55°C ... +125°C	Line voltage regulation	$\pm 0.2\%$ , max.	
Case Temperature	+100°C, max.	Load voltage regulation	$\pm 0.5\%$ , max.	
Derating	None required	Temperature coefficient	$\pm 0.02\%/^{\circ}\text{C}$ , typ.	
Humidity (non-condensing)	Up to 95%	<b>Physical Specifications:</b>		
Cooling	Free-air Convection	Dimensions	31.75x20.32x10.16mm 1.25x0.80x0.40inches	
		Weight	19g	
		Case material	Metal	

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

Specifications are subject to change without notification.

## MODELS Single Output

Models	Input Voltage	Output Voltage	Max. Output Current
AM6T-1203S-N	9 - 18VDC	3.3VDC	1400mA
AM6T-1205S-N		5VDC	1200mA
AM6T-1212S-N		12VDC	500mA
AM6T-1215S-N		15VDC	400mA
AM6T-1224S-N		24VDC	250mA
AM6T-2403S-N	18 - 36VDC	3.3VDC	1400mA
AM6T-2405S-N		5VDC	1200mA
AM6T-2412S-N		12VDC	500mA
AM6T-2415S-N		15VDC	400mA
AM6T-2424S-N		24VDC	250mA
AM6T-4803S-N	36 - 72VDC	3.3VDC	1400mA
AM6T-4805S-N		5VDC	1200mA
AM6T-4812S-N		12VDC	500mA
AM6T-4815S-N		15VDC	400mA
AM6T-4824S-N		24VDC	250mA

## MODELS Dual Output

Models	Input Voltage	Output Voltage	Max. Output Current
AM6T-1205D-N	9 - 18VDC	±5VDC	±600mA
AM6T-1212D-N		±12VDC	±250mA
AM6T-1215D-N		±15VDC	±200mA
AM6T-1224D-N		±24VDC	±125mA
AM6T-2405D-N	18 - 36VDC	±5VDC	±600mA
AM6T-2412D-N		±12VDC	±250mA
AM6T-2415D-N		±15VDC	±200mA
AM6T-2424D-N		±24VDC	±125mA
AM6T-4805D-N	36 - 72VDC	±5VDC	±600mA
AM6T-4812D-N		±12VDC	±250mA
AM6T-4815D-N		±15VDC	±200mA
AM6T-4824D-N		±24VDC	±125mA

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