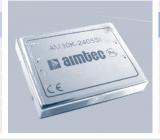


# **AM30K-I Series**



# 30 watt dc-dc converters

- POWER MODULES FOR PCB MOUNTING
- TERMAL SHUTDOWN
- REMOTE ON OFF CONTROL
- SOFT START
- HIGH EFFICIENCY
- STANDARD PACKAGE
- UVLO / OVLO SHUTDOWN

### **GENERAL DESCRIPTION**

Our AM30K-I series is a family of cost effective 30W output DC-DC converters. These converters are shielded on all six sides and encapsulated with a nickel-coated copper with a non-conductive base and dimensions of 50.8x40.64x10.8mm. The high performance features of our AM30K-I components include continuous short circuit protection with auto recovery, tight line regulation and a high efficiency operation coefficient up to 88%.

Twenty one models operate from an input voltage of 12, 24 & 48VDC producing output voltages of 3.3, 5, 12, 15,  $\pm$ 5,  $\pm$ 12, &  $\pm$ 15VDC. The normal operation is specified over the full operating temperature range of -40°C to +75°C with no derating required. Cooling is done 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 (2:1)	12VDC, 9~18VDC
	24VDC, 18~36VDC
	48 VDC, 36~75VDC

 $\pi$  (Pi) Network

### **Isolation Specifications:**

Filter

Rated voltage 1500VDC
Resistance >1000 Mohms
Capacitance 1000pF

### **General Specifications:**

Efficiency 81% to 88%

Switching frequency 250KHz, typ. 100% load

### **Environmental Specifications:**

Operating temperature -40°C ...+75°C
Storage temperature -55°C ...+115°C
Case temperature +100°C, max.
Humidity (non-condensing) Up to 95%
Cooling Free-air convection

### **Output Specifications:**

Voltage accuracy ±2%, max.

Ripple Noise (3.3 & 5V) 80m Vp-pmax

Ripple Noise (Others) 1% P-Pmax (Vp-p)

Short circuit protection Continuous, auto-recovery

Over current protection Over 110% of full load and recovers automatically

Over voltage protection Zener diode clamp protection

Line regulation (HL-LL) ±0.5%, max.

Load regulation (10-100%)Single ±0.5%, max., dual ±2%, max.

Temperature coefficient  $\pm 0.05\%$ /°C, max.

### **Physical Specifications:**

Dimensions 50.8x40.6x10.2mm,
2.0x1.6x0.4inches

Weight 50g

Case material Nickel-Coated Copper

MTBF: > 550,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

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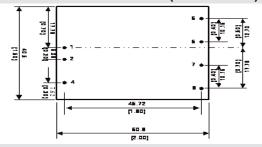




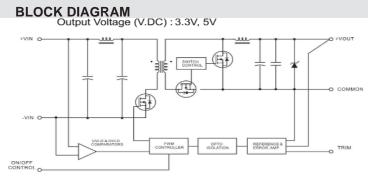
# **AM30K-I Series**

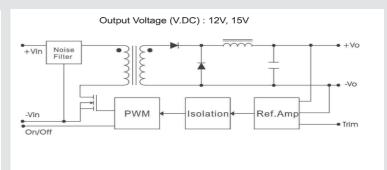
### **OUTLINE DIMENSIONS & PIN CONNECTIONS**

### **MECHANICAL DIMENSION (Bottom View)**

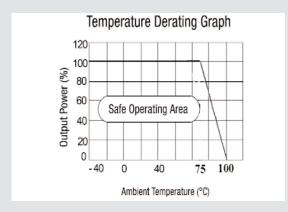


Pin	1500VDC	
	Single	Dual
1	+ V Input	+ V Input
2	- V Input	- V Input
4	On / Off Control	On / Off Control
5	N.P.	+ V Output
6	+ V Output	Common
7	-V Output	-V Output
8	Trim	Trim

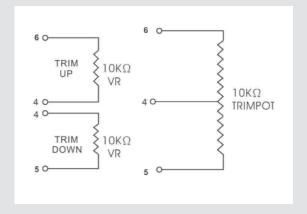




#### **DERATING**



#### **TRIMMING**





# **AM30K-I Series**

## **MODELS** Single output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM30K-1203SI		3.3VDC	5500mA
AM30K-1205SI	9-18VDC	5VDC	5000mA
AM30K-1212SI		12VDC	2500mA
AM30K-1215SI		15VDC	2000mA
AM30K-2403SI		3.3VDC	5500mA
AM30K-2405SI	18-36VDC	5VDC	5000mA
AM30K-2412SI		12VDC	2500mA
AM30K-2415SI		15VDC	2000mA
AM30K-4803SI		3.3VDC	5500mA
AM30K-4805SI	36-75VDC	5VDC	5000mA
AM30K-4812SI		12VDC	2500mA
AM30K-4815SI		15VDC	2000mA

## **MODELS** Dual output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM30K-1205DI		±5VDC	±2500mA
AM30K-1212DI	9-18VDC	±12VDC	±1250mA
AM30K-1215DI		±15VDC	±1000mA
AM30K-2405DI		±5VDC	±2500mA
AM30K-2412DI	18-36VDC	±12VDC	±1250mA
AM30K-2415DI		±15VDC	±1000mA
AM30K-4805DI	36-75VDC	±5VDC	±2500mA
AM30K-4812DI		±12VDC	±1250mA
AM30K-4815DI		±15VDC	±1000mA

