

AM10E-C Series

10 watt dc-dc converters



- POWER MODULES FOR PCB MOUNTING
- 2:1 WIDE INPUT RANGE
- REGULATED OUTPUT
- LOW RIPPLE & NOISE
- REMOTE ON/OFF CONTROL (OPTIONAL)



GENERAL DESCRIPTION

Our AM10E-C series is a family of cost effective 10W single 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 50.8x25.4x10.5mm. The high performance features of our AM10E-C components include short circuit protection with current limit auto recovery, tight line regulation and a high efficiency operation coefficient up to 83%.

Fifteen models operate from an input voltage range of 12, 24 & 48VDC producing output voltages of 3,3, 5, 12, 15 & 24VDC. The normal operation is specified over the full operating temperature range of -25°C to +71°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	12VDC, 9~18VDC 24VDC, 18~36VDC 48 VDC, 36~75VDC
Filter	π (Pi) Network

Isolation Specifications:

Rated voltage	1500VDC
Resistance	>1000 Mohms
Capacitance	1000pF

General Specifications:

Efficiency	78% to 83%
Switching frequency	300KHz, typ. 100% load

Environmental Specifications:

Operating temperature	-25°C ...+71°C
Storage temperature	-55°C ...+105°C
Case temperature	+95°C, max.
Humidity (non-condensing)	Up to 95%
Cooling	Free-air convection

Output Specifications:

Voltage accuracy	±2%, max.
Ripple	<0.2% Vout +20mVmax (Vp-p)
Noise	<0.5% Vout +50mVmax (Vp-p)
Short circuit protection	Current limit, auto-recovery
Over current protection	Works over 120% of rating and recovers automatically
Over voltage protection	Zener diode clamp protection
Line regulation (HL-LL)	±0.5%, typ.
Load regulation (10-100%)	±1%, typ.
Temperature coefficient	±0.02%/°C, typ.

Physical Specifications:

Dimensions	50.8x25.4x10.5mm, 2.0x1.0x0.413inches
Weight	32g
Case material	Nickel-Coated Copper with Non-Conductive base, six sides' shielded

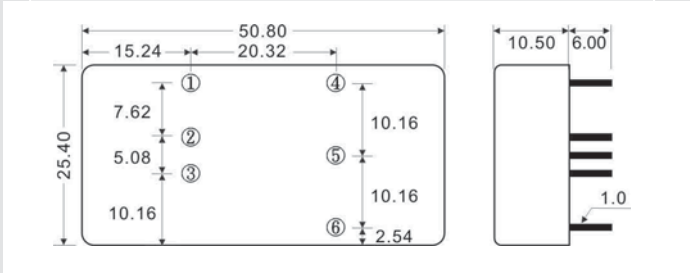
MTBF: > 800,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

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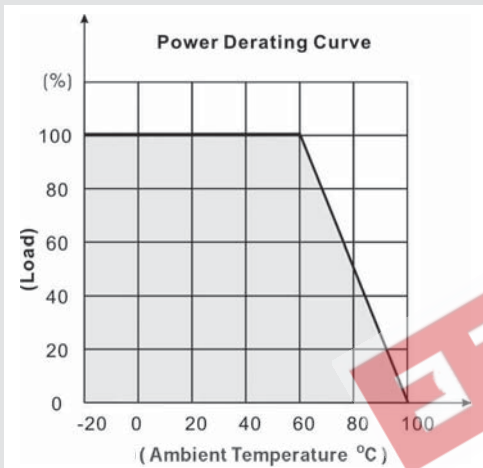
OUTLINE DIMENSIONS & PIN CONNECTIONS

MECHANICAL DIMENSION (Top View)



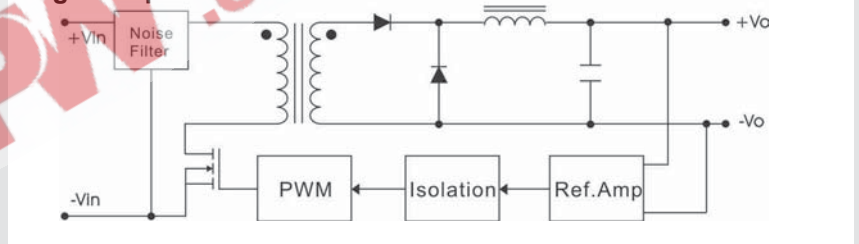
Pin	Single
1	On/Off Control (Optional)
2	-V Input
3	+V Input
4	-V Output
5	No pin
6	+V Output

DERATING



BLOCK DIAGRAM

Single Output



MODELS

Single output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM10E-1203SC	9VDC-18VDC	3.3VDC	2000mA
AM10E-1205SC		5VDC	2000mA
AM10E-1212SC		12VDC	830mA
AM10E-1215SC		15VDC	670mA
AM10E-1224SC		24VDC	420mA
AM10E-2403SC	18VDC-36VDC	3.3VDC	2000mA
AM10E-2405SC		5VDC	2000mA
AM10E-2412SC		12VDC	830mA
AM10E-2415SC		15VDC	670mA
AM10E-2424SC	24VDC	420mA	
AM10E-4803SC	36VDC-75VDC	3.3VDC	2000mA
AM10E-4805SC		5VDC	2000mA
AM10E-4812SC		12VDC	830mA
AM10E-4815SC		15VDC	670mA
AM10E-4824SC		24VDC	420mA