

# AM40K-C Series

## 40 watt dc-dc converters



- POWER MODULES FOR PCB MOUNTING
- HIGH EFFICIENCY
- SIX-SIDED CONTINUOUS SHIELD
- STANDARD PACKAGE

### GENERAL DESCRIPTION

Our AM40K-C series is a family of cost effective 40W 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 50.8x40.64x10.8mm. The high performance features of our AM40K-C components include short circuit protection with hiccup auto recovery, tight line regulation and a high efficiency operation coefficient up to 89%.

Seven models operate from an input voltage of 48VDC producing output voltages of 1.8, 2.5, 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 | 48 VDC, 36~75VDC |
| Filter        | π (Pi) Network   |

#### Isolation Specifications:

|               |             |
|---------------|-------------|
| Rated voltage | 1500VDC     |
| Resistance    | >1000 Mohms |
| Capacitance   | 1000pF      |

#### General Specifications:

|                     |                        |
|---------------------|------------------------|
| Efficiency          | 80% to 89%             |
| Switching frequency | 400KHz, 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  | Hiccup, 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    | 50.8x40.64x10.8mm,<br>2.0x1.6x0.43inches                                 |
| Weight        | 58g  |
| Case material | Nickel-Coated Copper with<br>Non-Conductive base,<br>six sides' shielded |

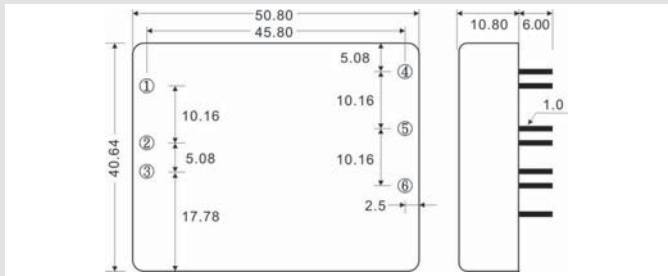
MTBF: > 550,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

# AM40K-C Series

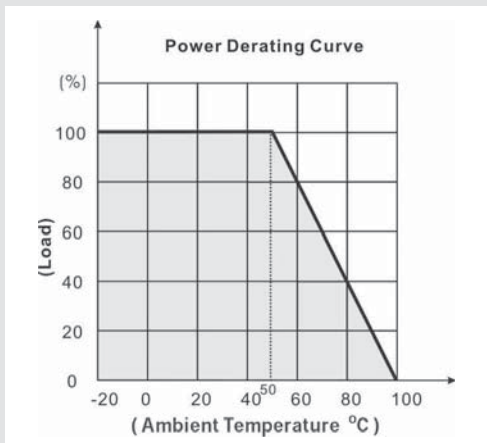
## OUTLINE DIMENSIONS & PIN CONNECTIONS

### MECHANICAL DIMENSION (Top View)

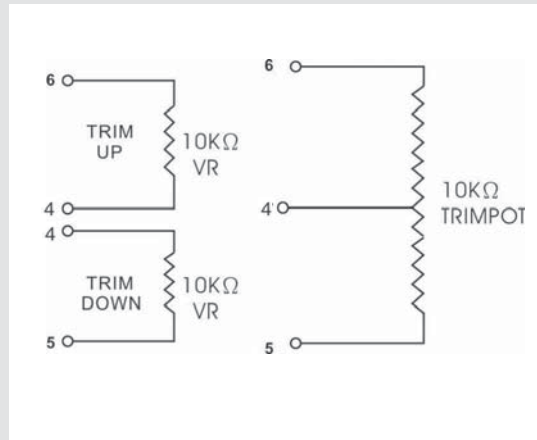


| Pin | Single                    |
|-----|---------------------------|
| 1   | On/Off Control (Optional) |
| 2   | -V Input                  |
| 3   | +V Input                  |
| 4   | Trim                      |
| 5   | -V Output                 |
| 6   | +V Output                 |

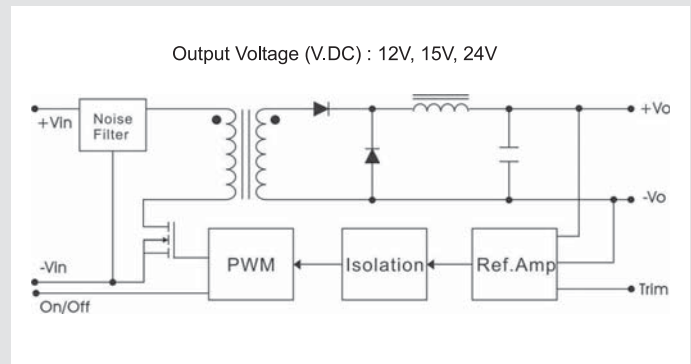
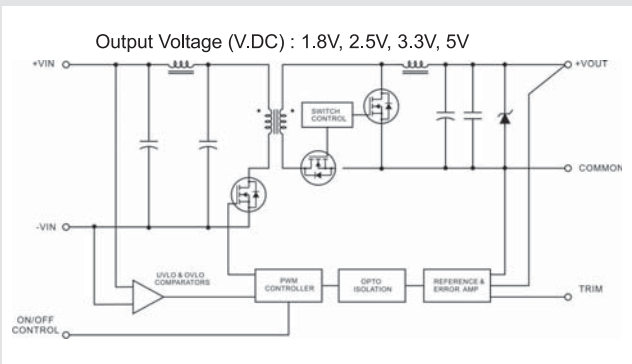
### DERATING



### TRIMMING



### BLOCK DIAGRAM



## MODELS

Single output

| Models       | Input Voltage | Ouput Voltage | Ouput Current max. |
|--------------|---------------|---------------|--------------------|
| AM40K-4801SC | 36VDC-75VDC   | 1.8VDC        | 8000mA             |
| AM40K-4802SC |               | 2.5VDC        | 8000mA             |
| AM40K-4803SC |               | 3.3VDC        | 8000mA             |
| AM40K-4805SC |               | 5VDC          | 8000mA             |
| AM40K-4812SC |               | 12VDC         | 3300mA             |
| AM40K-4815SC |               | 15VDC         | 2660mA             |
| AM40K-4824SC |               | 24VDC         | 1660mA             |