

# AM20E-C Series

## 20 watt dc-dc converters



- POWER MODULES FOR PCB MOUNTING
- SYNCHRONOUS RECTIFIER TOPOLOGY
- SURFACE MOUNT TECHNOLOGY
- STANDARD 2"x1" PACKAGE AND PINOUT
- REMOTE ON/OFF CONTROL (OPTIONAL)



### GENERAL DESCRIPTION

Our AM20E-C series is a family of cost effective 20W 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 AM20E-C components include short circuit protection with current limit auto recovery, tight line regulation and a high efficiency operation coefficient up to 88%.

Six models operate from an input voltage range of 24 & 48VDC then converts it into output voltages of 2.5, 3.3 & 5VDC. 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	24VDC, 18~36VDC 48 VDC, 36~75VDC
Filter	p (Pi) Network

#### Isolation Specifications:

Rated voltage	1500VDC
Resistance	>1000 Mohms
Capacitance	1000pF

#### General Specifications:

Efficiency	85% to 88%
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%
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

#### 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

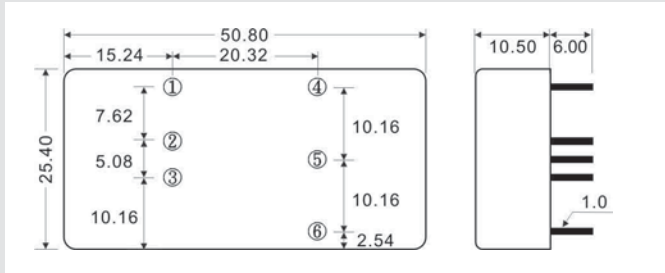
MTBF: > 550,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

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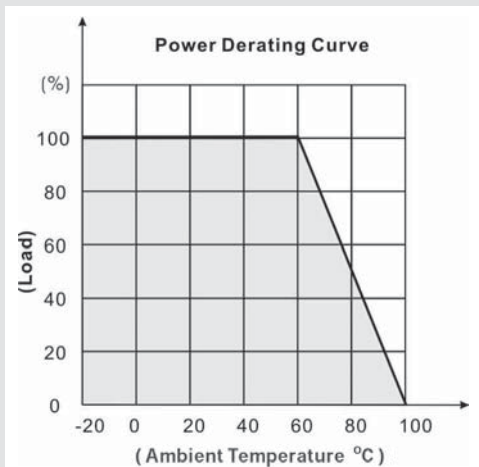
## OUTLINE DIMENSIONS & PIN CONNECTIONS

### MECHANICAL DIMENSION (Top View)

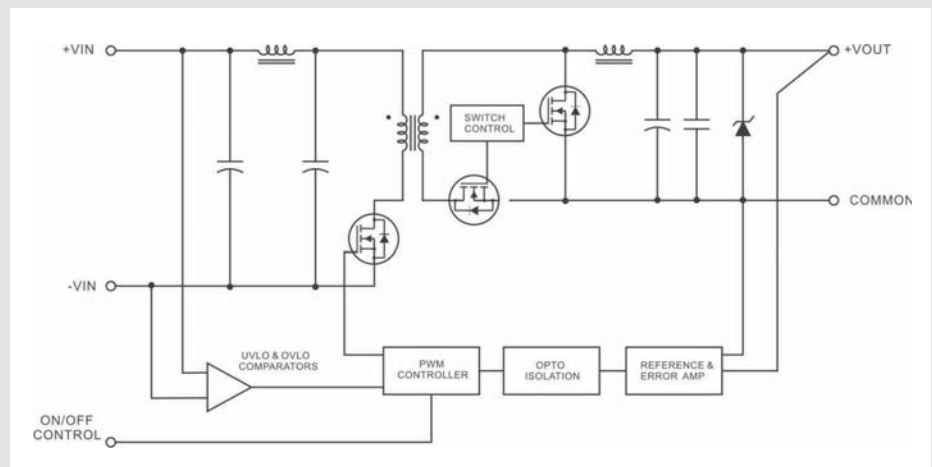


Pin	Single
1	On/Off Control (Optional)
2	-V Input
3	+V Input
4	-V Output
5	No pin
6	+V Output

### DERATING



### BLOCK DIAGRAM



## MODELS

Single output

Models	Input Voltage	Output Voltage	Output Current max.
AM20E-2402SC	18VDC-36VDC	2.5VDC	5000mA
AM20E-2403SC		3.3VDC	4250mA
AM20E-2405SC		5VDC	4000mA
AM20E-4802SC	36VDC-75VDC	2.5VDC	5000mA
AM20E-4803SC		3.3VDC	4250mA
AM20E-4805SC		5VDC	4000mA