# **AM5TW-C Series**



Input Specifications:

**General Specifications:** 

## 5 watt dc-dc converters

- 24 PIN DIP PACKAGE
- PLASTIC ENCAPSULATED CASE
- POWER MODULES FOR PCB MOUNTING
- 4:1 WIDE INPUT RANGE

- REGULATED OUTPUT
- LOW RIPPLE & NOISE
- OPERATING TEMPERATURE: -25 ... +71°C

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### GENERAL DESCRIPTION

Our AM5TW-C series is a family of cost effective 5W single and dual output DC-DC converters. These shielded converters are aluminum encapsulated on all six sides, have a non-conductive base & retain an anodized black DIP24 compatible plastic case (31.8x20.3x10.2mm). The high performance features of AM5TW-C series include current limit auto recovery short circuit protection, tight line regulation and high efficiency operation coefficient up to 78%.

These wide range devices operate over 4:1 input voltage range, providing a continuously stable output voltage. Input voltage range of 24 & 48VDC converts in output voltages of 3.3, 5, 12, 15, 24, ±5, ±12 & ±15VDC. 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.

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Voltage range	24VDC, 9~36VDC
	48 VDC, 18~75VDC
Filter	p (Pi) Network
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<b>Isolation Specifications:</b>	
Rated voltage	1500VDC
Resistance	>1000Mohms
Capacitance	1000pF, typ.
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Efficiency	73% to 78%
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		

Dimensions	31.8x20.3x10.2mm,
	tolerance ±0.5mm
	1.25x0.8x0.4inches
Weight	13g
Case material	Six-side shielded Aluminum
	with Non-Conductive
	base, Black Anodize

**Physical Specifications:** 

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
Line regulation (HL-LL)	±0.5%, typ.
Load regulation(10-100%	$\pm 2\%$ , typ.
Temperature coefficient	±0.02%/°C, typ.

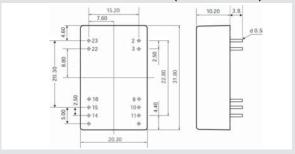
MTBF: > 800,000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

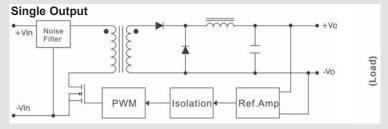
## **AM5TW-C Series**

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

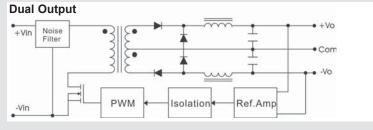
#### **MECHANICAL DIMENSION (Bottom View)**



#### **BLOCK DIAGRAM**

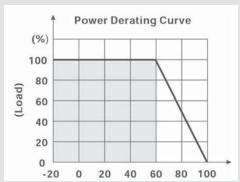


#### **BLOCK DIAGRAM**



#### 1500 & 3500 VDC Pin Single Dual -V Input 2 -V Input 3 -V Input -V Input 9 N.C. Common 10 N.C. N.C. N.C. -V Output 11 14 +V Output +V Output 15 N.C. N.C. 16 -V Output Common 22 +V Input +V Input 23 +V Input +V Input

#### **DERATING**



## **MODELS** Single output

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM5TW-2403SC	9VDC - 36VDC	3.3VDC	1200mA
AM5TW-2405SC		5VDC	1000mA
AM5TW-2412SC		12VDC	500mA
AM5TW-2415SC		15VDC	400mA
AM5TW-2424SC		24VDC	250mA
AM5TW-4803SC	18VDC - 75VDC	3.3VDC	1200mA
AM5TW-4805SC		5VDC	1000mA
AM5TW-4812SC		12VDC	500mA
AM5TW-4815SC		15VDC	400mA
AM5TW-4824SC		24VDC	250mA

#### **Dual output**

Models	Input Voltage	Ouput Voltage	Ouput Current max.
AM5TW-2405DC		±5VDC	±500mA
AM5TW-2412DC	9VDC - 36VDC	±12VDC	±250mA
AM5TW-2415DC		±15VDC	±200mA
AM5TW-4805DC		±5VDC	±500mA
AM5TW-4812DC	18VDC - 75VDC	±12VDC	±250mA
AM5TW-4815DC		±15VDC	±200mA