

## SMT05E Series

12 Vin single output

**Total Power:** 16.5W  
**Input Voltage:** 10 - 14 Vdc  
**# of Outputs:** Single

### Special Features

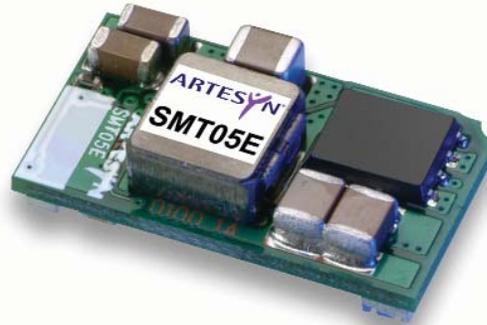
- 5 A Current rating
- Input voltage range:  
10 Vdc to 14 Vdc
- Output voltage range:  
0.8 Vdc to 3.63 Vdc
- Ultra high efficiency:  
91% @ 12 Vin and 3.3 Vout
- Extremely low internal power  
dissipation
- Minimal thermal design  
concerns
- Designed in reliability:  
MTBF of 6,920,000 hours  
per Telcordia SR-332
- Ideal solution where board  
space is at a premium  
or tighter card pitch is  
required
- Industry standard  
surface-mount footprint
- Available RoHS compliant
- 2 year warranty

### Safety

UL/cUL CAN/CSA 22.2 No.  
E174104  
UL 60950 File No. E174104

TÜV Product Service (EN60950)  
Certificate No. B 03 10 38572

CB report and certificate to  
DE3-51686M1



Rev.06.26.07  
smt05e\_12  
1 of 4

The SMT05E series are non-isolated dc-dc converters packaged in a surface-mount footprint giving designers a cost effective solution for conversion from a 12 V source. The SMT05E has a wide input range (10 Vdc to 14 Vdc) and offers a wide 0.8 Vdc to 3.63 Vdc output voltage range with a 5A load, which allows for maximum design flexibility and a pathway for future upgrades. The SMT05E is designed for applications that include distributed power, workstations, optical network and wireless applications. Implemented using state of the art surface-mount technology and automated manufacturing techniques, the SMT05E offers compact size and efficiencies of up to 91%.



# Specifications

All specifications are typical at nominal input, full load at 25°C unless otherwise stated.

## OUTPUT SPECIFICATIONS

Voltage adjustability	0.8-3.63 Vdc	
Setpoint accuracy	±0.4% typ.	
Line regulation	±0.2% typ.	
Load regulation	±1.0% typ.	
Total error band	±3.0% typ.	
Minimum load	0 A	
Overshoot/undershoot	None	
Ripple and noise	5 Hz to 20 MHz	60 mV pk-pk 25 mV rms
Temperature co-efficient	±0.01%/°C	
Transient response	50 mV max. deviation 50 µs recovery to within ±1.0%	

## INPUT SPECIFICATIONS

Input voltage range	10-14 Vdc	
Input current	No load (max.)	100 mA
Input current (max.)	1.85 A max. @ I <sub>o</sub> max. and V <sub>out</sub> = 3.3 V	
Input reflected ripple	30 mA rms	
Remote ON/OFF	(See Note 1)	
Start-up time	20 ms	

## EMC CHARACTERISTICS

Electrostatic discharge	EN61000-4-2, IEC801-2	
Conducted immunity	EN61000-4-6	
Radiated immunity	EN61000-4-3	

## GENERAL SPECIFICATIONS

Efficiency	91%	
Insulation voltage	Non-isolated	
Switching frequency	Fixed	330 kHz typ.
Approvals and standards	EN60950 UL/cUL60950	
Material flammability	UL94V-0	
Dimensions	(LxWxH)	20.32 x 11.43 x 5.97 mm 0.800 x 0.450 x 0.235 inches
Weight	3 g (0.11 oz)	
Coplanarity	100 µm	
MTBF	Telcordia SR-332	6,920,000 hours

## ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 2)	Operating ambient, temperature	-40 °C to +100 °C
	Non-operating	-40 °C to +125 °C

## PROTECTION

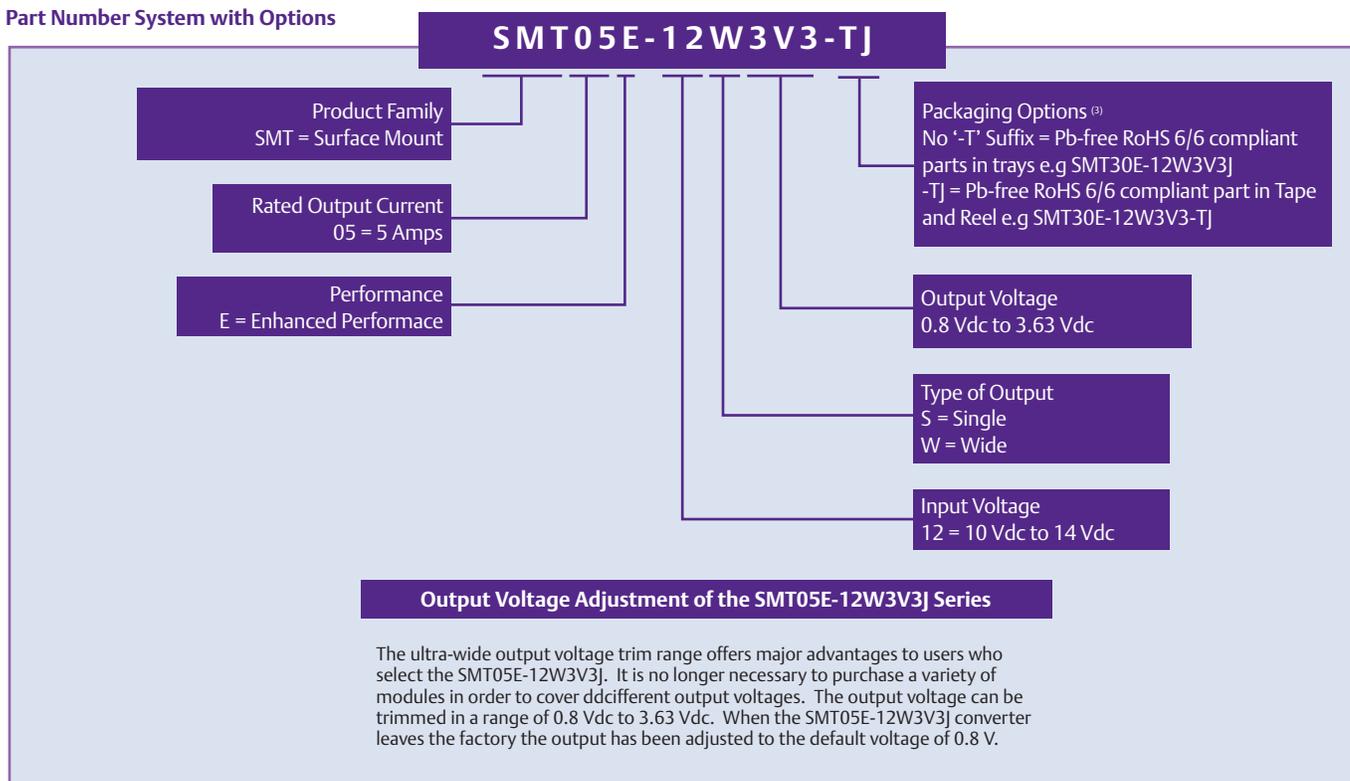
Short-circuit	Continuous
Thermal	Automatic recovery

# Specifications

All specifications are typical at nominal input, full load at 25°C unless otherwise stated.

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER <sup>(3,4)</sup>
						LINE	LOAD	
16.5 W	10-14 Vdc	0.8-3.63 Vdc	0 A	5 A	91%	±0.2%	±1.0%	SMT05E-12W3V3J

## Part Number System with Options



## Notes

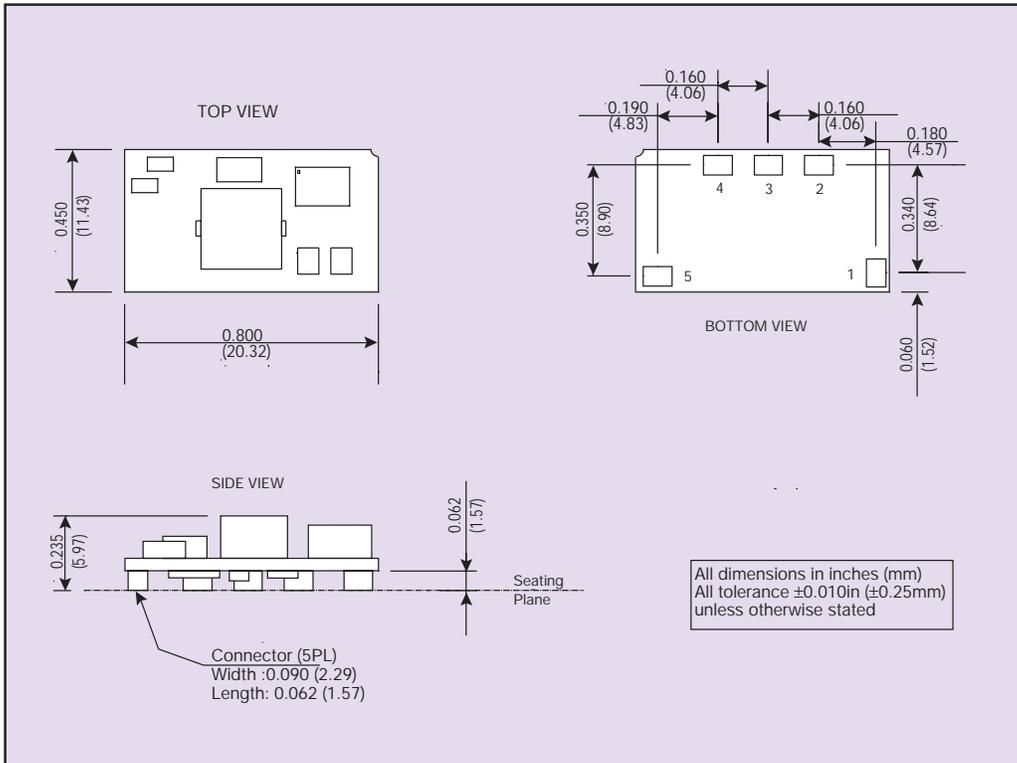
1 The SMT05E features an 'Positive Logic' Remote ON/OFF operation. If not using the Remote ON/OFF pin, leave the pin open (the converter will be on). The Remote ON/OFF pin is referenced to ground.

The following conditions apply for the SMT05E:

Configuration	Converter Operation
Remote pin open circuit	Unit is ON
Remote pin pulled low [Von/off <0.8 V]	Unit is OFF
Remote pin pulled high [Von/off >1.6 V]	Unit is ON

An 'Negative Logic' Remote ON/OFF version is also possible with this converter. To order please place the suffix '-R' at the end of the model number, e.g. SMT05E-12W3V3-RJ.

- Full derating curves available in both the Longform Datasheet and Application Note.
- TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.



PIN CONNECTIONS	
PIN NUMBER	FUNCTION
1	Remote ON/OFF
2	Vout
3	Trim
4	Ground
5	Vin

### Americas

5810 Van Allen Way  
 Carlsbad, CA 92008  
 USA  
 Telephone: +1 760 930 4600  
 Facsimile: +1 760 930 0698

### Europe (UK)

Waterfront Business Park  
 Merry Hill, Dudley  
 West Midlands, DY5 1LX  
 United Kingdom  
 Telephone: +44 (0) 1384 842 211  
 Facsimile: +44 (0) 1384 843 355

### Asia (HK)

16th - 17th Floors, Lu Plaza  
 2 Wing Yip Street, Kwun Tong  
 Kowloon, Hong Kong  
 Telephone: +852 2176 3333  
 Facsimile: +852 2176 3888

For global contact, visit:

[www.powerconversion.com](http://www.powerconversion.com)  
[technicalsupport@powerconversion.com](mailto:technicalsupport@powerconversion.com)

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

### Emerson Network Power.

The global leader in enabling business-critical continuity.

- AC Power
- Connectivity
- DC Power
- **Embedded Power**
- Inbound Power
- Integrated Cabinet Solutions
- Outside Plant
- Precision Cooling
- Site Monitoring and Services

[EmersonNetworkPower.com](http://EmersonNetworkPower.com)

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.  
 ©2007 Emerson Electric Co.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)