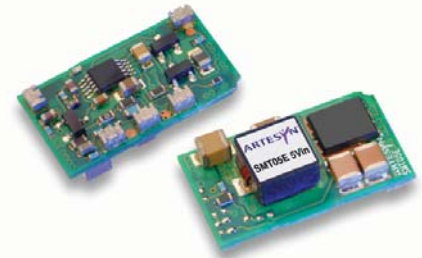


SMT05E Series

3.0-5.5Vin single output

NEW Product

- **5A Current rating**
- **Input voltage range: 3.0V - 5.5V**
- **Output voltage range: 0.75V - 3.63V**
- **Ultra high efficiency: 94% @ 5Vin and 3.3Vout**
- **Extremely low internal power dissipation**
- **Minimal thermal design concerns**
- **Designed in reliability: MTBF of TBD 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**



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 3.3V to 5V source. The SMT05E has a wide input range (3.0V to 5.5V) and offers a wide 0.75V to 3.63V 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 94%.



2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Voltage adjustability	0.75V to 3.63V
Setpoint accuracy	±0.4%
Line regulation	±1.0%
Load regulation	±1.0%
Minimum load	0A
Overshoot/undershoot	None
Ripple and noise 5Hz to 20MHz	75mV pk-pk 25mV rms
Temperature co-efficient	±0.01%/°C
Transient response	60mV max. deviation 50µs recovery to within 1%

INPUT SPECIFICATIONS

Input voltage range	3.0 to 5.5VDC
Input current	No load (max.) 150mA
Input current (max.)	3.9A max. @ Io max. and Vout = 3.3V
Input reflected ripple	40mA rms
Remote ON/OFF	(See Note 1)
Start-up time	20ms

EMC CHARACTERISTICS

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

GENERAL SPECIFICATIONS

Efficiency	See Table	
Insulation voltage	Non-isolated	
Switching frequency	Fixed	300kHz typ.
Approvals and standards	EN60950 UL/cUL60950	
Material flammability	UL94V-0	
Dimensions	(LxWxH)	20.32 x 11.43 x 6.70mm 0.800 x 0.450 x 0.264 inches
Weight	2.8g (0.10oz)	
Coplanarity	100µm	
MTBF	Telcordia SR-332	9,009,000

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 2)	Operating ambient, temperature	-40°C to +85°C
	Non-operating	-40°C to +125°C

PROTECTION

Short-circuit protection	Continuous
Thermal protection	Automatic recovery

International Safety Standard Approvals



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

TÜV Product Service (EN60950) Certificate No. B 03 10 38572 037
CB report and certificate to DE3-51686M1

SMT05E Series

3.0-5.5Vin single output

DC/DC CONVERTERS

E Class Non-isolated

Preliminary Data - subject to change without notice

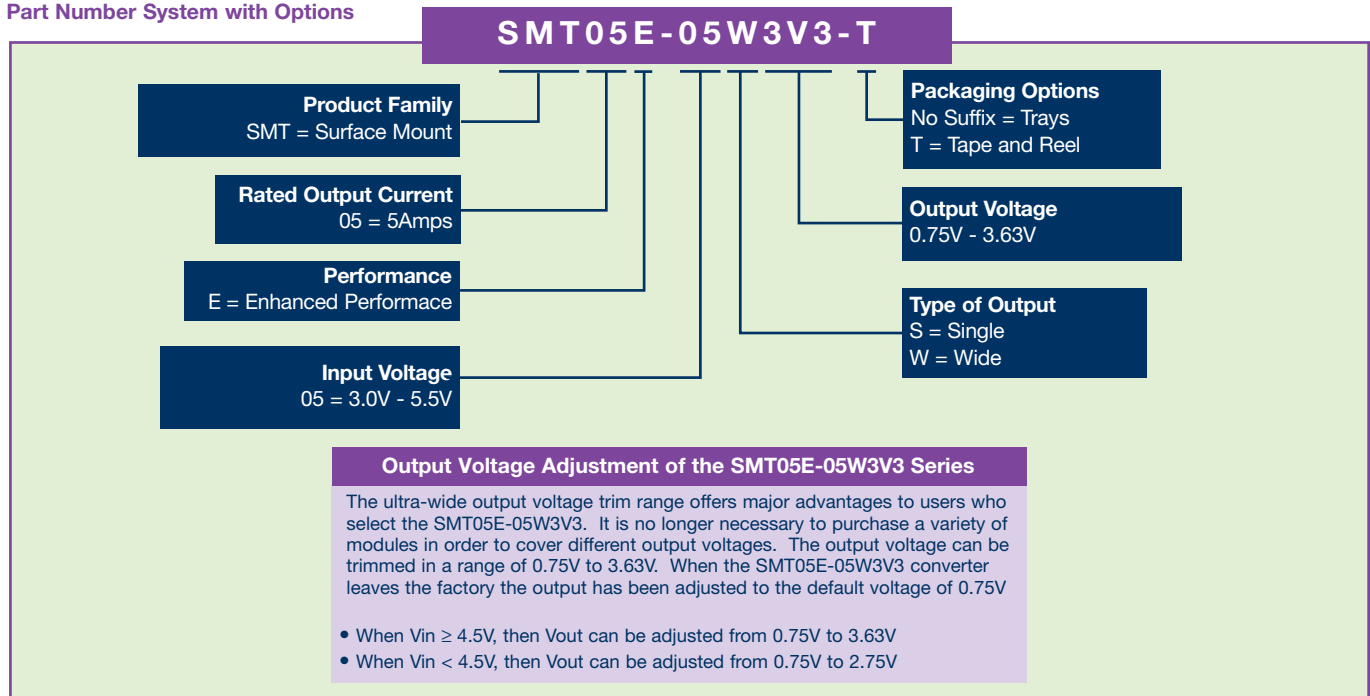
2

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

NEW Product

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER
						LINE	LOAD	
8.25W	3.0V - 5.5V	1.5V	0A	5A	87.5%	±1.0%	±1.0%	SMT05E-05S1V5
18.15W	3.0V - 5.5V	0.75V - 3.63V	0A	5A	94%	±1.0%	±1.0%	SMT05E-05W3V3

Part Number System with Options



Notes

- The SMT05E features a 'Negative 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	Unit is ON
Remote pin pulled high [$V_{on/off} > 2.5V$]	Unit is OFF

An 'Positive Logic' Remote ON/OFF version is also possible with this converter. To order please use part number SMT05E-05W3V3-R or SMT05E-05W3V3-RT.

- Full de-rating curves available in both the Long Form Data Sheet and Application Note.

SMT05E Series

3.0-5.5Vin single output

DC/DC CONVERTERS

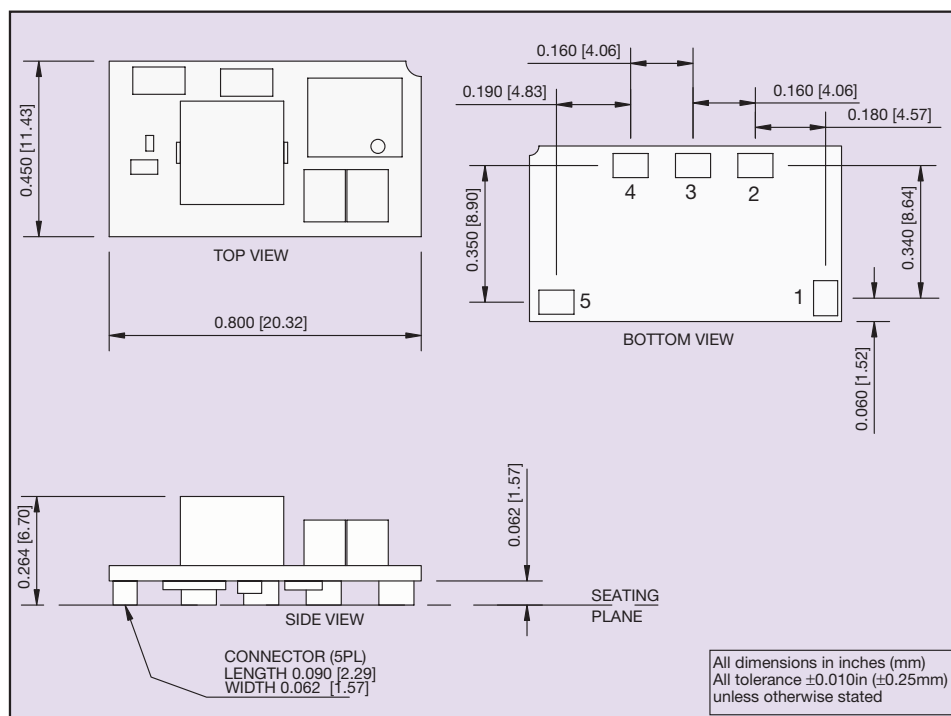
E Class Non-isolated

Preliminary Data - subject to change without notice

3

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

NEW Product



PIN CONNECTIONS

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

Data Sheet © Artesyn Technologies® 2003

The information and specifications contained in this data sheet are believed to be correct at time of publication. However, Artesyn Technologies accepts no responsibility for consequences arising from printing errors or inaccuracies. The information and specifications contained or described herein are subject to change in any manner at any time without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.

Please consult our website for the following items: ✓ Application Note ✓ Longform Data Sheet

www.artesyn.com