

SMT05E Series

3.0-5.5Vin single output

DC/DC CONVERTERS

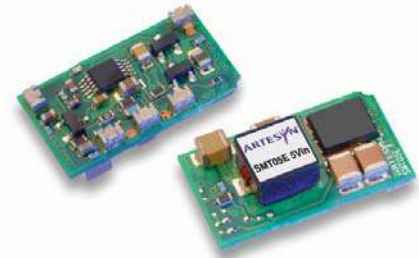
E Class Non-isolated

Preliminary Data - subject to change without notice

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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 Non-operating	-40°C to +85°C -40°C to +125°C
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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

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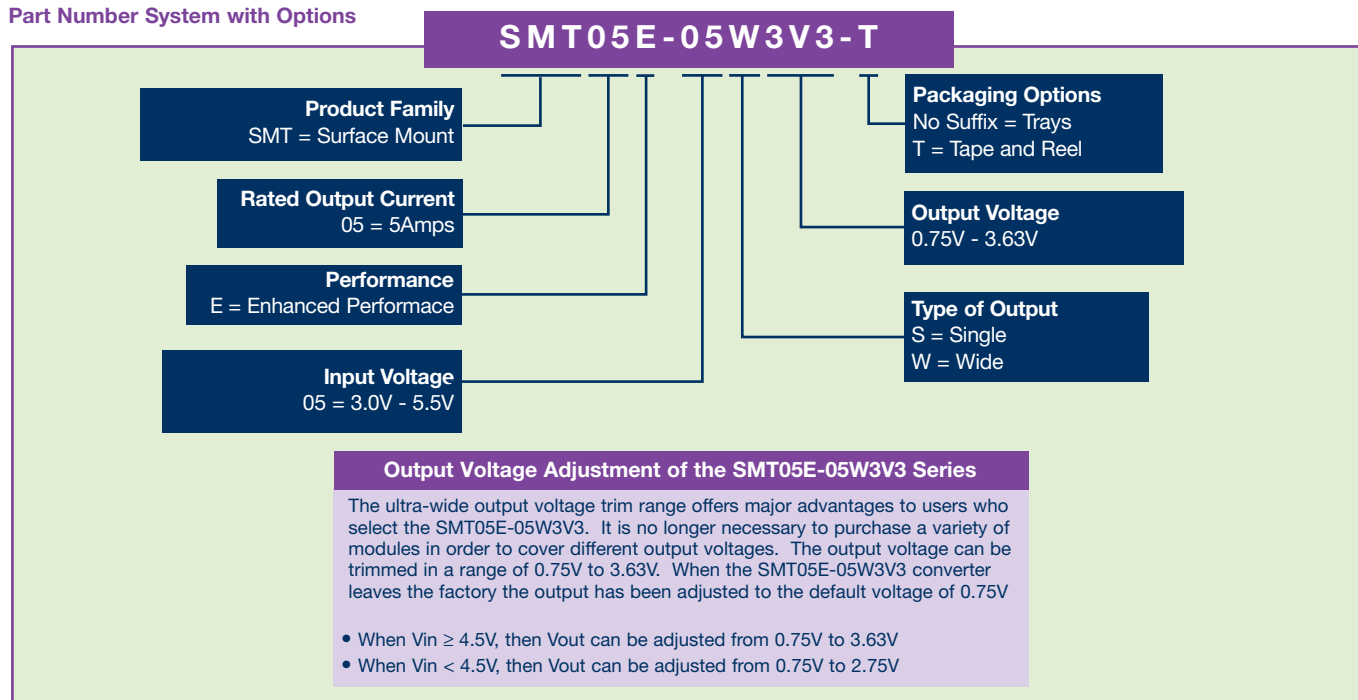
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For the most current data and application support visit www.artesyn.com/powergroup/products.htm

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.

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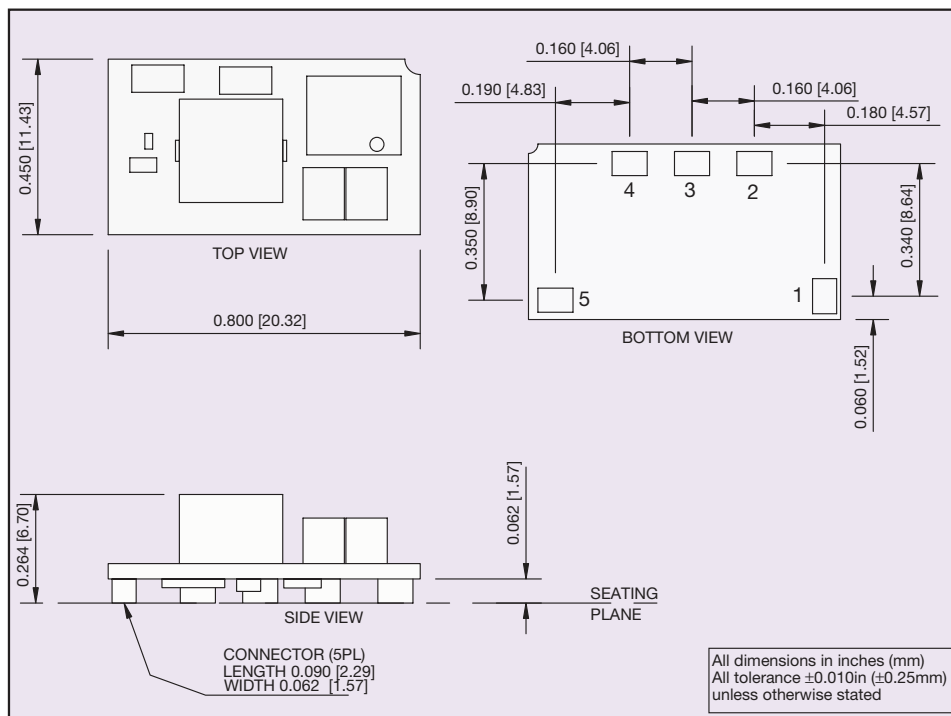
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NEW Product



PIN CONNECTIONS

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

Data Sheet © Artesyn Technologies® 2003

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

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