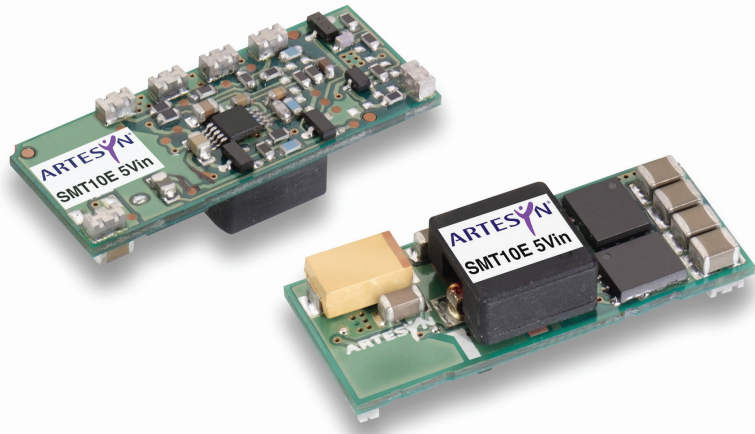


SMT10E Series 3.0 - 5.5 Vin

Total Power: 13.2 Watts
Input Voltage: 3.0 - 5.5 Vdc
of Outputs: Single



Special Features

- 10 A current rating
- Input voltage range: 3.0 Vdc to 5.5 Vdc
- Output voltage range: 0.8 Vdc to 3.63 Vdc
- Ultra high efficiency: 96% @ 5 Vin and 3.3 Vout
- Extremely low internal power dissipation
- Minimal thermal design concerns
- Designed in reliability: MTBF of >7 million 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. E186249
- TÜV Product Service (EN60950) Certificate No. B 08 05 51485 378
- CB report and certificate to DE3-51686M1

Electrical Specifications

Input		
Input voltage range:		3.0-5.5 Vdc
Input current:	No load	70 mA typ.
Input current (max.):		8 A max. @ Io max. and Vout = 3.63 V
Input current ripple:		110 mA rms
Remote ON/OFF:		(See Note 2)
Start-up time:		20 ms
Output		
Voltage adjustability: (See Note 1)	Fixed output versions Wide trim version	±10% 0.8 - 3.63 Vdc
Setpoint accuracy:		±0.4%
Line regulation:		±0.2%
Load regulation:		±1.0%
Minimum load:		0 A
Overshoot/Undershoot:		None
Ripple and noise:	0 to 20 mHz BW	50 mV pk-pk 25 mV rms max.
Temperature co-efficient:		±0.01%/°C
Transient response:		60 mV max. deviation 50µs recovery to within ±1.0%
Remote sense:		10% Vo compensation

All specifications are typical at 5 Vin and 3.3 Vout, full load at 25 °C unless otherwise stated.



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	300 kHz typ.
Approvals and standards:		EN60950 UL/cUL60950
Material flammability:		UL94V-0
Dimensions	(L x W x H)	33.02 x 13.46 x 8.21 mm 1.3 x 0.53 x 0.323 inches
Weight:		6.3 g (0.22 oz)
Coplanarity:		100 μm
MTBF:	Telcordia SR-332 MIL-HDBK-217F	7,042,000 hours 680,000 hours

Environmental Specifications

Thermal performance: (See Note 3)	Operating ambient temperature	-40° C to +100 °C
	Non-operating	-40 °C to +125 °C

Protection

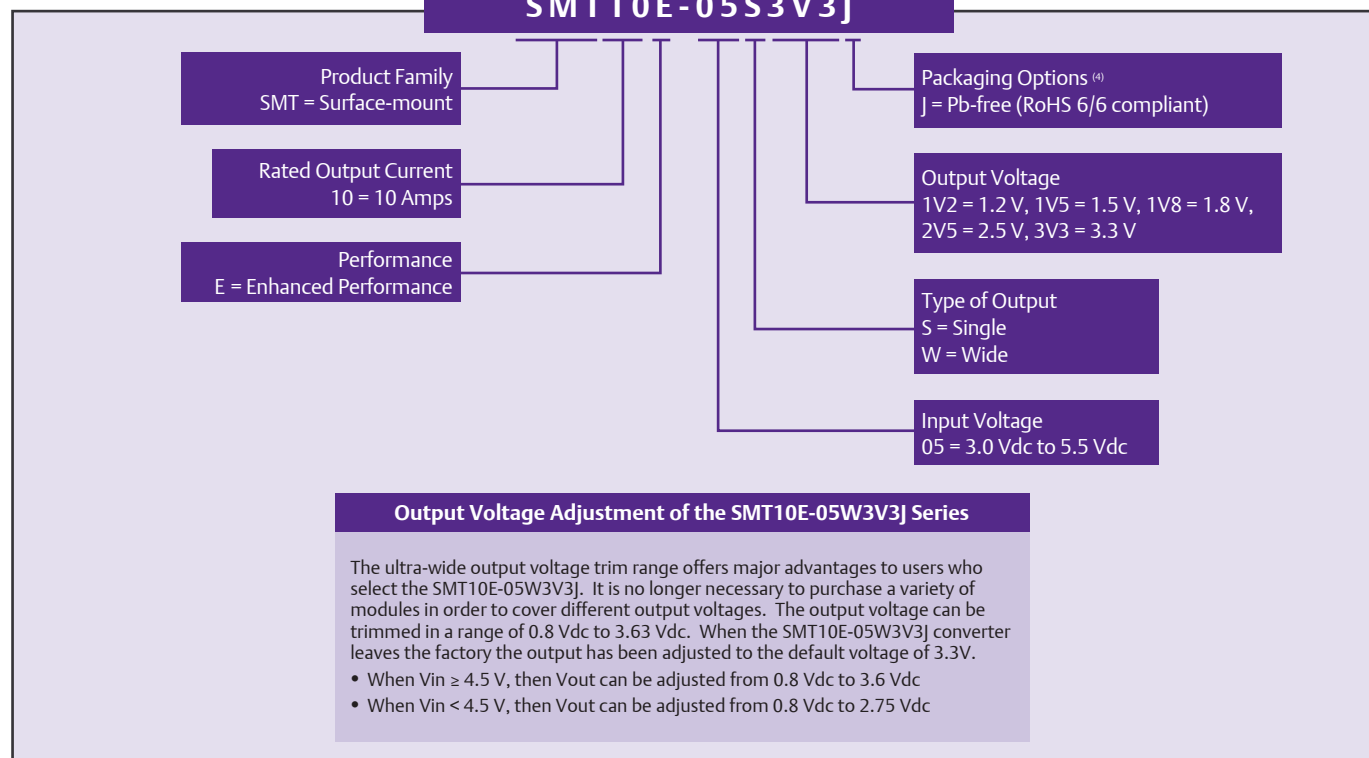
Short circuit:	Continuous
Thermal:	Automatic recovery

Ordering Information

All specifications are typical at 5 Vin and 3.3 Vout, full load at 25 °C unless otherwise stated.

Ordering Information								
Output Power (Max.)	Input Voltage	Output Voltage	Output Currents		Efficiency (typ.)	Regulation		Model Numbers ^(2, 4, 5)
			Min	Max		Line	Load	
13.2 W	3.0 - 5.5 Vdc	1.2 Vdc	0 A	10 A	89%	±0.2%	±1.0%	SMT10E-05S1V2J
16.5 W	3.0 - 5.5 Vdc	1.5 Vdc	0 A	10 A	90%	±0.2%	±1.0%	SMT10E-05S1V5J
19.8 W	3.0 - 5.5 Vdc	1.8 Vdc	0 A	10 A	92%	±0.2%	±1.0%	SMT10E-05S1V8J
27.5 W	3.0 - 5.5 Vdc	2.5 Vdc	0 A	10 A	95%	±0.2%	±1.0%	SMT10E-05S2V5J
36.3 W	4.5 - 5.5 Vdc	3.3 Vdc	0 A	10 A	96%	±0.2%	±1.0%	SMT10E-05S3V3J
36.3 W	3.0 - 5.5 Vdc	0.8 - 3.63 Vdc	0 A	10 A	96%	±0.2%	±1.0%	SMT10E-05W3V3J

Part Number System with Options



Notes

- When Vin ≥ 4.5 V, then Vout can be adjusted from 0.8 Vdc to 3.6 Vdc. When Vin < 4.5 V, then Vout can be adjusted from 0.8 Vdc to 2.75 Vdc.
- The SMT10E 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 SMT10E:

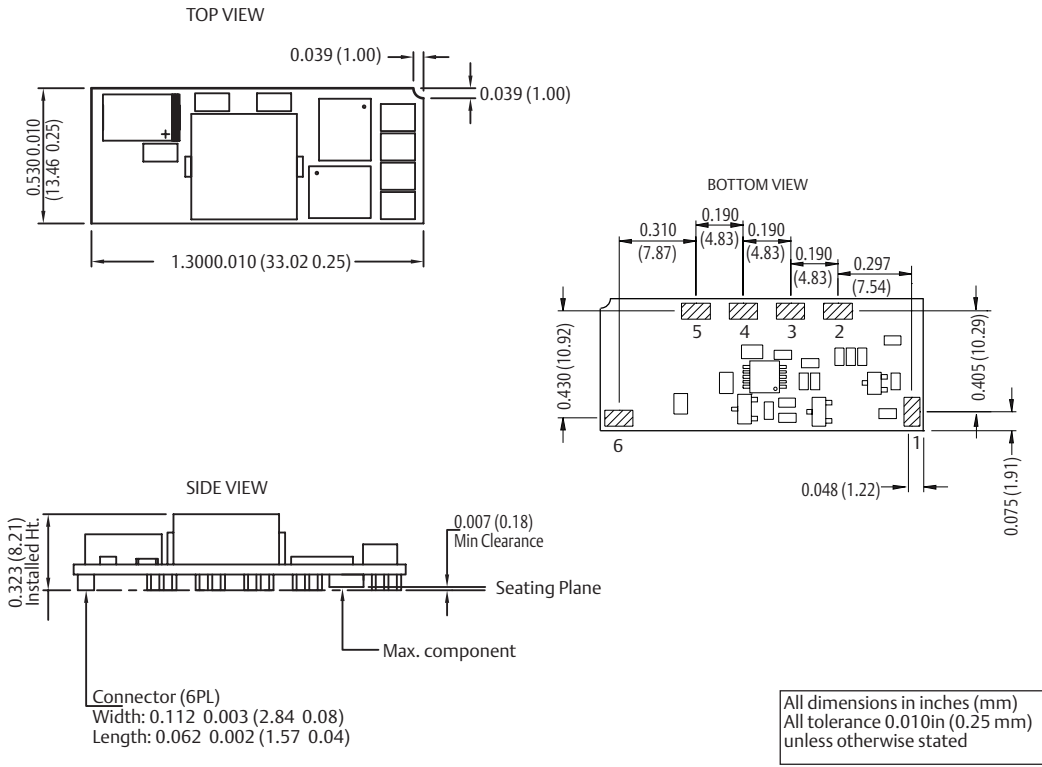
Configuration Operation	Converter
Remote pin open circuit	Unit is ON
Remote pin pulled low	Unit is ON
Remote pin pulled high [Von/off > 1.2 V]	Unit is OFF

A 'Positive 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. SMT10E-05W3V3-RJ.

Notes Continued

- Full derating curves available in both the Longform Datasheet and Application Note 168.
- 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 Emerson Network Power representative or use the on-line model number search tool at <http://www.PowerConversion.com> to find a suitable alternative.

Mechanical Drawing



Pin Connections	
Pin Number	Function
Pin 1	Remote ON/OFF
Pin 2	Remote Sense +
Pin 3	Trim
Pin 4	+Vout
Pin 5	Ground
Pin 6	+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)

14/F, 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
techsupport.embeddedpower@emerson.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 Computing
- **Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.
 ©2008 Emerson Electric Co.