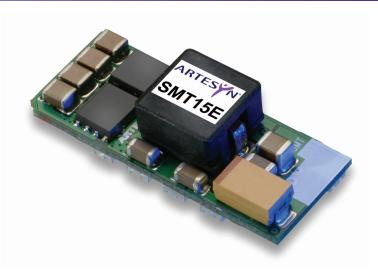
SMT15E Series 12 Vin

Total Power: 49.5 Watts **Input Voltage:** 10-14 Vdc # of Outputs: Single



Rev.3.4.09_91 SMT15E_12 Series



Special Features

- 15 A Current rating
- Input voltage range: 10 Vdc to 14 Vdc
- Output voltage range: 0.8 Vdc to 3.63 Vdc
- Ultra high efficiency: 94% @ 12 Vin and 3.3 Vout
- Extremely low internal power dissipation
- Minimal thermal design concerns
- Designed for 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. E186249 TÜV Product Service (EN60950) Certificate No. B 08 05 51485 378 CB report and certificate to
- IEC60950 DE3-51686M1

Electrical Specifications

Input		
Input voltage range:		10-14 Vdc
Input current:	No load (max.)	100 mA
Input current (max.):		4.5 A max. @ lo max. and Vout = 3.3 V
Input reflected ripple:		100 mA rms
Remote ON/OFF:		(See Note 1)
Start-up time:		20 ms
Output		
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:		100 mV max. deviation $100\mu s$ recovery to within $\pm 1.0\%$
Remote sense:		10% Vo compensation

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





Rev.3.4.09_91 SMT15E_12 Series 2 of 4

EMC Characteristics

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

General Specifications

•		
Efficiency:		94%
Insulation voltage:		Non-isolated
Switching frequency:	Fixed	200 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	6,920,000 hours

Environmental Specifications

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

Protection

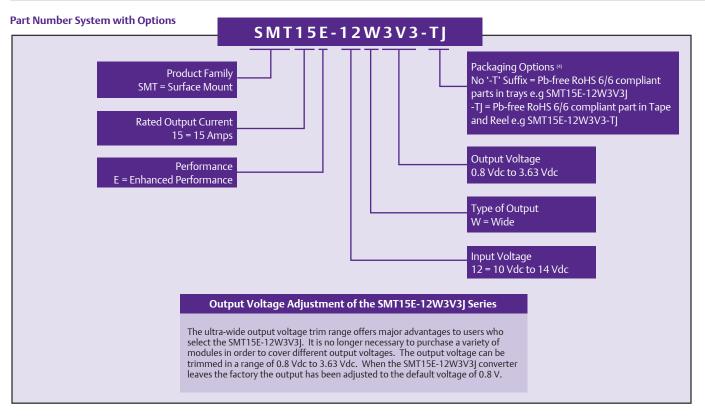
Short circuit:	Continuous		
Thermal:	Automatic recovery		

Ordering Information

Rev.3.4.09_91 SMT15E_12 Series 3 of 4

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

Ordering Information									
Output	Output	Input Voltage	Output Voltage	Output Currents		Efficiency	Regulation		Model Numbers (4,5)
	Power (Max.)	iliput voltage	Output voitage	Min	Max	(typ.) (3)	Line	Load	Wiodel Numbers ** /
	49.5 W	10 - 14 Vdc	0.8 - 3.63 Vdc	0 A	15 A	94%	±0.2%	±1.0%	SMT15E-12W3V3J



Notes

1 The SMT15E 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 SMT15E:

Configuration

Remote pin open circuit

Remote pin pulled low [Von/off < 0.8 V]

Remote pin pulled high [Von/off >1.6 V]

Unit is OFF

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. SMT15F-12W3V3-TRI.

- the end of the model number, e.g. SMT15E-12W3V3-TRJ.
 Full derating curves available in both the Longform Datasheet and Application Note.
- 3 Typical efficiency figures for various output voltages are as follows:

1.2 V 83% 1.5 V 85.5% 1.8 V 87.5% 2.0 V 91% 2.5 V 92%

- 4 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 5 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.

Rev.3.4.09_91 SMT15E_12 Series

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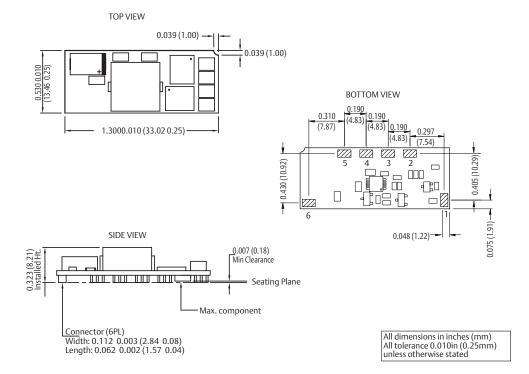
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Mechanical Drawing



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				