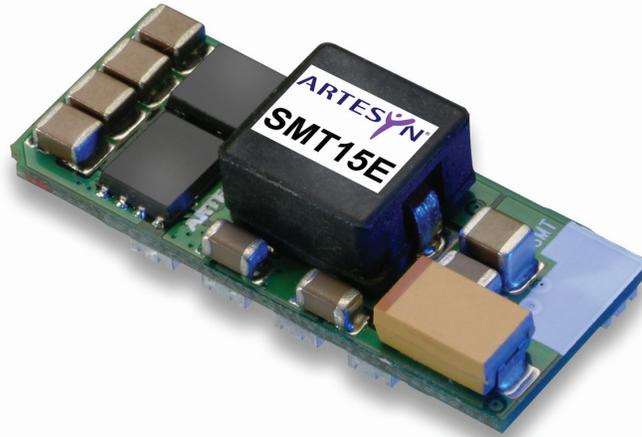


SMT15E Series 12 Vin

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



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. @ Io 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 100µs recovery to within ±1.0%
Remote sense:		10% Vo compensation

All specifications are typical at nominal input, 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:		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

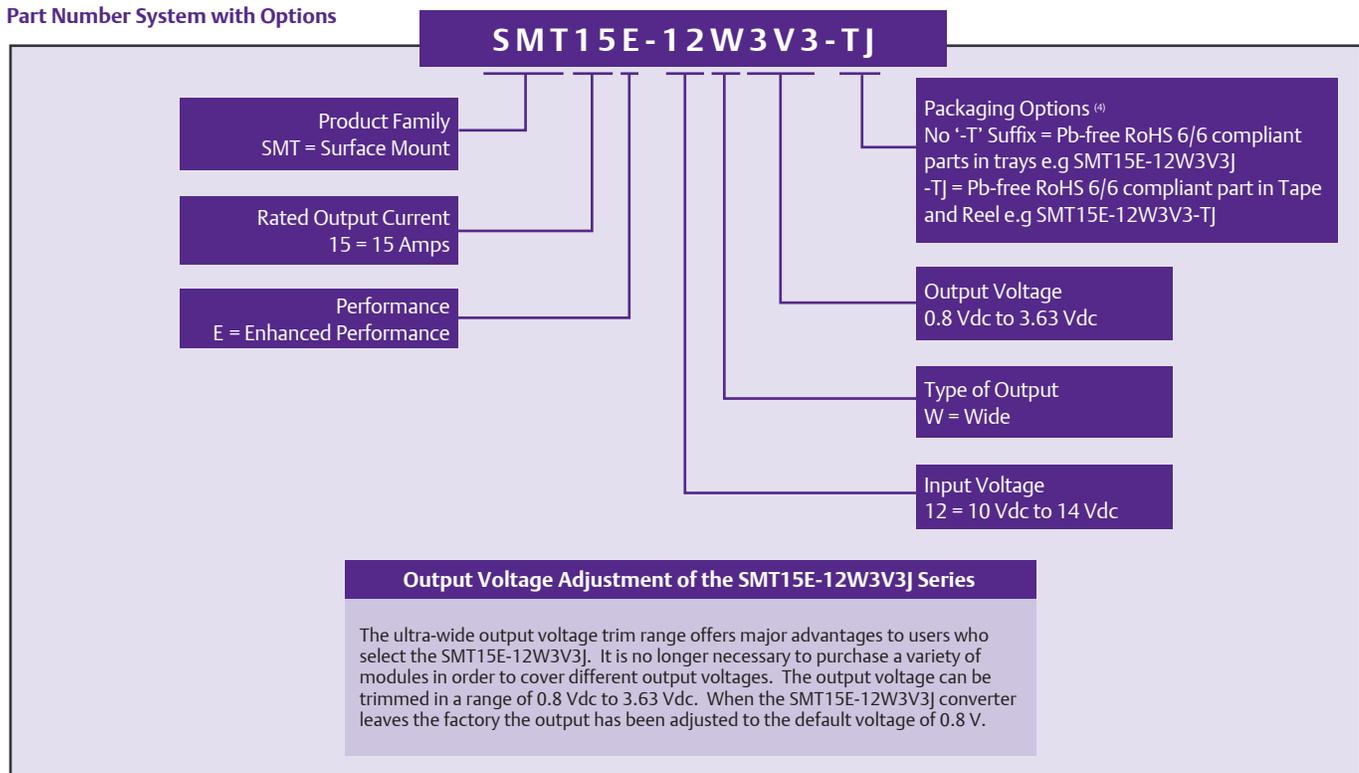
Short circuit:	Continuous
Thermal:	Automatic recovery

Ordering Information

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

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

Part Number System with Options



Notes

- 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	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

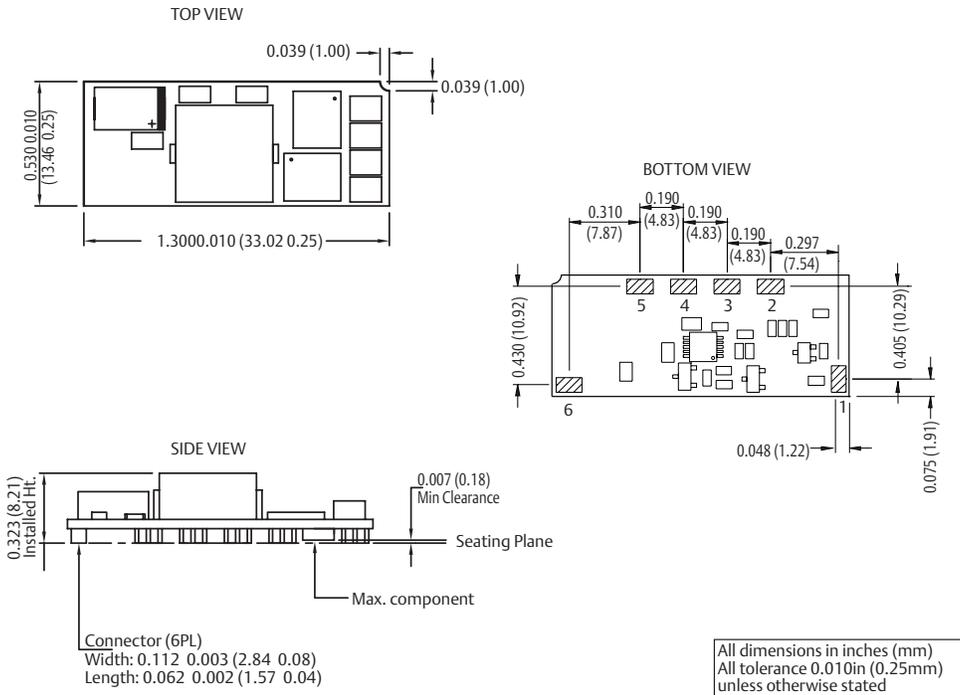
An 'Negative Logic' Remote ON/OFF version is also possible with this converter. To order please place the suffix 'R' at the end of the model number, e.g. SMT15E-12W3V3-TRJ.

- Full derating curves available in both the Longform Datasheet and Application Note.
- 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%

- 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

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