SMT15E Series



DC/DC CONVERTERS

50W Non-isolated DC/DC Converters

NEW Product

- Current rating of 15A
- Outputs of 2.5V and 3.3V 10% trim
- Applications for 5V or 3.3V input POL converters
- Highest power density available today (220W/in³)
- High efficiency up to 95% achievable on 3.3Vout
- Industry standard surface-mount footprint
- Remote sense and remote ON/OFF
- Available in tape and reel

The SMT15E series are non-isolated DC/DC converters packaged in a surface mount footprint giving designers a cost effective solution for conversion from either a 3.3V or 5V input to output voltages of 3.3V and 2.5V. The SMT15E offers a range of fixed outputs at an industry leading 15A which allows maximum design flexibility and a pathway for future upgrades. Local voltage conversion by the SMT15E series from existing 3.3V or 5V system voltages eliminates the need for redesign of existing power architectures when voltage requirements change. The SMT15E 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 SMT15E offers compact size and efficiencies of up to 95%.





2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Voltage adjustability	±10%
Output setpoint accuracy	±2.7%
Line regulation	±1.0%
Load regulation	±1.0%
Minimum load	0A
Overshoot/undershoot	None
Ripple and noise 5Hz to 20MHz	60mV pk-pk 25mV rms
Temperature co-efficient	±0.01%/°C
Transient response	60mV max. deviation 50µs recovery to within ±1.0%
Remote sense	10% Vo compensation

INPUT SPECIFICATIONS

Input voltage range		3.0 to 5.5VDC
Input current	No load (max.)	100mA
Input current (max.)		11.8A max. @ Io max. and Vout = 3.3V
Input reflected ripple		30mA 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 (pending)		EN60950 UL/cUL60950
Material flammability		UL94V-0
Dimensions	(LxWxH)	33.00 x 13.46 x 8.20mm 1.3 x 0.53 x 0.323 inches
Weight		6.3g (0.22oz)
Coplanarity		100µm
MTBF	Telecordia 332	7,042,000

ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating ambient,	-40°C to +100°C
(see Note 4)	temperature	
	Non-operating	-40°C to +125°C

International Safety Standard Approvals (pending)



UL/cUL CAN/CSA 22.2 No. (TBD) UL 60950 file No. (TBD)

TÜV Product Service (EN60950) Certificate No. (TBD). CB report and certificate to IEC60950

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

NEW Product

OUTPUT POWER	INPUT	ОИТРИТ	OUTPUT CURRENT	OUTPUT CURRENT	EFFICIENCY	REGU	LATION	MODEL
(MAX.)	VOLTAGE	VOLTAGE	(MIN.)	(MAX.)	(TYP.)	LINE	LOAD	NUMBER
41.25W	3.0V - 5.5V ⁽³⁾	2.5V	0A	15A	94%	±1%	±1%	SMT15E-05S2V5
54.50W	4.5V - 5.5V ⁽²⁾	3.3V	0A	15A	95%	±1%	±1%	SMT15E-05S3V3

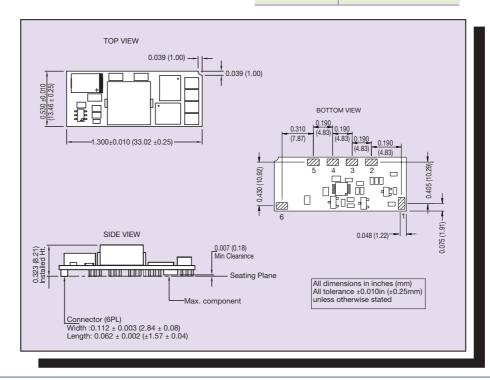
Notes

- 1 Referenced to ground for shutdown. If pin 1 is high unit will shutdown. If pin 1 is open unit will operate as normal. Converter is guaranteed OFF when pin 1 is greater than 1.2V.
- 2 For 3.3Vout, the input must be greater than 4.5V
- For 2.5Vout, the input must be greater than 3.3V
- 4 Full de-rating curves available in both the Long Form Data Sheet and Application Note 136.

 $\mbox{{\it CAUTION:}}$ High internal temperatures. Ensure that unit is not user accessible.

PROTECTION	
Short-circuit protection	Continuous
Thermal protection	Automatic recovery

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



Data Sheet © Artesyn Technologies® 2002

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Please consult our website for the following items:

Application Note

Longform Data Sheet

www.artesyn.com