

SMT15E Series

Single output

DC/DC CONVERTERS

50W Non-isolated DC/DC Converters

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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%.

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

International Safety Standard Approvals (pending)

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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

SMT15E Series

Single output

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER
						LINE	LOAD	
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
- 3 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.

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

