

SMT10E Series

12 Vin single output

DC-DC CONVERTERS

E Class Non-isolated

1

NEW Product



- **10 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 in 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**



The SMT10E series are non-isolated dc-dc converters packaged in a surface-mount footprint giving designers a cost effective solution for conversion from a 12 V source. The SMT10E has a wide input range (10 Vdc to 14 Vdc) and offers a wide 0.8 Vdc to 3.63 Vdc output voltage range with a 10 A load, which allows for maximum design flexibility and a pathway for future upgrades. The SMT10E 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 SMT10E offers compact size and efficiencies of up to 94%.



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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

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 µs recovery to within ±1.0%
Remote sense	10% Vo compensation	

INPUT SPECIFICATIONS

Input voltage range	10-14 Vdc	
Input current	No load (max.)	100 mA
Input current (max.)	3 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	

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	(LxWxH)	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

International Safety Standard Approvals



UL/cUL CAN/CSA-C22.2 No. 60950-1-03/UL 60950-1, File No. E174104



TÜV Product Service (EN60950) Certificate No. B03 10 38572 037
CB Report and Certificate to IEC60950, Certificate No. DE3-51686M1

SMT10E Series

12 Vin single output

DC-DC CONVERTERS

E Class Non-isolated

2

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

NEW Product

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER ^(3,4)
						LINE	LOAD	
33 W	10-14 Vdc	0.8-3.63 Vdc	0 A	10 A	94%	±0.2%	±1.0%	SMT10E-12W3V3J

Part Number System with Options

SMT10E-12W3V3-TJ

Product Family
SMT = Surface Mount

Rated Output Current
10 = 10 Amps

Performance
E = Enhanced Performance

Packaging Options ⁽³⁾
No '-T' Suffix = Pb-free RoHS 6/6 compliant parts in trays e.g SMT10E-12W3V3J
-TJ = Pb-free RoHS 6/6 compliant part in Tape and Reel e.g SMT10E-12W3V3-TJ

Output Voltage
0.8 Vdc to 3.63 Vdc

Type of Output
W = Wide

Input Voltage
12 = 10 Vdc to 14 Vdc

Output Voltage Adjustment of the SMT10E-12W3V3J Series

The ultra-wide output voltage trim range offers major advantages to users who select the SMT10E-12W3V3J. It is no longer necessary to purchase a variety of modules in order to cover different output voltages. The output voltage can be trimmed in a range of 0.8 Vdc to 3.63 Vdc. When the SMT10E-12W3V3J converter leaves the factory the output has been adjusted to the default voltage of 0.8 V.

Notes

- The SMT10E 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 SMT10E:

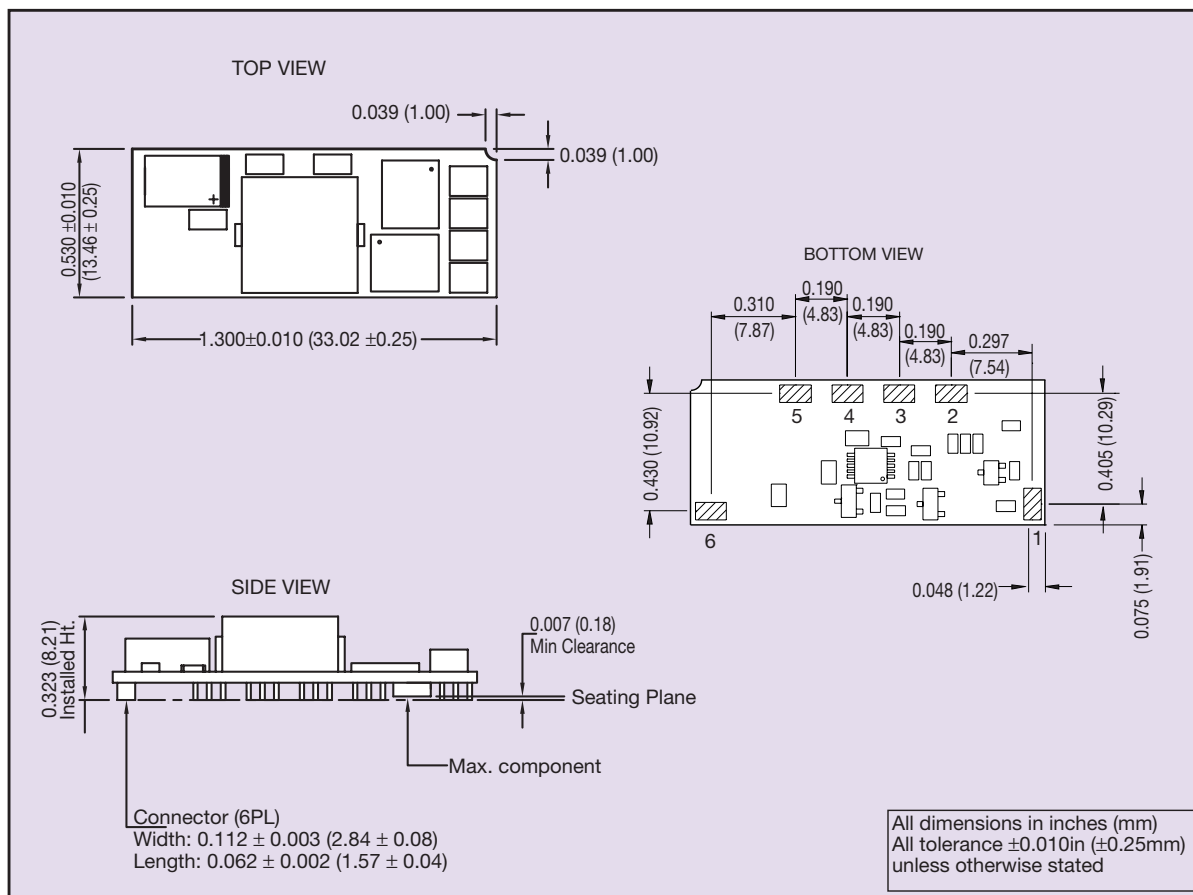
Configuration	Converter Operation
Remote pin open circuit	Unit is ON
Remote pin pulled low [Von/off < 0.8 V]	Unit is OFF
Remote pin pulled high [Von/off > 1.6 V]	Unit is ON

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. SMT10E-12W3V3-RJ.

- Full derating curves available in both the Longform Datasheet and Application Note.
- 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 Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.

SMT10E Series

12 Vin single output



PIN CONNECTIONS

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

*The sense function and the trim function are customer specified options. Please consult factory for details.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.