



Features

- Wide operating input voltage range
- Meets IEC 60950-1, Functional Grade of Insulation
- RoHS compliant*

Applications

- TI UCC28880 High voltage switcher
- AC/DC Power supplies
- Metering, home automation, appliances, white goods and LED drivers

SM91047EL Series Flyback Transformer

Electrical Specifications @ 25 °C

Bourns Part Number	L (Pin 9-7) ±15 % @10 kHz / 1 V	Rated Current	Hi-pot	
			NP to NS	NP, NS to Core
SM91047EL	5.0 mH	0.2 Adc	1.5 k Vrms, 2 mA, 2 S	200 Vrms, 2 mA, 2 S
SM91047-1EL	3.5 mH	0.3 Adc	1.5 k Vrms, 2 mA, 2 S	1.5 k Vrms, 2 mA, 2 S
SM91047-2EL	5.0 mH	0.2 Adc	3 k Vrms, 2 mA, 2 S	2 k Vrms, 2 mA, 2 S

Rated Current

L_{drop} (Pin 9-7) @ 10 kHz, 1 V >85 % L_{0A}

Leakage Inductance @10 kHz, 1 V

Pin 9-7 100 μ H max.
(Pin 2,4 Short)

DCR

Pin 9-7 8.0 Ω ±20 %
Pin 2-4 104 m Ω ±30 %

Turns Ratio & Polarity @10 kHz, 1 V

Pin 9-7 : Pin 2-4 11.875 : 1 typ.

Operating Temperature Range -40 °C to +125 °C
including temperature rise

Storage Temperature Range -40 °C to +85 °C

Packaging Specifications

Tape & Reel 180 pcs./reel

How To Order

Model _____ **SM91047** **E L**

L (see Electrical Specifications chart)
Blank = 5 mH, 1.5 kV / 200 V Hi-pot
-1 = 3.5 mH, 1.5 kV / 1.5 kV Hi-pot
-2 = 5 mH, 3 kV / 2 kV Hi-pot

Packaging _____
E = Tape and Reel (180 pcs./reel)

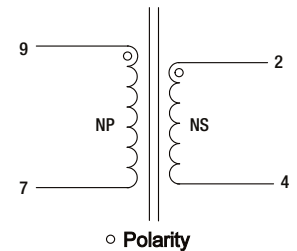
Termination _____
L = Tin (RoHS Compliant)



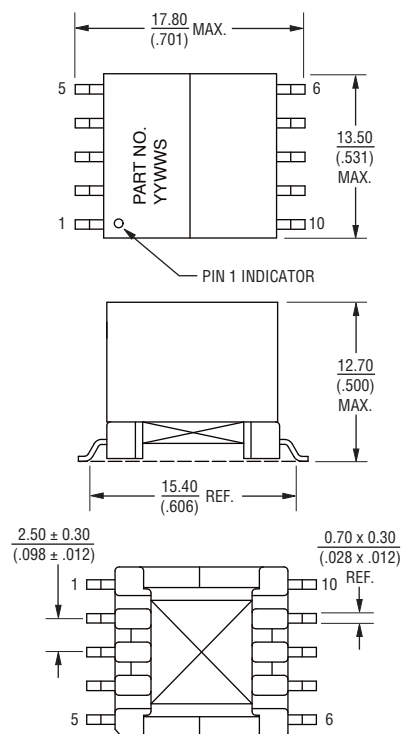
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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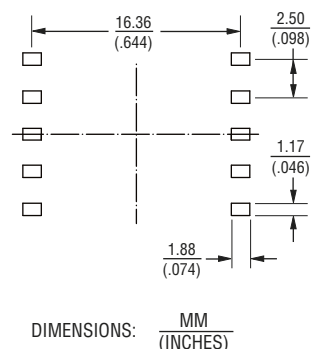
Electrical Schematic



Product Dimensions



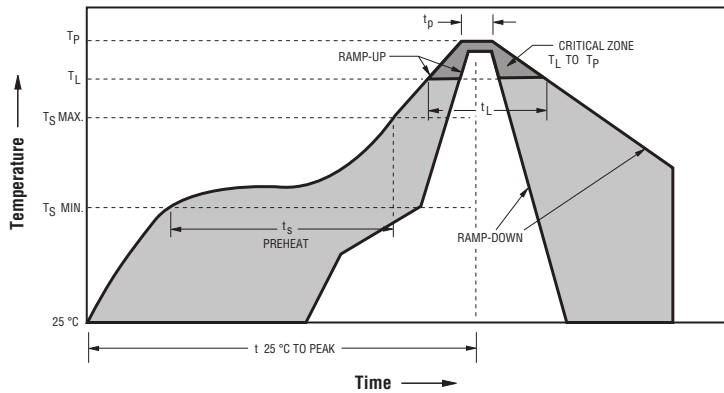
Recommended Layout



SM91047EL Series Flyback Transformer

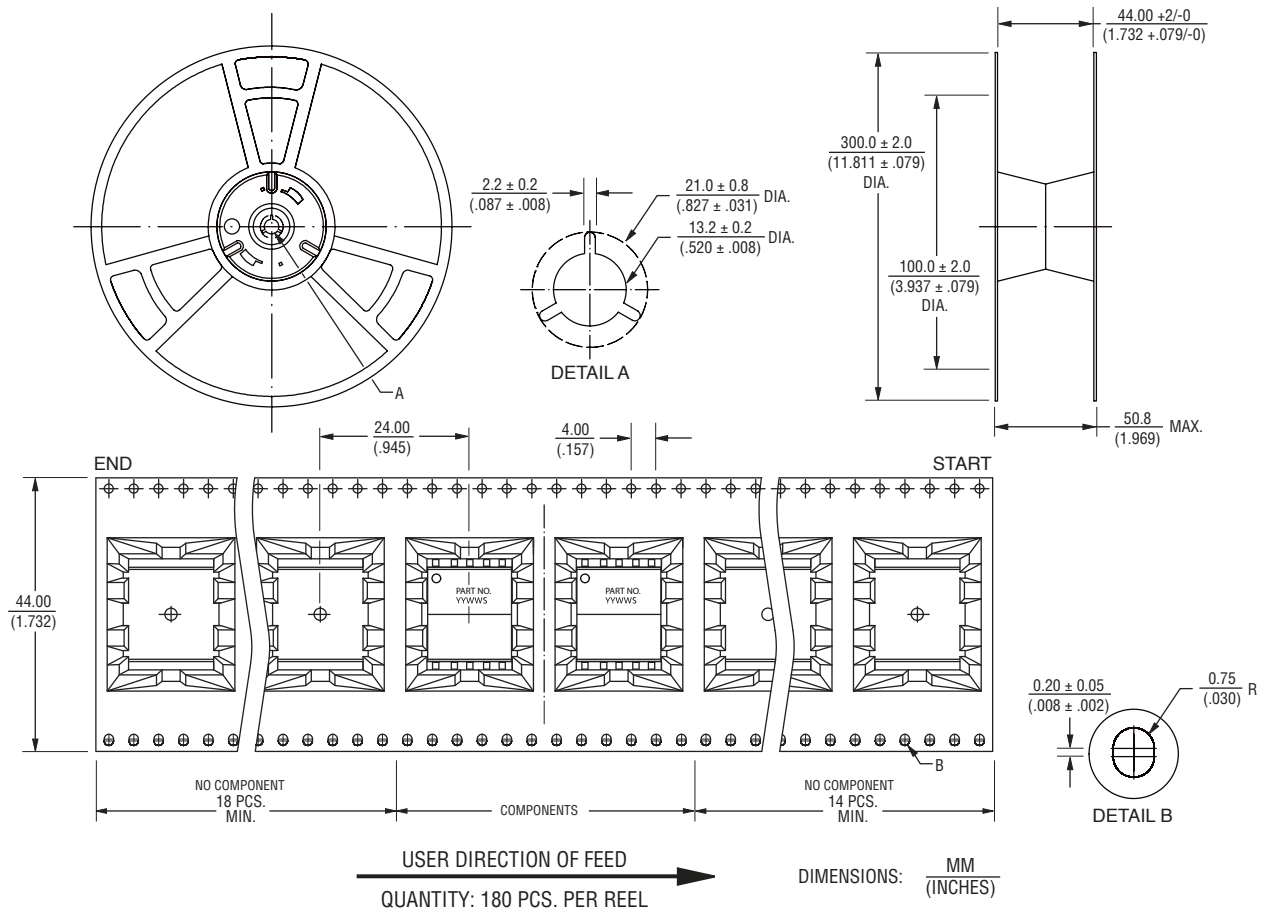
BOURNS®

Reflow Solder Profile



Ramp-up rate = 3 °C/sec. max.
 Ramp-down rate = 6 °C/sec. max.
 $T_L = 217\text{ °C}$ $t_L = 60\text{-}150\text{ sec.}$
 $T_p = 245\text{ °C} \pm 5\text{ °C}$
 Time within 5 °C of actual Peak Temp (t_p) = 20-40 sec.
 $T_s\text{ min} = 150\text{ °C}$ $T_s\text{ max} = 200\text{ °C}$
 $T_s\text{ min to } T_s\text{ max} = 60\text{-}180\text{ sec.}$, 25 °C to Peak Temperature = 6 min. max.

Packaging Specifications



REV. 01/18

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