

## Features

- DC to DC transformer: 60 to 71 watts
- Flyback converter topology
- Low leakage inductance
- Low profile component
- Surface mount
- Operating temperature: -40 °C to +125 °C
- RoHS compliant\*

## Applications

- High power PoE applications
- Industrial power systems
- Switched-Mode Power Supplies (SMPS)
- LED lighting
- Battery Management Systems

# PLN0xx-ER20 Series – Planar Transformer

### General Specifications

Operating Temperature.....	-40 °C to +125 °C (Temperature Rise Included)
Storage Temperature with Packaging.....	+5 °C to +40 °C
Transformer Input Voltage .....	36-72 VDC
Switching Frequency .....	200 kHz
Moisture Sensitivity Level.....	1

### Additional Information

Click these links for more information:



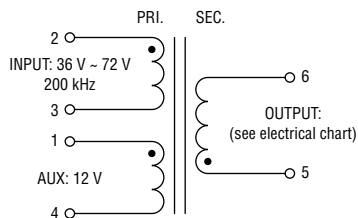
### Electrical Specifications @ 25 °C

Bourns Part Number	Primary Inductance <sup>1</sup> (µH)	Leakage Inductance <sup>2</sup> (µH) max.	DCR max. (mΩ)			Turns ratio			Hi - Pot <sup>3</sup>	Main Output
			pri.	sec.	aux.	pri.	sec.	aux.		
PLN060-ER20A03S	21 ± 10 %	0.5	90	11.0	220	1	0.166	0.666	1500 V <sub>rms</sub>	3.3 V / 18 A
PLN060-ER20A05S			40	8.0			0.25	0.5		5.0 V / 12 A
PLN060-ER20A12S			40	14.0			0.5	0.5		12 V / 5.0 A
PLN060-ER20A24S			40	33.0			1	0.5		24 V / 2.4 A
PLN071-ER20A03S	18 ± 10 %		90	9.0			0.166	0.666		3.3 V / 21 A
PLN071-ER20A05S			40	8.0			0.25	0.5		5.0 V / 14 A
PLN071-ER20A12S			40	14.0			0.5	0.5		12 V / 5.9 A
PLN071-ER20A24S			40	33.0			1	0.5		24 V / 2.9 A

Notes:

1. Measuring conditions 100 kHz, 1 V @ 25 °C.
2. Leakage inductance is for the primary and is measured with the secondary winding shorted.
3. DC current at 25 °C that causes an inductance drop of <15 % from its value without current.
4. HI-POT: Pri-Sec: 1500 VAC / 2 mA / 5 S, Pri, Sec-Core: 500 VAC / 2 mA / 5 S.
5. Output is for the secondary. Output of the aux winding is 12 V, 30 mA.

### Electrical Schematic



### How To Order

**PLN 060 - ER20 A 03 S**

Model \_\_\_\_\_  
 PLN = Planar Transformer

Power Rating \_\_\_\_\_  
 060 = 60 W  
 071 = 71 W

Core and Size \_\_\_\_\_  
 ER20 = ER20

Sub-series \_\_\_\_\_  
 A = A, B, C, D... Series

Output Voltage \_\_\_\_\_  
 03 = 3.3 V

PCB type \_\_\_\_\_  
 S = SMD



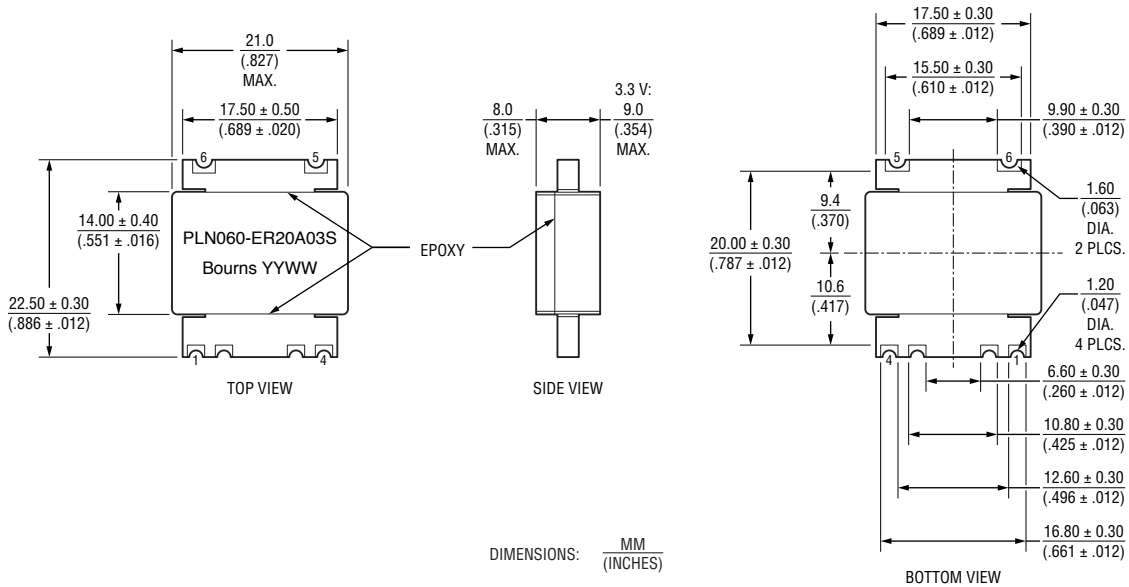
**WARNING Cancer and Reproductive Harm -**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 Specifications are subject to change without notice.  
 Users should verify actual device performance in their specific applications.  
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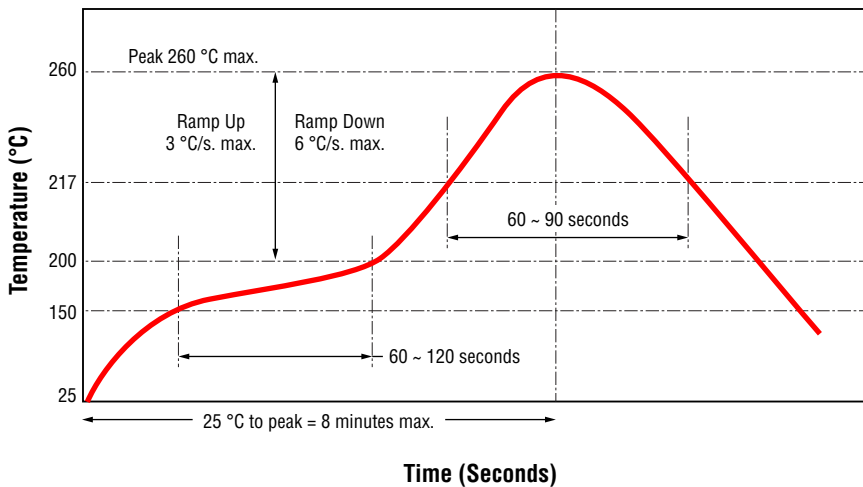
# PLN0xx-ER20 Series – Planar Transformer



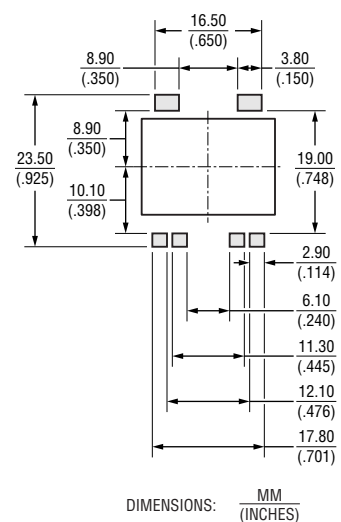
## Product Dimensions



## Soldering Profile



## Recommended Layout



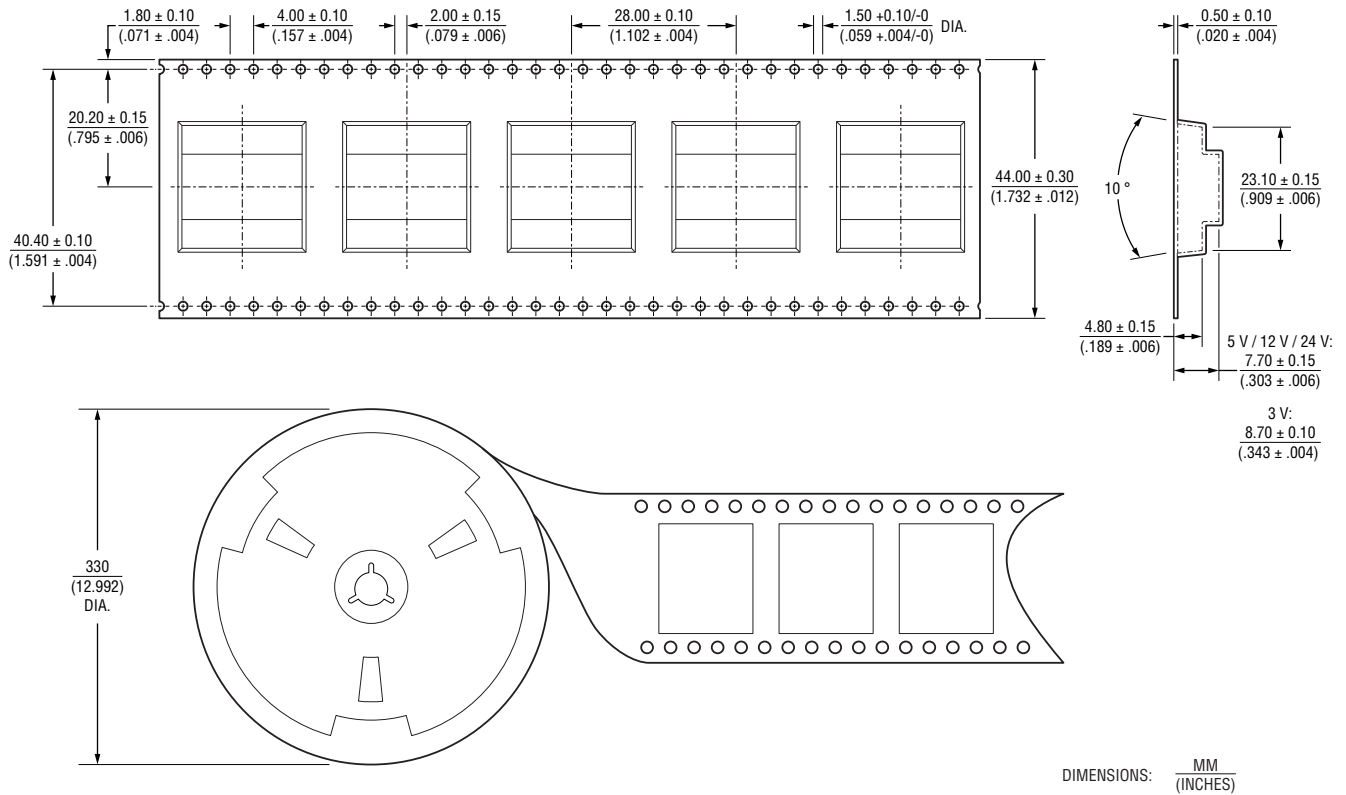
Preheat condition.....	150 ~ 200 °C / 60 ~ 120 seconds
Allowed time above 217 °C .....	60 ~ 90 seconds
Maximum temperature.....	260 °C
Maximum time at maximum temperature .....	10 seconds
Solder paste .....	Sn/3.0Ag/0.5Cu
Allowed reflows.....	2X maximum

# PLN0xx-ER20 Series – Planar Transformer

**BOURNS®**

## Packaging Specifications

200 pcs. per reel, 4 reels per carton



**BOURNS®**

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REV. 01/24

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Users should verify actual device performance in their specific applications.

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