



Features

- IEEE 802.3 Ethernet compatible
- Compatible with 1G/2.5G/5G Base-T
- PoE+ capable
- Discrete transformers and common mode chip inductors for flexible PCB layout
- Pairing common mode chip inductor SRF2012A-801Y for EMI reduction
- Expanded temperature range: -40 to +85 °C
- RoHS compliant* and halogen free**

SM453230-231N7YP - 1 / 2.5 / 5 GbE Chip-LAN Transformer

Electrical Specifications @ 25 °C

Inductance (Pin 1-2 & 6-7 / short 3-4)
230 μ H min. @ 100 kHz, 0.1 V, 0 mA
 . 200 μ H min. @ 100 kHz, 0.1 V, 15 mA
 Turns Ratio
 Pin 1-2 : 6-7 / short 3-4 : 1:1 \pm 3 %
 Insertion Loss
 1-250 MHz..... -1.5 dB typ.
-2.3 dB max.
 Capacitance (Pin 3-5 / short 3-4)
35 pF typ.
 PoE+.....700 mA
 Hi-Pot (Pin 1-6, short 3-4)
 1500 Vac, 60 s
 Operating Temperature.-40 °C to +85 °C
 Storage Temperature....-40 °C to +85 °C

Packaging Specifications

Tape & Reel..... 2000 pcs./reel

How To Order

SM453230 - 231 - N7 Y P

Model _____
 Packaging _____
 121 = Inductance code
 Termination _____
 N7 = Termination code
 Tolerance _____
 Y = Tolerance code
 Interface _____
 P = PoE

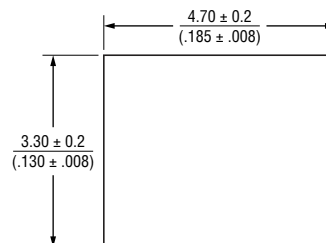
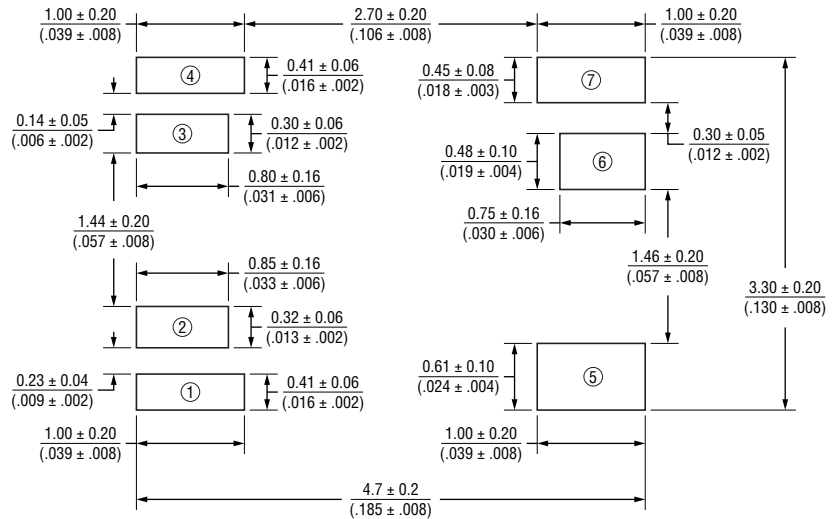
Additional Information

Click these links for more information:

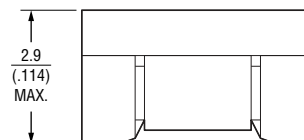


Product Dimensions

Terminal Dimensions – Top View



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$



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

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

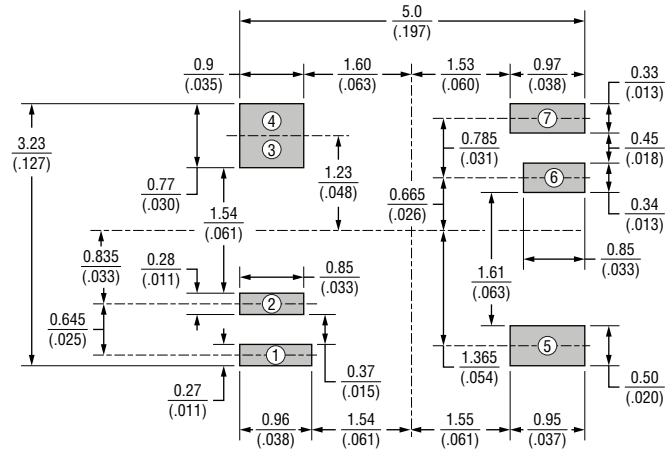
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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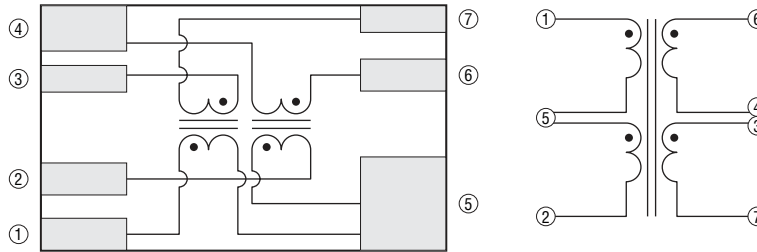
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Recommended Layout

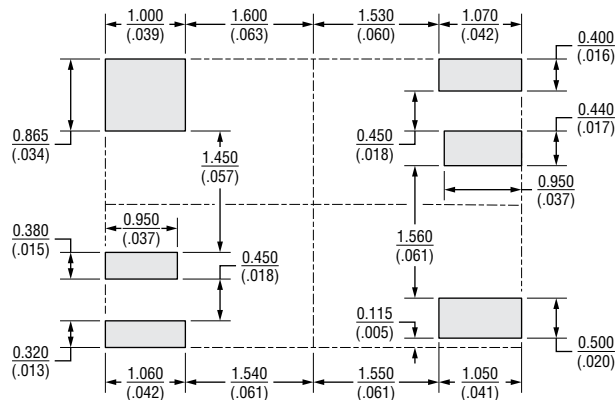


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Electrical Schematic



Solder Paste Stencil Aperture Recommendation



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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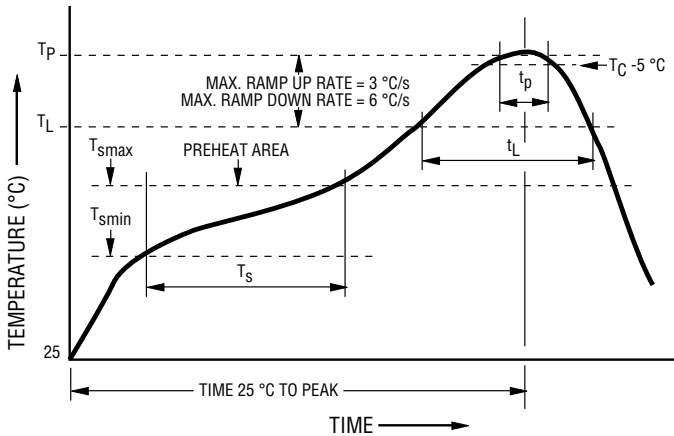
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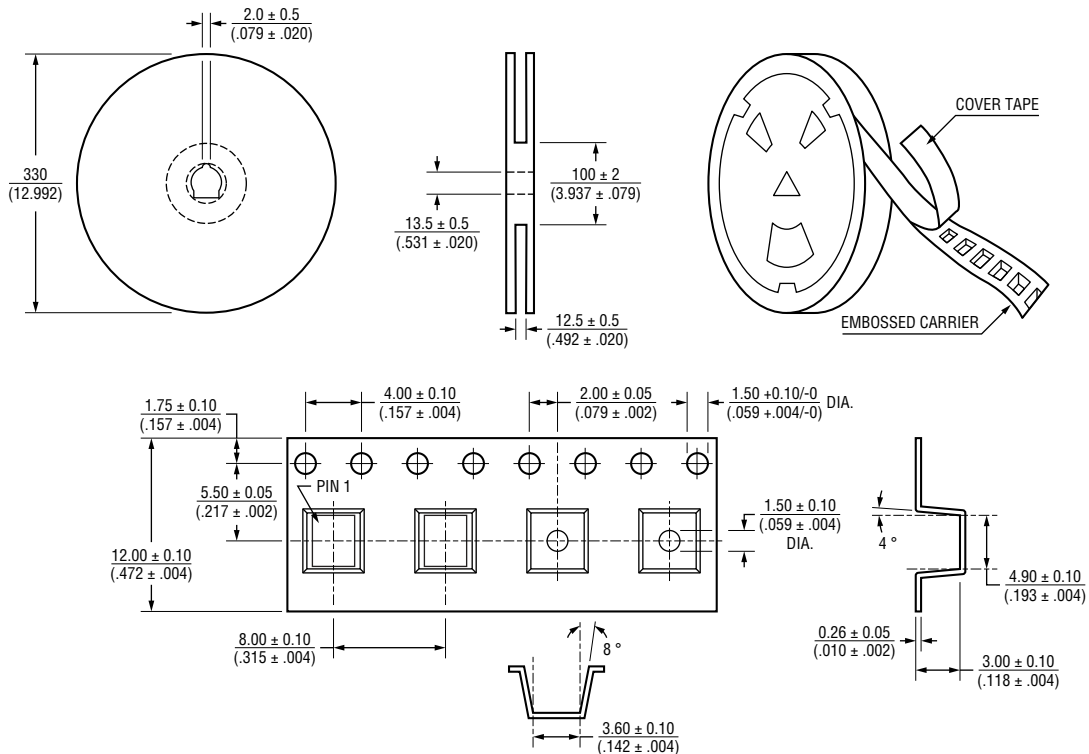
Solder Reflow Recommendations



Profile Feature	Pb-Free Assembly
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	150 °C 200 °C 60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L) Time (t_L) maintained above T_L	217 °C 60~150 seconds
Peak Package Body Temperature (T_p)	250 °C
Time (t_p)* within 5 °C of the specified classification temperature (T_c)	30 seconds*
Ramp Down Rate (T_p to T_L)	6 °C / second max.
Time 25 °C to Peak Temperature	8 minutes max.

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Packaging Specifications



DIMENSIONS: $\frac{MM}{(INCHES)}$

USER DIRECTION OF FEED

QTY: 2000 PCS. PER REEL

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