

Features

- Compliant with IEEE802.3 standards
- Designed for 10/100 Base-Tx and PoE
- RoHS compliant*

Applications

- VoIP
- Power over Ethernet - PoE

SM51108PEL LAN 10/100 Base-Tx VoIP Transformer (PoE) Modules

Electrical Specifications @ 25 °C

Turns Ratio ($\pm 3\%$) 1CT:1CT
 OCL (@100 kHz,
 0.1 V, 8 mA, DC Bias) 350 μ H min.
 Leakage Inductance
 (@100 kHz, 0.1 V
 with 1-2-3-6-7-8 Short)
 9-11 = 14-16 0.5 μ H max.
 Cw/w @ 100 kHz, 0.1 V 35 pF max.
 DCR
 1-3 = 6-8 0.8 ohm max.
 9-11 = 14-16 1.1 ohm max.
 Insertion Loss
 1-100 MHz -1.2 dB max.
 Return Loss (@ 100 Ohms)
 1-30 MHz -16 dB min.
 40 MHz -14 dB min.
 50 MHz -13 dB min.
 60-80 MHz -12 dB min.
 Cross Talk
 60 MHz -40 dB min.
 100 MHz -35 dB min.
 DCMRR
 30 MHz -43 dB min.
 60 MHz -37 dB min.
 100 MHz -33 dB min.
 PoE Current Up to 350 mA
 Hi-Pot Test 1500 Vrms
 Operating Temperature Range
 -40 °C to +85 °C
 Storage Temperature Range
 -25 °C to +125 °C

Environmental Specifications

Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Packaging Specifications

Tape & Reel 600 pcs./reel

How To Order

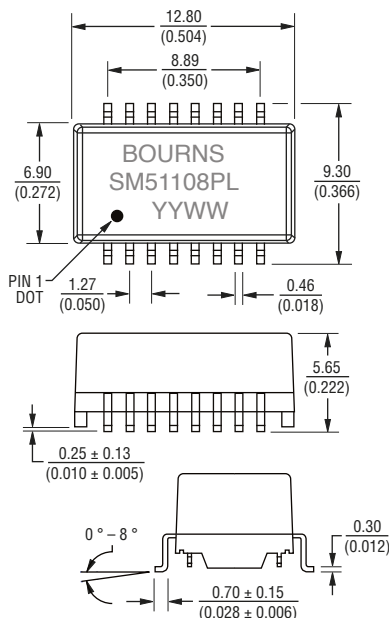
Model SM51108 P E L

Construction _____
 P = Potted

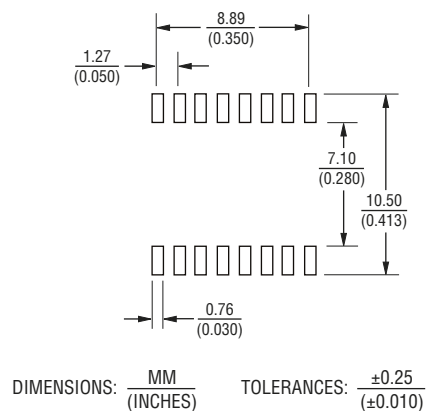
Packaging _____
 E = Tape and Reel (600 pcs./reel)

Termination _____
 L = Tin (RoHS Compliant)

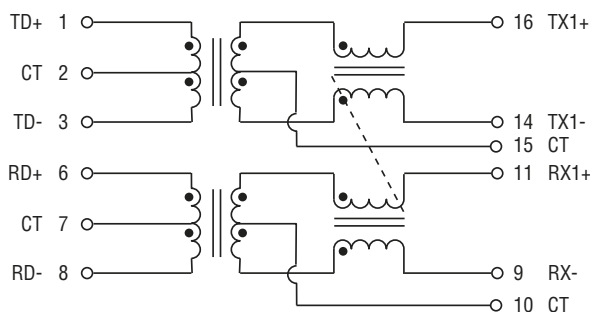
Product Dimensions



Recommended Layout



Electrical Schematic



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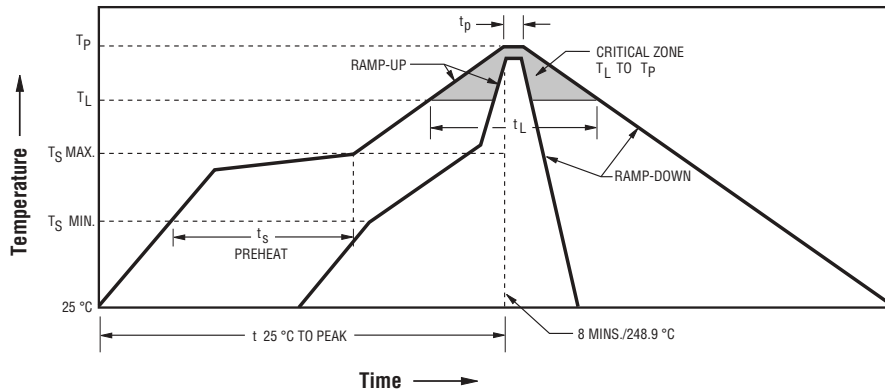
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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SM51108PEL LAN 10/100 Base-Tx VoIP Transformer (PoE) Modules



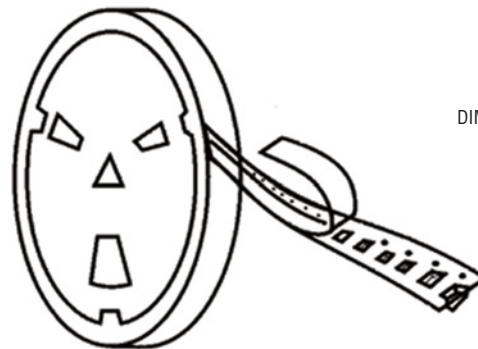
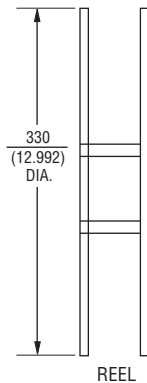
Soldering Profile



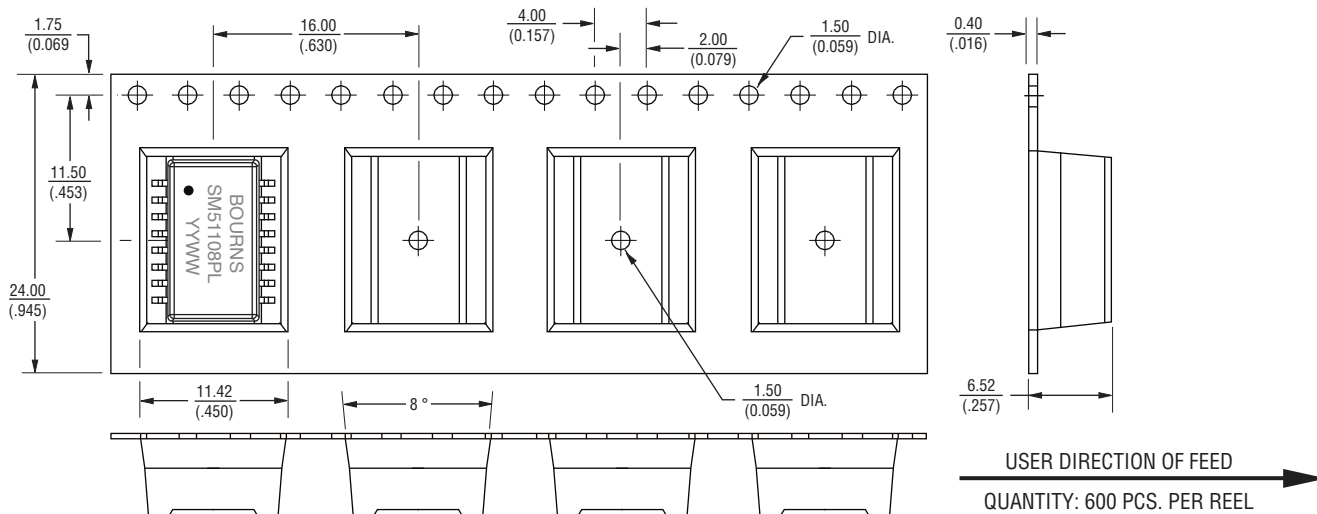
- Ramp-up rate = 3 °C/sec. max.
- Ramp-down rate = 6 °C/sec. max.
- $T_L = 217\text{ °C}$
- $t_L = 60\text{-}150\text{ sec.}$
- $T_p = 250 \pm 3\text{ °C}$
- Time within 5 °C of actual Peak Temp (t_p)² = 20-40 sec.
- $T_S\text{ min} = 150\text{ °C}$
- $T_S\text{ max} = 200\text{ °C}$
- $T_S\text{ min to } T_S\text{ max} = 60\text{-}180\text{ sec.}, 25\text{ °C to Peak Temperature} = 8\text{ min. max.}$

Refer to IPC/JEDEC J-STD020D standard.

Packaging Specifications



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



REV. 05/18

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