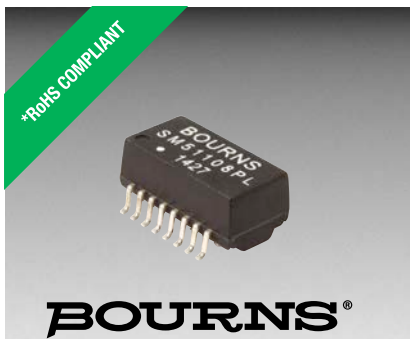




Features

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



This series is currently available but not recommended for new designs. The newer model [SM13126PEL](#) is recommended.

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)	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

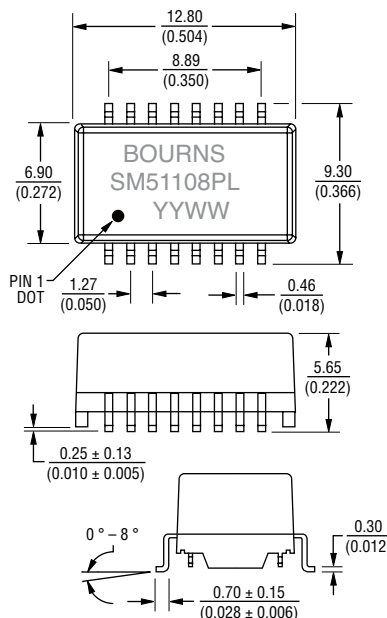
Packaging Specifications

Tape & Reel	600 pcs./reel
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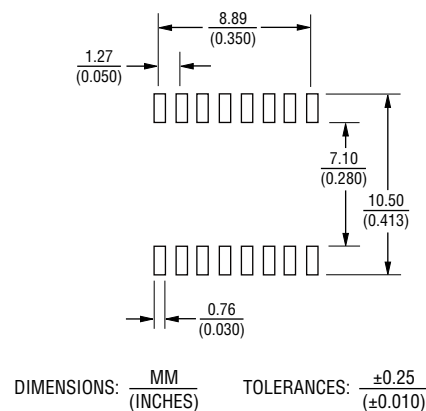
How To Order

Model	SM51108 P E L
Construction	P = Potted
Packaging	E = Tape and Reel (600 pcs./reel)
Termination	L = Tin (RoHS Compliant)

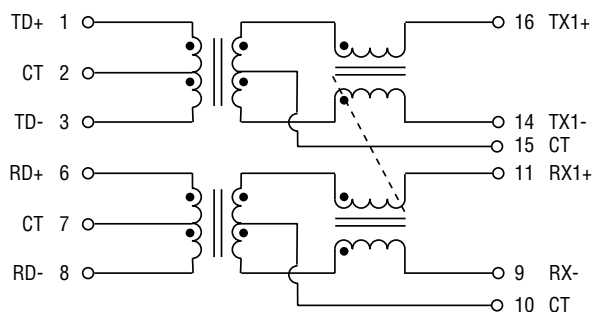
Product Dimensions



Recommended Layout



Electrical Schematic



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

*RoHS Directive 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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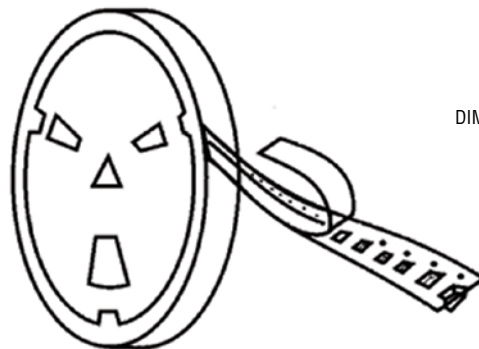
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The graph illustrates a heat treatment cycle with the following parameters and phases:

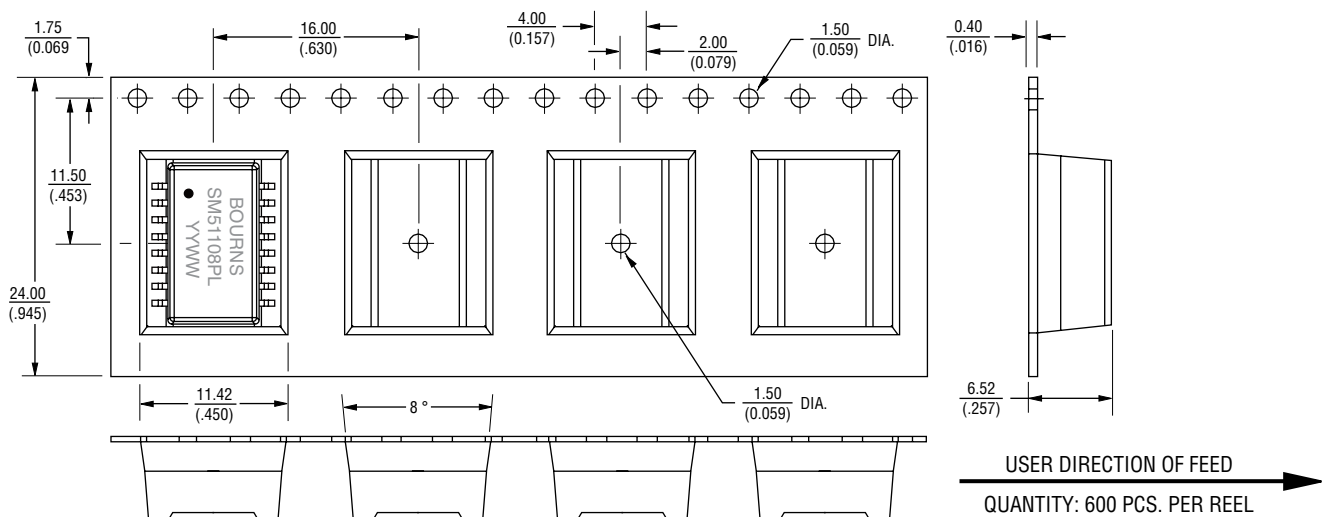
- Temperature Levels:** $25\text{ }^{\circ}\text{C}$, $T_S\text{ MIN.}$, $T_S\text{ MAX.}$, T_L , and T_P .
- Time Intervals:**
 - t_s : Preheat time from $25\text{ }^{\circ}\text{C}$ to $T_S\text{ MAX.}$
 - t_p : Time to reach peak temperature T_P
 - t_L : Time spent in the critical zone between T_L and T_P
- Phases:**
 - PREHEAT:** From $25\text{ }^{\circ}\text{C}$ to $T_S\text{ MAX.}$
 - RAMP-UP:** From $T_S\text{ MAX.}$ to T_P
 - CRITICAL ZONE:** The temperature range from T_L to T_P
 - RAMP-DOWN:** From T_P back to $25\text{ }^{\circ}\text{C}$
- Cooling Rate:** $8\text{ MINS./}248.9\text{ }^{\circ}\text{C}$

- 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.
- $T_S\text{ min} = 150\text{ °C}$
- $T_S\text{ max} = 200\text{ °C}$
- $T_S\text{ min to } T_S\text{ max} = 60\text{--}180\text{ sec., } 25\text{ °C to Peak Temperature} = 8\text{ min. max.}$

Diagram of a reel with a diameter dimension. The dimension is labeled as 330 (12.992) DIA. The word REEL is written below the diagram.



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



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