

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)	..... 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 320 mA
Hi-Pot Test	..... 1500 Vrms
Operating Temperature Range	..... -40 °C to +85 °C
Storage Temperature Range	..... -25 °C to +125 °C

Packaging Specifications

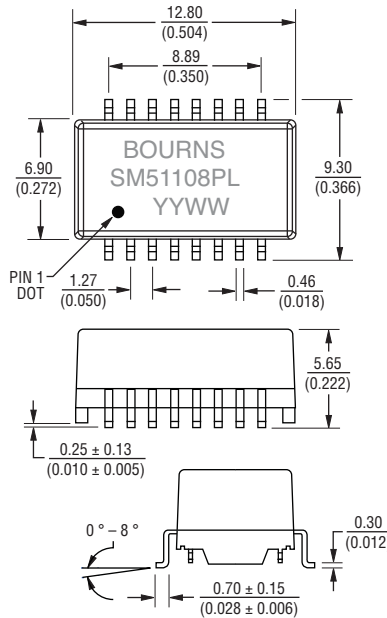
Tape & Reel 600 pcs./reel

How To Order

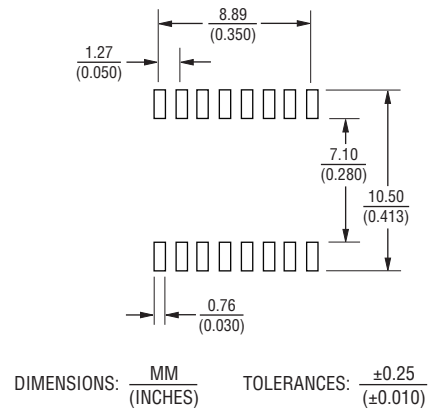
SM51108 P E L

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

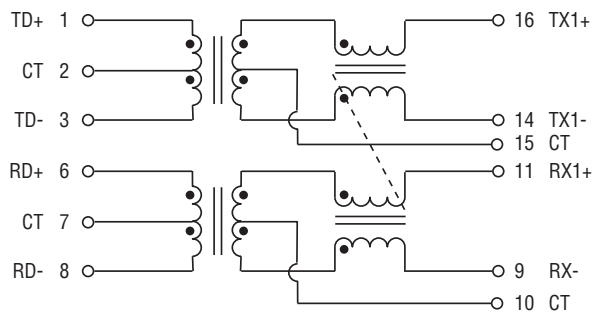
Product Dimensions



Recommended Layout



Electrical Schematic



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

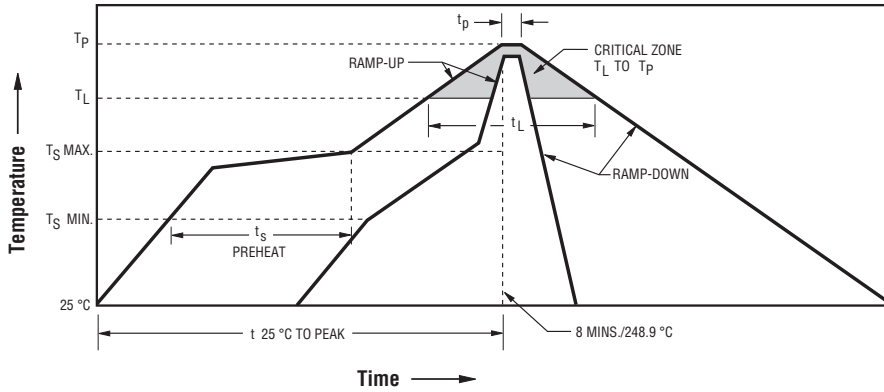
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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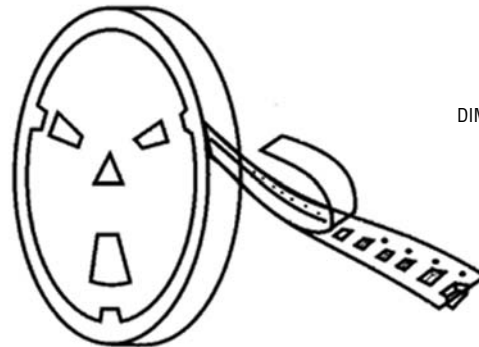
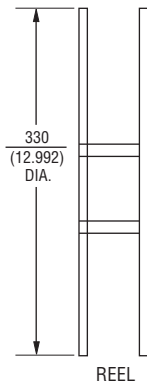
Soldering Profile



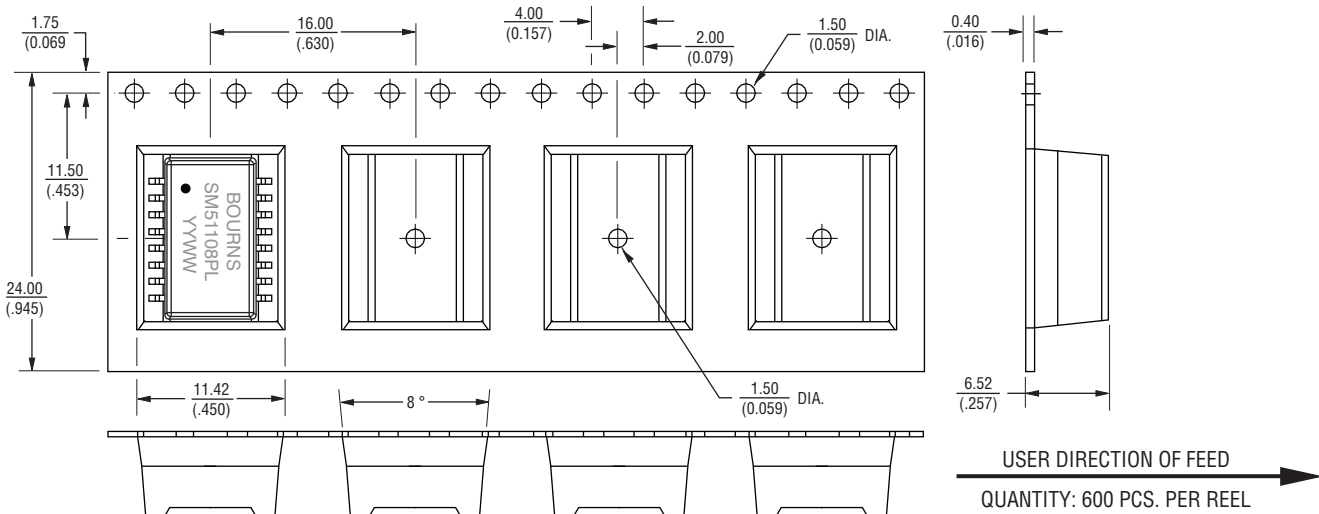
- Ramp-up rate = 3 °C/sec. max.
- Ramp-down rate = 6 °C/sec. max.
- $T_L = 217\text{ °C}$
- $t_L = 60\text{-}150\text{ sec.}$
- $T_p = 250 \pm 3\text{ °C}$
- Time within 5 °C of actual Peak Temp (t_p)² = 20~40 sec.
- $T_S\text{ min} = 150\text{ °C}$
- $T_S\text{ max} = 200\text{ °C}$
- $T_S\text{ min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

Refer to IPC/JEDEC J-STD020D standard.

Packaging Specifications



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



REV. 05/15

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