Features
- Compliant with IEEE802.3 standards
- Designed for 10/100/1000 Base-T and PoE+
- 5K VAC dielectric withstanding voltage
- RoHS compliant

Applications
- LAN
- Ethernet
- Power over Ethernet - PoE

SM51589PEL LAN 10/100/1000 Base-T Transformer (PoE+) Modules

Electrical Specifications @ 25 °C
- Turns Ratio (±5 %) ...................1CT:1CT
- OCL (@100 kHz, 0.1 V, 8 mA, DC Bias) .... 350 µH min.
- Leakage Inductance
  (@100 kHz, 0.1 V) ........... 0.5 µH max.
- Interwinding Capacitance
  (@ 100 kHz, 0.1 V) ........ 35 pF max.
- Isolation Hi-Pot ........... 5000 VAC, 1 mA, 2 seconds
- Insertion Loss
  1-100 MHz .................... -1.0 dB max.
- Return Loss (@ 100 Ohms)
  1-30 MHz ..................... -18 dB min.
  40 MHz ....................... -14.4 dB min.
  50 MHz ....................... -13.1 dB min.
  60-80 MHz .................. -12 dB min.
  100 MHz ................... -10 dB min.
- Cross Talk
  30 MHz ..................... -45 dB min.
  60 MHz ..................... -40 dB min.
  80 MHz .................... -35 dB min.
- DCMR
  30 MHz ..................... -43 dB min.
  60 MHz ..................... -37 dB min.
  80 MHz .................... -33 dB min.
- PoE+ Current .............. Up to 720 mA
- Operating Temperature Range
  -40 °C to +85 °C
- Storage Temperature Range
  -40 °C to +125 °C
- Moisture Sensitivity Level .............. 1
- ESD Classification (HBM) .............. N/A

Environmental Specifications
- Moisture Sensitivity Level .............. 1
- ESD Classification (HBM) .............. N/A

Packaging Specifications
- Tape & Reel .................. 350 pcs./reel

How To Order
SM51589 P E L

Model
Construction
Packaging
Termination
P = Potted
E = Tape and Reel (400 pcs./reel)
L = Tin (RoHS Compliant)

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

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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SM51589PEL LAN 10/100/1000 Base-T Transformer (PoE+) Modules

**Solder Profile**

Ramp-up rate = 3 °C/sec. max.
Ramp-down rate = 6 °C/sec. max.
T_L = 217 °C, t_L = 60-150 sec.
T_P = 250 °C ± 3 °C
Time within 5 °C of actual Peak Temp (T_P2) = 20-40 sec.
T_S min = 150 °C, T_S max = 200 °C
T_S min to T_S max = 60-180 sec., 25 °C to Peak Temperature = 8 min. max.

**Packaging Specifications**

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