

Ethernet

Power over Ethernet (PoE) Surge Protection

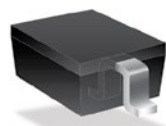
Solution Products



PT61020EL



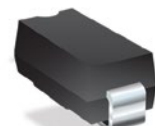
TCS-DL004-250-WH



CDSOD323-T05C



MOV-10D820K



SMLJ58A

Design Kit



PN-DESIGNKIT-44

Objective

Power over Ethernet (PoE) interfaces combine V_{PP} differential signals and nominal 48 V_{DC} power. This solution provides protection for both the data and power signals and is compatible with 10/100/1000 Base-T.

Solution

- 1 Quad Transformer: PT61020EL
- 4 TCS™ High-Speed Protectors: TCS-DL004-250-WH
- 4 TVS Diodes: CDSOD323-T05C
- 2 Metal Oxide Varistors (MOVs): MOV-10D820K
- 1 TVS Diode: SMLJ58A

Compliance

ITU-T K.20, K.21, K.45 Basic
Telcordia GR-1089-CORE Issue 6 Port Type 4

Alternate Recommendations

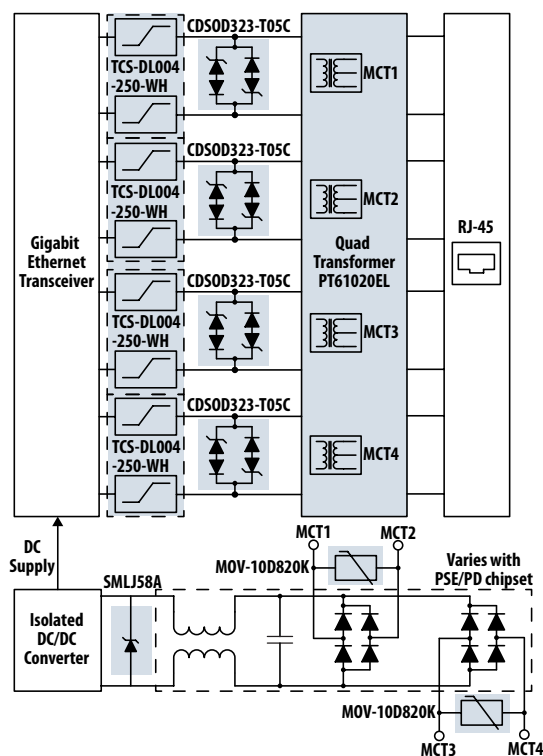
Other PortNote® Solutions:

- Ethernet - ESD Protection
- Ethernet - Power Over Ethernet (PoE) PD Solution
- Ethernet - Power Over Ethernet (PoE) PSE Solution
- Ethernet - Power Contact and Surge Protection

Variations of this circuit are available depending on specific design constraints; contact your local Bourns technical representative for more information.

Benefit

The Bourns® TCS™ High-Speed Protector and TVS Diode combination provide robust surge protection without impairing the Ethernet signal.



The schematic here illustrates the application protection and does not constitute the complete circuit design. Customers should verify actual device performance in their specific applications.