

Thunderbolt™ Port ESD & Overcurrent Protection

Solution Products



CDDFN10-0524P



CDSOD323-T05SC



MF-MSMF260-2

Design Kit



PN-DESIGNKIT-33

Objective

Thunderbolt™ is an interface for connecting peripheral devices to a computer via an expansion bus. Thunderbolt™ is a 10 Gbps dual-channel, dual-protocol (PCI Express and DisplayPort), bidirectional port. This solution provides ESD and overcurrent protection to this hot-pluggable interface.

Solution

- 1 TVS Diode Array: CDDFN10-0524P
- 1 TVS Diode: CDSOD323-T05SC
- 1 Multifuse® PPTC Resettable Fuse: MF-MSMF260-2

Compliance

IEC 61000-4-2 Level 4 (8 kV / 15 kV)

Alternate Recommendations

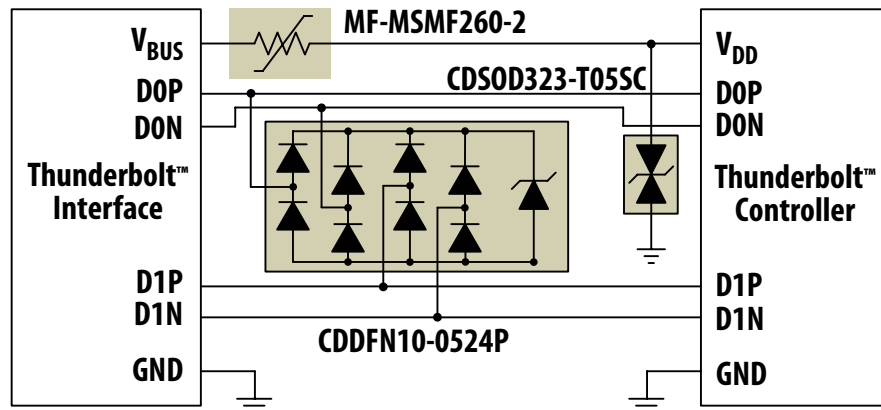
A model CDMSP10-0504M may be used and would replace both the CDDFN10-0524P and the CDSOD323-T05SC devices.

Other PortNote® Solutions:

- HDMI 1.4 - ESD & Overcurrent Protection
- DisplayPort 1.2 – ESD & Overcurrent Protection
- USB 3.0 - ESD & Overcurrent Protection

Benefit

This solution provides ESD protection without impairing the Thunderbolt™ signal.



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