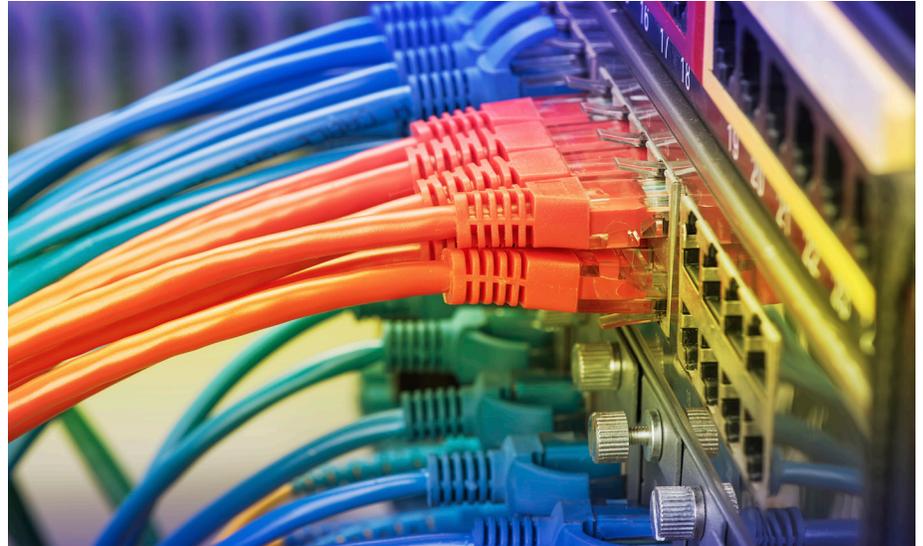![Semtech logo]

Gigabit Ethernet

RClamp®3374N

KEY FEATURES

- 3.3V low operating voltage
- Protects 4 lines
- ±30kV air discharge/ ±30kV contact
- Low capacitance for high-speed interfaces
- Able to withstand a high-level surge current (40A, 8/20us)
- Flow-through package (3.0 x 2.0 x 0.60mm)

Alternative Solutions
RClamp®0512TQ

KEY FEATURES

- 5V working voltage
- Protects two high-speed data lines
- ±30kV air discharge/ ±30kV contact
- Low capacitance: 1.1pF typ
- Dynamic Resistance: 0.075 Ohms (Typ)
- AEC-Q100 qualified
- Small 3-pin 0402 package
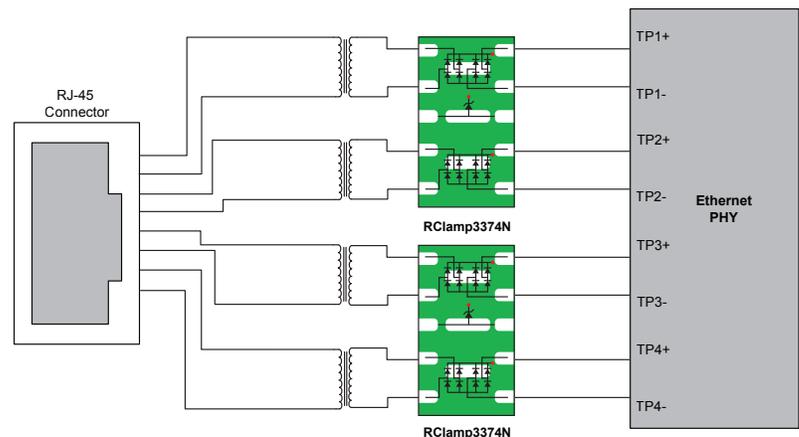 (1.0 x 0.60 x 0.40mm)

RClamp®2502L

KEY FEATURES

- 2.5V low operating voltage
- Protects up to two I/O lines
- ±15kV air discharge/ ±8kV contact
- <5pF (Line-to-Line) low capacitance
- High surge capability: 40A (tp=8/20µs)
- Industry standard SO-8 package

Surge and ESD Protection for Safeguarding Gigabit Ethernet

Gigabit Ethernet transceivers, built on advanced semiconductor process nodes, are more sensitive to electrical transient events than ever before. Today's advanced PHYs require state of the art TVS protection arrays that can absorb the expected transient energy, clamp the incoming surge to a safe level, and present sufficiently low junction capacitance to be electrically transparent to the system under normal operation.
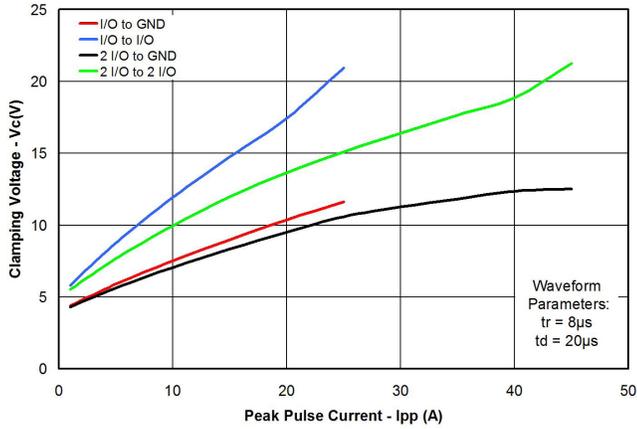
Semtech has pioneered and led the way in transient protection for high speed data lines. Semtech offers leading edge protection technology to achieve best in class protection on Gigabit Ethernet lines.
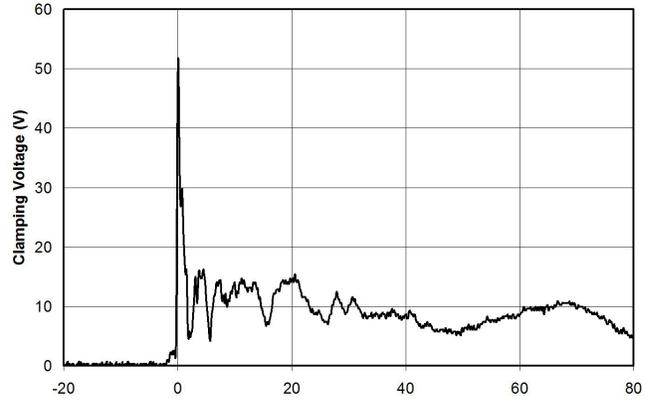

Gigabit Ethernet Protection with RClamp3374N

RClamp®3374N

Clamping Voltage vs. Peak Pulse Current

ESD Clamping - I/O to Gnd
(8kV Contact per IEC 61000-4-2)

Device Parameter Summary

Part #	V_{rvm}	Lines	ESD Rating		Cap (I/O - I/O)	Ipp @ 8/20µs	Package size (mm)	Schematic Reference
			Air	Contact				
RClamp3374N	3.3	4	±30kV	±30kV	1.7pF	40	3.0x2.0x0.6	
RClamp0512TQ	5	2	±30kV	±30kV	2.0pF	25	1.0x0.6x0.6	
RClamp2502L	2.5	2	±20kV	±5kV	1.5pF	40	4.9x5.9x1.5	

SEMTECH

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