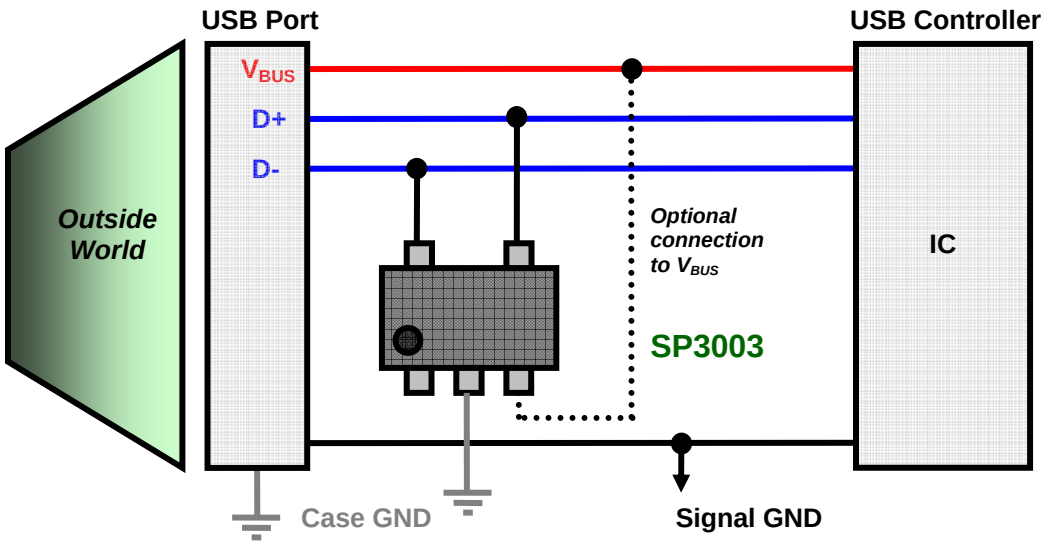
Application Guide
USB2.0

Considerations:

● Each port can operate up to 480Mbps
→ The high data rate requires a low capacitance device to preserve signal integrity

● Requires 2 channels of data line protection per port (i.e. D+/D-)
→ A 4 channel device can be useful if protecting a USB stack of 2 ports to make the ESD footprint as small as possible
→ V_{BUS} can be protected by connecting it to the V_{CC} pin on the diode array or by using a separate single channel device as previously shown (i.e. SP1003)

Application Schematic:



Recommended SPA Devices:

Ordering Number	ESD Level (Contact)	I/O Capacitance	# of Channels	V_{RWM}	Packaging
SP3003-02XTG	±8kV	0.65pF	2	6V	SOT553
SP3004-04XTG	±12kV	0.85pF	4	6V	SOT563
SP3002-04UTG	±12kV	0.85pF	4	6V	µDFN-6 (1.6x1.6mm)

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