


**INTERFACE APP NOTE**
**USB 3.0 Protection**

**DFN-8 PACKAGE**
**OBJECTIVE**

Universal Serial Bus (USB) 3.0 provides ports 5 Gbps of data transfer and 5V of power up to 900mA. As a hot-pluggable interface, USB typically protection against ESD and short circuits.

**BENEFIT**

The integrated TVS Diode solution is designed to protect the interface against surge events by using one device (PLR0506LP) to protect 6 datalines and 1 device (PSD05) to protect the  $V_{CC}$  Bus.

**COMPLIANCE**

- IEC 61000-4-2 ±8kV Contact, ±15kV Air Discharge
- IEC 61000-4-4 EFT 40A, 5/50ns
- IEC 61000-4-5 Surge Secondary Lightning, 4A @ 8/20µs

**SOLUTION**

- 1 x PLR0506LP in DFN-8 Package
- Stand-Off Voltage  $V_{WM}$ : 5 Volts
- Breakdown Voltage  $B_{V_{MIN}}$ : 6.0 Volts
- $V_C @ I_p$ : 18V @ 4A
- Leakage Current  $I_R$ : 3.0µA
- Typ. Capacitance: 0.8pF
- 1 x PSD05 in SOD-323 ( $V_{CC}$  Bus)

**ALTERNATE RECOMMENDATIONS**

- 1 x SRV05-4LC


**SOD-323 PACKAGE**
