



INTERFACE APP NOTE

RS-485/RS-422 Protection



SOT-23 PACKAGE

OBJECTIVE

RS-485, also known as TIA-485(-A)/EIA-485, is a standard defining the electrical characteristics of drivers and receivers for use in serial communication systems. Electrical signaling is balanced and multi-point systems are supported.

BENEFIT

The integrated TVS Diode solution is designed to protect the interface against surge events by using one device to protect transceivers connected to the twisted pair.

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, 50A @ 8/20µs

SOLUTION

- 1 x PSM712 in SOT-23 Package
- Stand-Off Voltage V_{WM} : -7V / +12V
- Breakdown Voltage $B_{V_{MIN}}$: -7.5V / +13.3V
- $V_C @ I_p$: 17V @ 34A / 30V @ 30A
- Leakage Current I_R : 20µA / 1µA
- Typ. Capacitance: 75pF

ALTERNATE RECOMMENDATIONS

- 1 x PSOT12C or 2 x PSOT12C
- 1 x PSOT08C for negative side of common mode signal

