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Introduction

The Teridian 78Q2123 (and 78Q2133) IC is designed to function properly in the presence of external system ESD noise. However, immunity to ESD noise is dependent on the total system enclosure design for effective external ESD noise isolation.

Improving ESD Tolerance

Figure 1 shows the addition of four 10 pF capacitors to the TXOP/N and RXIP/N signals. Capacitors are added to TXOP/N for MDIX operation.

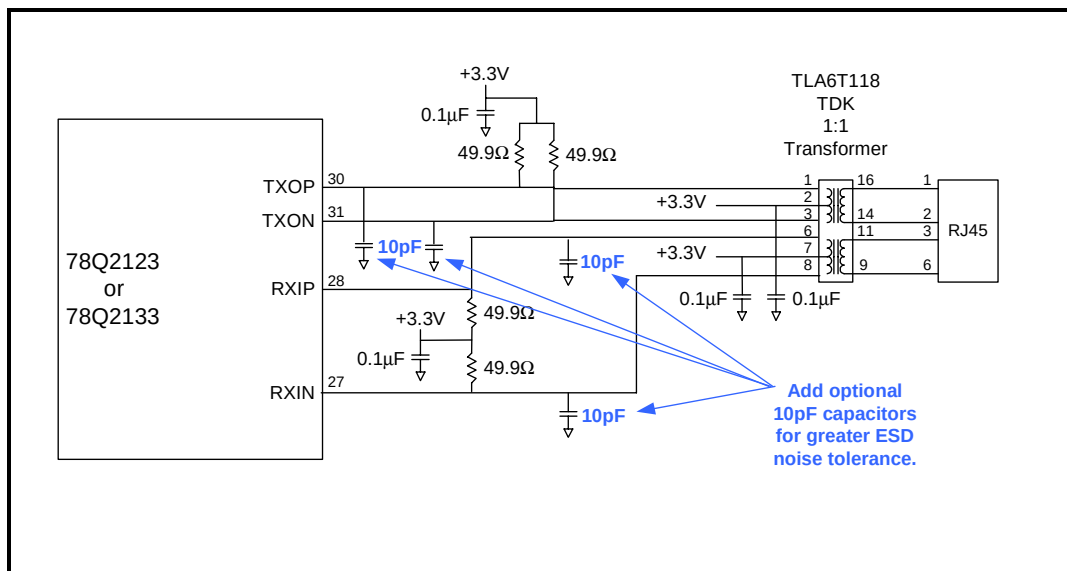


Figure 1 – Optional ESD Noise Reduction Capacitors

The necessity for incorporating the 10 pF capacitors is dependent on the system's printed circuit board layout towards isolating external ESD energy. Use of the capacitors is optional for reducing the occurrence of bit errors during ESD noise events. Receiver performance is not compromised by the addition of these capacitors. A maximum capacitor value of 20 pF may be used to achieve the desired level of ESD tolerance.

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