

NXP introduces ESD protection device for USB 3.0 and eSATA

March 8 2010

NXP Semiconductors today announced the availability of a new ESD protection device, the IP4284CZ10, for high speed differential interfaces such as USB 3.0 and eSATA. The IP4284CZ10 offers the industry's lowest differential crosstalk with excellent line-to-line capacitance matching and straight-through routing for optimized signal integrity. The IP4284CZ10 delivers 8kV of contact ESD protection which is at level 4 according to the IEC61000-4-2 standard.

USB 3.0 and eSATA transmit and receive simultaneously and have unique signal integrity requirements for ESD devices that have not existed with half-duplex or unidirectional high speed interfaces such as USB 2.0, HDMI and DisplayPort. The IP4284CZ10 was optimized in order to meet the dual requirements of matching capacitance, while maintaining low crosstalk between differential pairs and cost benefits of a single silicon die. This minimizes the signal skew and data errors on sensitive receivers when an adjacent transmitter channel is active.

“SuperSpeed USB is now adopted by the major players in the computing industry and customers show a high interest in ESD protection for the new data lines. The IP4284CZ10 is already being used by customers for their latest computers,” says Stefan Seider, product marketing manager, Integrated Discrettes, [NXP Semiconductors](#).

A complete design-in package is available, which includes layout recommendations, eye diagrams, crosstalk measurements, which are summarized in an USB 3.0 application note. The IP4284CZ10 is

available either in the leadless SOT1059 (1.0 x 2.5 x 0.5 mm) or in the leaded TSSOP10 package (3.0 x 3.0 x 1.1 mm), which are both Pb-free and RoHS compliant.

The NXP IP4284CZ10 is in mass production and available worldwide. Pricing for the IP4284CZ10 is US \$0.30/piece at 10,000 quantities.

Source: NXP

Citation: NXP introduces ESD protection device for USB 3.0 and eSATA (2010, March 8) retrieved 27 April 2024 from <https://phys.org/news/2010-03-nxp-esd-device-usb-esata.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.