ESD Diode Array Delivers Virtually Invisible Protection for Highest Performing High-Definition Connections

STMicroelectronics has simplified design and reduced the real-estate needed to protect the electronics behind the latest high-speed multimedia connections, with an all-in-one device compatible with today's highest signal speeds and featuring the smallest package dimensions currently on the market.

With growing access to high-definition content throughout increasingly sophisticated home multimedia networks, equipment such as Blu-ray players, set-top boxes, PVRs, game terminals, PCs, network storage and televisions are now integrating high-speed interfaces such as HDMI, DisplayPort and DiiVA (Digital interactive interface for Video and Audio). These interconnects combine several multi-gigabit data channels to achieve total data rates in excess of 10 Gbit/s in the case of HDMI 1.4 and up to 13.5 Gbit/s for DiiVA.

ST's HSP06-8M16 ESD provides eight channels of protection, allowing designers to use only one device per connector, simplifying PCB design. In addition, the device has smaller dimensions than alternative approaches, which frees real-estate on the board for other value-added functions.

With ultra-low capacitance per line and extremely close matching between capacitance values, the HSP061-8M16 also minimizes slowing of data edges and prevents signal skew between adjacent lines. This prevents communication errors that ultimately can produce glitches in played-back HD images or audio.

Major features of the HSP061-8M16:

* 15kV ESD protection meeting IEC 61000-4-2

* 3.3 x 1.5 x 0.6 mm package

* 100 Ohm differential impedance

* 0.6 pF input/output capacitance

* 6.3 GHz bandwidth: compatible with HDMI, DVI, LVDS, Diiva, DisplayPort, USB3.0, SATA

The HSP061-8M16 is sampling now to lead customers, and will be available in a 16-pad uDFN package.

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