



Toshiba Launches High Peak Pulse Current TVS Diodes for Power Line Protection

High-performance diodes protect USB and power supply interfaces in mobile devices

Düsseldorf, Germany, 5th March, 2017 – Toshiba Electronics Europe has announced a new series of TVS diodes that protect USB power lines and power supply connectors used in mobile devices.

Toshiba's DF2SxxP2 series protects the power lines of smartphones and tablets by suppressing malfunctions and damage from ESD, noise from induced lightning that enters via the power cord and signal cable, and transient voltage at the time of turning equipment on or off. They can also be used to protect the USB Type-C™ charging lines ($V_{BUS} = 5V$ to $20V$) that will be widely used in the future.

The diodes are based on Toshiba's proprietary Zener diode process. This has lowered dynamic resistance to 80% of existing parts, while high peak pulse current ratings are over 30 times^{[1][2]} greater. Each diode in the series has an ESD rating of 30kV^[3].

There will be six diodes in the DF2SxxP2 series, offering power supply line voltage ratings of 5V, 12V and 20V. Each voltage rating is available in either a compact, low-profile SOD-963

(CST2C) or a standard SOD-323 (USC) package. Package dimensions are 1.6mm x 0.8mm x 0.48mm and 2.5mm x 1.25mm x 0.9mm respectively.

Notes:

[1] Compared with the current 5V line product (DF2S6.8ASL)

[2] Compared with the current 5V line product. The peak pulse current rating differs depending on the voltage class.

[3] @IEC61000-4-2 (contact)

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About Toshiba Electronics Europe

[Toshiba Electronics Europe](#) (TEE) is the European electronic components business of [Toshiba Electronic Devices and Storage Corporation](#). TEE offers a broad IC and discrete product line including high-end memory, microcontrollers, ASICs and ASSPs for automotive, multimedia, industrial, telecoms and networking applications. The company also has a wide range of power semiconductor solutions as well as storage products including HDDs, SSDs, SD Cards and USB sticks.

TEE was formed in 1973 in Neuss, Germany, providing design, manufacturing, marketing and sales and now has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom. TEE employs approximately 300 people in Europe. Company president is Mr Akira Morinaga. For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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