



Toshiba announces availability of highly accurate SPICE models

G2 SPICE models offer more accurate transient modelling for power applications

Düsseldorf, Germany, 27th June 2022 – Toshiba Electronics Europe GmbH (“Toshiba”) today announces the availability of highly accurate G2 SPICE models allowing designers to more faithfully simulate the performance of their designs before committing to hardware. Alongside Toshiba’s existing G0 SPICE models that emphasize computational speed over accuracy, the new range of G2 SPICE models is now accessible to simulate transient characteristics more accurately.

Simulation is a valuable tool for designers as they reduce the number of prototypes required, saving the need for respins, thereby increasing development efficiency, and reducing overall time, cost, and risk.

In the challenging world of power electronics and automotive design there is a strong demand for preliminary performance predictions of the EMI performance and power dissipation of the entire system. This leads to a growing demand for SPICE models for power semiconductors that can predict power conversion efficiencies, EMI and other relevant parameters.

These new G2 SPICE models for discrete power devices are created using the macro model format, combining multiple compact models to match the structure of the device, representing the electrical characteristics with a few non-linear elements and a continuous arbitrary function. With this approach, switching simulations are more accurate and closer to actual measurements by improving the reproducibility of the high-current-domain characteristics of the I_D - V_{DS} curve, including the voltage-dependent characteristics of the parasitic capacitance.

Available from Toshiba's [website](#), the G2 models cover low voltage MOSFETs (12V-300V) and medium to high voltage MOSFETs (400V to 900V). Versions are available for PSpice and LTSpice.

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) is the European electronic components business of [Toshiba Electronic Devices and Storage Corporation](#). TEE offers European consumers and businesses a wide variety of innovative hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical semiconductors as well as microcontrollers and application specific standard products (ASSPs) amongst others.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services. The company president is Mr. Tomoaki Kumagai.

For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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