

Toshiba expands family of high-speed, low-voltage MOSFETs with new 60V and 120V devices

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Toshiba America Electronic Components (TAEC) today announced that it has expanded its family of low-voltage, high-speed MOSFETs with new, ultra-efficient 60V and 120V devices that will save space and reduce losses in secondary synchronous rectification designs.

Targeted at switch mode power supplies in applications such as AC/DC adapters, industrial systems, [telecom equipment](#) and [servers](#), the 16 new trench MOSFET devices are based on Toshiba's eighth generation U-MOS VIII-H process. This process delivers significant improvements in trade-off characteristics between low on-resistance ($R_{DS(ON)}$) and low

input capacitance (C_{iss}) and improves switching speeds and minimizes radiated noise.

Available in either TO-220 or TO-220SIS 'smart isolation' package formats, the new product line consists of eight 60V MOSFETs and eight 120V MOSFETs. By offering lower $R_{DS(ON)} * C_{iss}$ 'figures of merit', compared to previous generations of devices, the new MOSFETs operate with lower conduction and drive losses and deliver significant efficiency increases.

Among the new MOSFETs are the TK100E06N1 (TO-220) and TK100A06N1 (TO-220SIS) 60V devices with typical on-resistance ratings (@ $V_{GS} = 10V$) as low as just 1.9m Ω and 2.2m Ω , respectively. The 120V series includes TK56E12N1 (TO-220) and TK56A12N1 (TO-220SIS) devices with respective typical on-resistances of 6.1m Ω and 6.5m Ω (@ $V_{GS} = 10V$).

Samples of all of the new parts are available now.

Provided by Toshiba

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