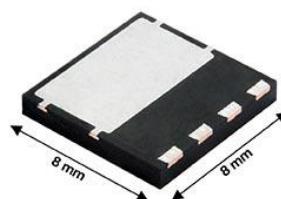


New SiHH070N60EF Fourth-Generation 600 V EF Series Fast Body Diode MOSFET Provides Industry-Low $R_{DS(ON)} \cdot Q_g$ FOM of 3.1 $\Omega \cdot nC$, Lowers Conduction and Switching Losses, Increases Efficiency in Telecom, Industrial, and Enterprise Applications

Product Benefits:

- Ultra low on-resistance and gate charge reduce conduction and switching losses to save energy
- Gate charge times on-resistance figure of merit (FOM) of 3.1 $\Omega \cdot nC$
- Low effective output capacitances $C_{o(er)}$ and $C_{o(tr)}$ improves switching performance in zero voltage switching (ZVS) topologies such as LLC resonant converters
- Offered in the PowerPAK® 8x8 package
- RoHS-compliant and halogen-free
- Designed to withstand overvoltage transients in avalanche mode with guaranteed limits through 100 % UIS testing



Market Applications:

- Totem-pole bridgeless power factor correction (PFC) and soft-switched DC/DC converter topologies for telecom, industrial, computing, and enterprise power systems

The News:

Vishay Intertechnology introduces a new device in its fourth generation of 600 V EF Series fast body diode MOSFETs. Providing high efficiency for telecom, industrial, and enterprise power supply applications, the Vishay Siliconix n-channel SiHH070N60EF offers the lowest on-resistance times gate charge for devices in the same class, a key figure of merit (FOM) for 600 V MOSFETs used in power conversion applications.

- Built on Vishay's latest energy-efficient E Series superjunction technology
- Slashes on-resistance by 29 % compared with previous-generation devices, while delivering 60 % lower gate charge
- FOM of 3.1 $\Omega \cdot nC$ is 30 % lower than the closest competing MOSFET in the same class
- $C_{o(tr)}$ of 560 pF is 32 % lower than the closest competing MOSFET in the same class

The Key Specifications:

- Drain-source voltage: 600 V
- Typical on-resistance at 10 V: 0.061 Ω
- Typical gate charge at 10 V: 50 nC
- Effective output capacitance, energy related: 90 pF
- Effective output capacitance, time related: 560 pF
- Package: PowerPAK 8x8



NEW PRODUCT INFORMATION

Product Group: Vishay Siliconix, MOSFETs / December 2020



The Perspective:

Vishay offers a broad line of MOSFET technologies that support all stages of the power conversion process, from high voltage inputs to the low voltage outputs required to power the latest high tech equipment. With the SiHH070N60EF and upcoming devices in the fourth-generation 600 V EF Series family, the company is addressing the need for efficiency and power density improvements in two of the first stages of the power system architecture — totem-pole bridgeless power factor correction (PFC) and soft-switched DC/DC converter topologies.

Availability:

Samples and production quantities of the SiHH070N60EF are available now, with lead times of 10 weeks.

To access the product datasheet on the Vishay Website, go to
<http://www.vishay.com/ppg?92290> (SiHH070N60EF)

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