2015 Super 12 Products

SiHP33N60EF / EF Series

High-Voltage MOSFETs

2015 S12 SUPER 12 FEATURED PRODUCTS

A WORLD OF SOLUTIONS

SiHP33N60EF / EF Series

HV Fast Body Diode Power MOSFET Offers up to 10x Reduction in Qrr

- Features:
  - Based on E Series Super Junction technology
  - Fast body diode provides as much as 10x reduction in Qrr over the standard E Series MOSFET for lifetime control
  - Designed and developed for soft-switching topologies along with similar standard E Series on-resistance values
    - Scales of economy can be achieved within a system using EF Series throughout the design (in place of standard E Series MOSFETs with similar on-resistance) in the hard-switched topology
  - 600 V, 33 A maximum, $R_{DS(on)}$ max of 98 mΩ
  - 28 A maximum, $R_{DS(on)}$ max of 123 mΩ option also available (SiHx28N60EF)
  - Package options include TO-220, TO-263 (D^2PAK), and TO-247AC

SiHP33N60EF / EF Series

- Applications / Market Segments:
  - Hard- and soft-switching (focus) topologies
    - — Zero voltage switching (ZVS) and LLC converters
  - Applications
    - — Renewable energy: PV inverters
    - — Industrial: battery chargers
    - — Telecom: servers
    - — Computing: ATX / silver box SMPS

- Datasheet document number: 91592
- Product page: www.vishay.com/ppg?91592

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- Competition:
  - Infineon: CoolMOS (CFD)
  - ST: FDmesh II (Fast body diode MOSFETs)
  - Fairchild: FRFET
  - Toshiba: DTMOSIV (HSD)
- Why use SiHP33N60EF / EF Series?
  - We offer similar on-resistance to our standard E Series MOSFETs and can provide economies of scale where a customer can use EF MOSFETs in hard-switched topologies as well, and will achieve similar efficiency to using a standard E Series MOSFET
  - The competition sees 5 % to 7 % increase in on-resistance from standard MOSFET to fast body diode MOSFET

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