VISHAY INTERTECHNOLOGY, INC.

600 V POWER MOSFETs

SiHG22N60S-E3 / SiHG47N60S-E3

MOSFETs

PRODUCT OVERVIEW

www.vishay.com

600 V POWER MOSFETs

SiHG22N60S-E3 / SiHG47N60S-E3

Vishay is adding to its Super Junction power MOSFET family with new n-channel devices in the TO-247 package, featuring ultra-low maximum on-resistance and low gate charge for an improved figure of merit (FOM).

Features:

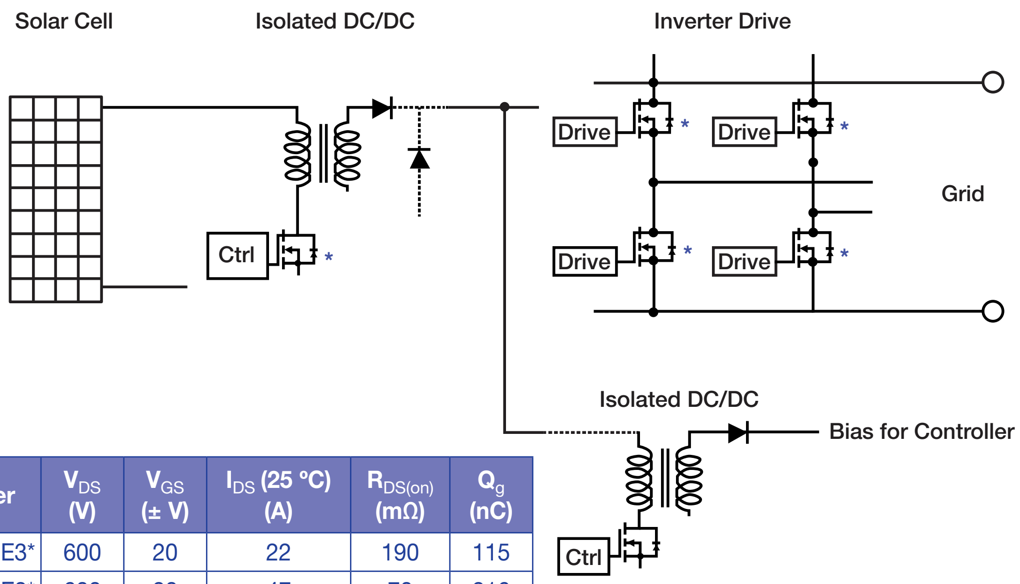
- High E_{AR} capability
- Improved R_{ON} x Q_g figure of merit (FOM)
  - 18.81 Ω-nC (SiHG22N60S-E3)
    - SiHP22N60S-E3, SiHF22N60S-E3, and SiHB22N60S-E3 also available
  - 15.12 Ω-nC (SiHG47N60S-E3)
- Ultra-low $R_{DS(on)}$
- Ultra-low gate charge (Q_g)
- 100 % avalanche tested
- dV/dt ruggedness
- Compliant to RoHS Directive 2002/95/EC

Applications

- PFC power supply stages
- Hard switching topologies
- Solar inverters
- UPS
- Motor control
- Lighting
- Server telecom

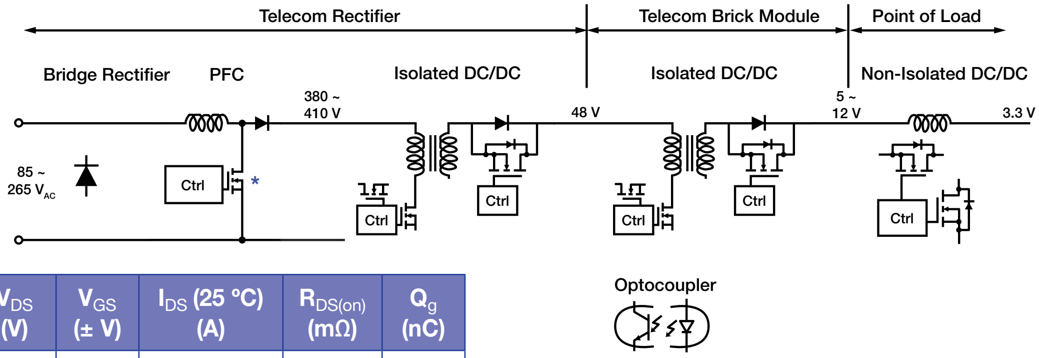
These devices are produced using Vishay Super Junction technology, which has been tailored to minimize on-state resistance and withstand high energy pulses in the avalanche and commutation modes.

Solar Cell and Inverter Block Diagram



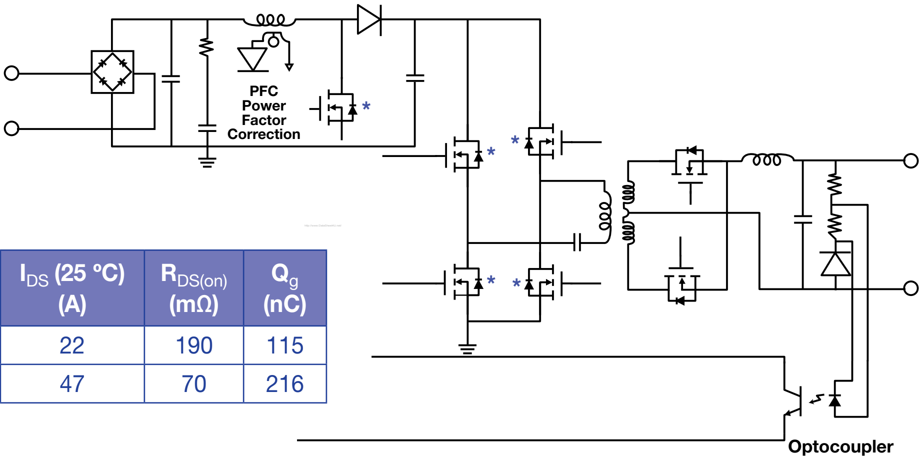
Part Number	V_{DS} (V)	V_{GS} (± V)	I_{DS} (25 °C) (A)	$R_{DS(on)}$ (mΩ)	Q_g (nC)
SiHG22N60S-E3*	600	20	22	190	115
SiHG47N60S-E3*	600	20	47	70	216

Telecom Power Supply Block Diagram



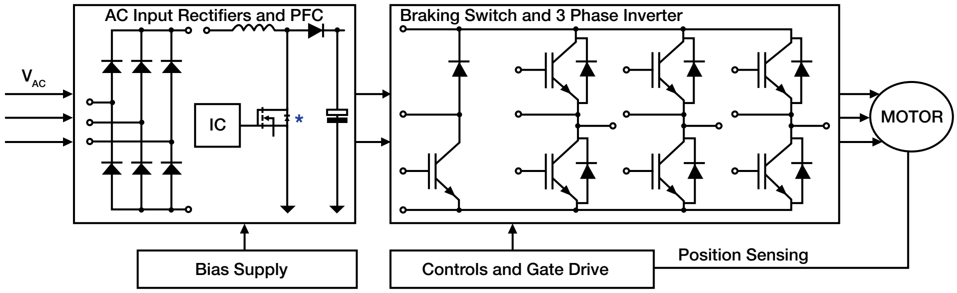
Part Number	V_{DS} (V)	V_{GS} (± V)	I_{DS} (25 °C) (A)	$R_{DS(on)}$ (mΩ)	Q_g (nC)
SiHG22N60S-E3*	600	20	22	190	115
SiHG47N60S-E3*	600	20	47	70	216

Server Power Supply Block Diagram



Part Number	V_{DS} (V)	V_{GS} (± V)	I_{DS} (25 °C) (A)	$R_{DS(on)}$ (mΩ)	Q_g (nC)
SiHG22N60S-E3*	600	20	22	190	115
SiHG47N60S-E3*	600	20	47	70	216

Motor Control Power Supply Block Diagram



Part Number	V_{DS} (V)	V_{GS} (± V)	I_{DS} (25 °C) (A)	$R_{DS(on)}$ (mΩ)	Q_g (nC)
SiHG22N60S-E3*	600	20	22	190	115
SiHG47N60S-E3*	600	20	47	70	216

SEMICONDUCTORS:
Rectifiers • High-Power Diodes and Thyristors • Small-Signal Diodes • Zener and Suppressor Diodes • FETs • Optoelectronics • ICs • Modules

PASSIVE COMPONENTS:
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