

SOT-227 Power Modules in Single-Switch and Low Side Chopper Configurations Increase Power Conversion Efficiency While Eliminating the Need for PCB Redesigns; Feature Latest 650 V Superjunction MOSFET Technology for an Optimized $R_{DS(on)}$ - Q_g Tradeoff

Product Benefits:

- Superjunction power MOSFETs
- Industry-standard SOT-227 package
- Available in single-switch and low side chopper (with integrated 650 V SiC diode) configurations
- Current ratings of 50 A, 100 A, and 150 A
- Low on-resistance down to 14.8 m Ω typical
- Low conduction and switching losses
- Wide temperature range of -55 °C to +150 °C



Market Applications:

- DC/DC converters and DC/AC inverters in solar power inverters and hydrogen generation and fuel cell systems; auxiliary electronics and energy transportation within HVDC infrastructure; charging stations; switch mode power supplies and welding and cutting equipment; UPS, lighting systems, and rail power supplies; and medical imaging equipment such as X-ray and MRI systems

The News:

Vishay Intertechnology introduces four new power modules featuring 650 V superjunction MOSFETs in the industry-standard SOT-227 package. Designed to deliver an optimized balance between conduction and switching losses, the Vishay Semiconductors VS-FC50SA65, VS-FC100SA65, VS-FC150SA65, and VS-FC50LA65 support high efficiency power conversion in energy and industrial applications.

- The components leverage the latest high efficiency 650 V superjunction MOSFET technology to achieve a highly competitive tradeoff between on-resistance and gate charge. This allows designers to reduce power losses while maintaining fast switching performance
- For existing designs, the devices' SOT-227 package provides a drop-in replacement for competing solutions, lowering costs by eliminating the need for PCB redesigns



The Key Specifications:

Part number	VS-FC50LA65	VS-FC50SA65	VS-FC100SA65	VS-FC150SA65
V_{DS} (V)	650	650	650	650
$R_{DS(on)}$ typ. (m Ω)	45	44	22	14.8
Q_g (nC)	167	167	338	508
Continuous drain current at $T_c = 90^\circ\text{C}$ (A)	42	51	82	115
Configuration	Low side chopper	Single switch	Single switch	Single switch

Availability:

Sample and production quantities of the VS-FC50SA65, VS-FC100SA65, VS-FC150SA65, and VS-FC50LA65 are available now with lead times of 12 weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?97328> (VS-FC50LA65)

<http://www.vishay.com/ppg?97321> (VS-FC50SA65)

<http://www.vishay.com/ppg?97316> (VS-FC100SA65)

<http://www.vishay.com/ppg?97317> (VS-FC150SA65)

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