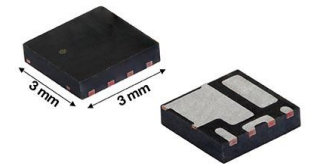




New SiZF300DT 30 V MOSFET Half-Bridge Power Stage With Integrated Schottky Diode Increases Power Density and Efficiency; Delivers 11 % Higher Output Current Than Other Solutions in PowerPAIR® 3x3F and Utilizes 65 % Less PCB Space Than 6 mm x 5 mm Packages

Product Benefits:

- High side TrenchFET® MOSFET and low side SkyFET® MOSFET with Schottky diode integrated in one compact PowerPAIR 3.3 mm by 3.3 mm package
 - Internally connected in a half-bridge configuration
 - Low-side MOSFET and Schottky diode are monolithically integrated in SkyFET MOSFET
 - Delivers increased power density and efficiency, while reducing component counts and simplifying designs
- Optimized for high current applications
 - On-resistance down to 4.5 mΩ at 10 V for the Channel 1 MOSFET and 1.84 mΩ at 10 V for the Channel 2 MOSFET
- Designed for fast switching
 - Low gate charge of 6.9 nC (Channel 1) and 19.4 nC (Channel 2)
- 100 % Rg- and UIS-tested, RoHS-compliant, and halogen-free



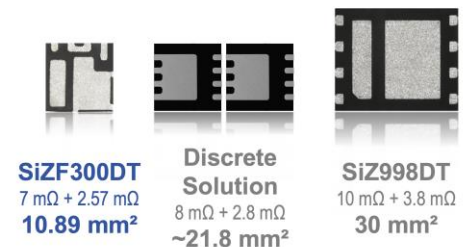
Market Applications:

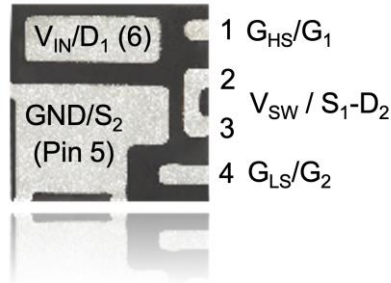
- Point-of-load (POL) conversion, power supplies, and synchronous buck and DC/DC converters in graphic and accelerator cards, computers, servers, and telecom and RF networking equipment

The News:

Vishay Intertechnology introduces a new 30 V n-channel MOSFET half-bridge power stage that combines a high side TrenchFET MOSFET and low side SkyFET MOSFET with monolithically integrated Schottky diode in one compact PowerPAIR 3.3 mm by 3.3 mm package. For power conversion in computing and telecom applications, the Vishay Siliconix SiZF300DT delivers increased power density and efficiency, while reducing component counts and simplifying designs.

- 65 % smaller than dual devices in 6 mm by 5 mm packages with similar on-resistance, making it one of the most compact integrated products on the market
- A unique pin configuration and construction delivers up to 11 % higher output current per current phase than competing products in the same footprint area, in addition to higher efficiency for output current above 20 A
- Pin configuration and large PGND pad enhance thermal transfer, optimize the electrical path, and enable a simplified PCB layout





This bottom view of the SiZF300DT shows the device's distinctive pinout configuration, which enhances thermal transfer, optimize the electrical path, and enable a simplified PCB layout

The Key Specifications:

Channel	1	2
V_{DS} (V)	30	30
$R_{DS(ON)}$ max. (m Ω) @	10 V	1.84
	4.5 V	2.57
Q_g typ. (nC)	6.9	19.4
I_D (A)	75	141

Availability:

Samples and production quantities of the new dual MOSFET are available now, with lead times of 12 weeks for large orders.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?76288> (SiZF300DT)

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