



Vishay Intertechnology 80 V Symmetric Dual MOSFET Delivers Best in Class RDS(ON) in PowerPAIR® 3x3FS to Increase Power Density, Efficiency, and Thermal Performance

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Requiring 50 % Less PCB Space Than Discrete Devices in the PowerPAK® 1212, Space-Saving Device Reduces Component Counts and Simplifies Designs

MALVERN, Pa., Feb. 28, 2024 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced a new 80 V symmetric dual n-channel power MOSFET that combines high and low side TrenchFET® Gen IV MOSFETs in a single 3.3 mm by 3.3 mm PowerPAIR® 3x3FS package. For power conversion in industrial and telecom applications, the Vishay Siliconix [SiZF4800LDT](#) increases power density and efficiency while enhancing thermal performance, reducing component counts, and simplifying designs.

The dual MOSFET released today can be used in place of two discrete devices typically specified in the PowerPAK® 1212 package, saving 50 % board space. The device provides designers with a space-saving solution for synchronous buck converters, point of load (POL) converters, and half- and full-bridge power stages for DC/DC converters in radio base stations, industrial motor drives, welding equipment, and power tools. In these applications, the high and low side MOSFETs of the SiZF4800LDT form an optimized combination for 50 % duty cycles, while its logic level turn-on at 4.5 V simplifies circuit driving.

To increase power density, the MOSFET offers best in class on-resistance down to 18.5 mΩ typical at 4.5 V. This is 16 % lower than the closest competing device in the same package dimensions. For increased efficiency in high frequency switching applications, the SiZF4800LDT offers a low on-resistance times total gate charge — a key figure of merit (FOM) for MOSFETs used in power conversion applications — of 131mΩ*nC.

The device's flip-chip technology enhances thermal dissipation, resulting in 54 % lower thermal resistance compared to competing MOSFETs. The SiZF4800LDT's combination of low on-resistance and thermal resistance results in a continuous drain current of 36 A, which is 38 % higher than the closest competing device. The MOSFET features a unique pin configuration that enables a simplified PCB layout and supports shortened switching loops to minimize parasitic inductance. The SiZF4800LDT is 100 % Rg- and UIS-tested, RoHS-compliant, and halogen-free.

Competitor Comparison Table:

Part number		SiZF4800LDT (New)	Competitor	SiZF4800LDT Performance improved
Package		PowerPAIR 3x3FS	PowerPAIR 3x3FS	
Dimensions (mm)		3.3 x 3.3 x 0.75	3.3 x 3.3 x 0.75	-
Configuration		Symmetric dual	Symmetric dual	-
V _{DS} (V)		80	80	-
V _{GS} (V)		± 20	± 20	-
R _{DS(on)} (mΩ) @ 4.5 V _{GS}	Typ.	18.5	22	+16%
	Max.	23.8	29	+18%
Q _g (nC) @ 4.5 V _{GS}	Typ.	7.1	6.0	-
	FOM	-	131	+1%
I _D (A)	Max.	36	26	+38%
R _{thJC} (C/W)	Max.	2.2	4.8	+54%

Samples and production quantities of the SiZF4800LDT are available now, with lead times of 26 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**™ Vishay Intertechnology, Inc. is a Fortune 1,000 Company listed on the NYSE (VSH). More on Vishay at www.vishay.com.

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Vishay on Facebook: <http://www.facebook.com/VishayIntertechnology>

Vishay Twitter feed: <http://twitter.com/vishayindust>

Link to product datasheet:

<http://www.vishay.com/ppg?262251> (SiZF4800LDT)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720315108938>

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