



Vishay Intertechnology World's Best Automotive -80 V P-Channel MOSFET Increases Efficiency and Power Density

April 7, 2021

Industry-Best FOM AEC-Q101 Device Offered in Compact PowerPAK® SO-8L Package With Gullwing Leads

MALVERN, Pa., April 07, 2021 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced the world's best AEC-Q101 qualified p-channel -80 V TrenchFET® MOSFET. With the lowest on-resistance of any -80 V p-channel device, the new Vishay Siliconix SQJA81EP increases power density and efficiency in automotive applications. In the compact 5.13 mm by 6.15 mm PowerPAK® SO-8L single package with gullwing leads, the [SQJA81EP](#) offers on-resistance down to 17.3 mΩ maximum / 14.3 mΩ typical at 10 V.

The on-resistance of the Automotive Grade MOSFET released today is 28 % lower than the closest competing device in the DPAK package — while offering a 50 % smaller footprint — and 31 % lower than previous-generation solutions. These values translate into energy savings by minimizing power losses from conduction while allowing higher output for increased power density. Combined with the SQJA81EP's superior gate charge down to 52 nC at 10 V — which reduces losses from gate driving — the result is best in class gate charge times on-resistance, a critical figure of merit (FOM) for MOSFETs used in power conversion applications.

With high temperature operation to +175 °C, the device provides the ruggedness and reliability required for automotive applications such as reverse polarity protection, battery management, high side load switching, and LED lighting. In addition, the SQJA81EP's gullwing leads allow for increased automatic optical inspection (AOI) capabilities and provide mechanical stress relief for increased board-level reliability.

The device's -80 V rating provides the safety margin required to support several popular input voltage rails, including 12 V, 24 V, and 48 V systems. The MOSFET's increased power density saves PCB space in these systems by reducing the number of components needed in parallel. In addition, as a p-channel device, the SQJA81EP enables simpler gate drive designs that don't require the charge pump needed by its n-channel counterparts. Lead (Pb)-free, halogen-free, and RoHS-compliant, the MOSFET is 100 % Rg and UIS tested.

Samples and production quantities of the SQJA81EP are available now, with lead times of 14 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.

The DNA of tech™ is a trademark of Vishay Intertechnology. TrenchFET and PowerPAK are registered trademarks of Siliconix incorporated.

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

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

Share it on Twitter: [http://twitter.com/intent/tweet?text=@vishayindust introduces the new Vishay Siliconix SQJA81EP the world's best AEC-Q101 qualified p-channel -80 V TrenchFET MOSFET. - https://bit.ly/3fUTnxo](http://twitter.com/intent/tweet?text=@vishayindust%20introduces%20the%20new%20Vishay%20Siliconix%20SQJA81EP%20the%20world's%20best%20AEC-Q101%20qualified%20p-channel%20-80%20V%20TrenchFET%20MOSFET.-https://bit.ly/3fUTnxo)

Link to product datasheet:

<http://www.vishay.com/ppg?77266> (SQJA81EP)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72157718827308616>

For more information please contact:

Vishay Intertechnology
Peter Henrici, +1 408 567-8400
peter.henrici@vishay.com

or

Redpines
Bob Decker, +1 415 409-0233
Email: bob.decker@redpinesgroup.com



Source: Vishay Intertechnology, Inc.