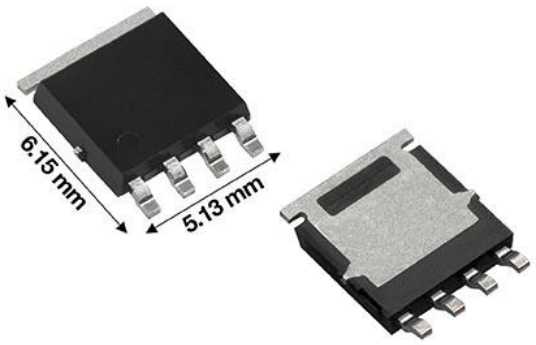
Industry-Best SQJA81EP Automotive Grade -80 V P-Channel MOSFET in Compact PowerPAK® SO-8L Package Increases Efficiency and Power Density

Product Benefits:

- AEC-Q101 qualified
- World's best maximum on-resistance, down to 17.3 mΩ at 10 V, saves energy by minimizing power losses from conduction, while allowing higher output for increased power density
- Best in class gate charge times on-resistance, a critical figure of merit (FOM) for MOSFETs used in power conversion applications
- Gate charge down to 52 nC at 10 V reduces losses from gate driving
- Compact 5.13 mm by 6.15 mm PowerPAK® SO-8L single package with gullwing leads
- High temperature operation to +175 °C provides ruggedness and reliability
- Gullwing leads increase board-level reliability
- Lead (Pb)-free, halogen-free, and RoHS-compliant
- 100 % Rg and UIS tested



Market Applications:

- Reverse polarity protection, battery management, high side load switching, and LED lighting in automobiles

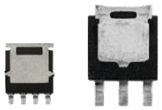
Buy It Now:

Check distributor stock on the Vishay website

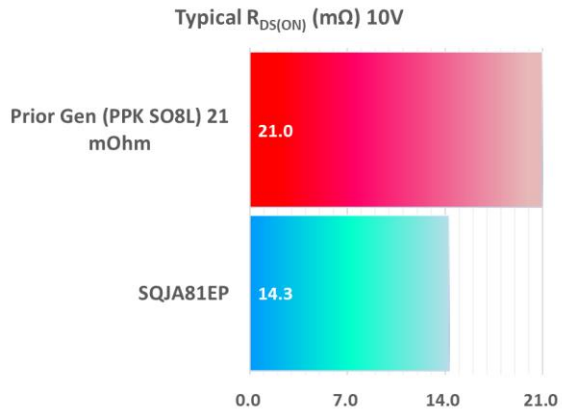
The News:

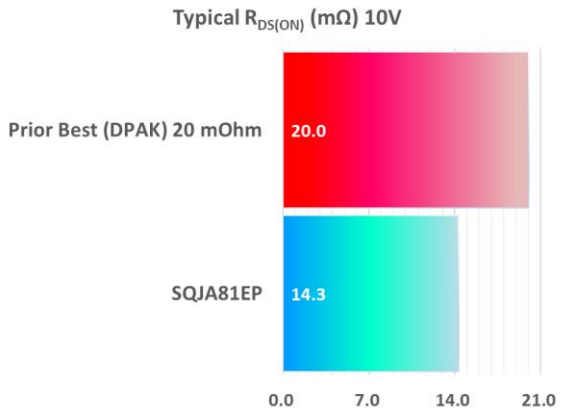
Vishay Intertechnology introduces the world's best AEC-Q101 qualified p-channel -80 V TrenchFET® MOSFET. With the lowest on-resistance of any -80 V p-channel device, the new Vishay Siliconix SQJA81EP increases power density and efficiency in automotive applications. In the compact 5.13 mm by 6.15 mm 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 SQJA81EP's on-resistance 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



SQJA81EP	**Industry Best**
PowerPAK SO-8L	**DPAK**
17.3 mΩ	**25 mΩ**
5.25 mm x 6.25 mm	6.7 mm x 10.4 mm
Area = 32.8 mm^3	**Area = 70 mm^3**





- 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 by reducing the number of components needed in parallel
- As a p-channel device, the SQJA81EP enables more simple gate drive designs that don't require the charge pump needed by its n-channel counterparts

The Key Specifications:

Part number		SQJA81EP
Package		PowerPAK SO-8L
V_{DS} (V)		-80
V_{GS} (V)		± 20
$R_{DS(ON)}$ @ V_{GS} = -10 V (mΩ)	**Typ.**	14.3
	Max.	17.3
$R_{DS(ON)}$ @ V_{GS} = -4.5 V (mΩ)	**Typ.**	21.9
	Max.	26.5
Q_g @ V_{GS} = -10 V (nC)	**Typ.**	52
	Max.	80

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

To access the product datasheet on the Vishay Website, go to
http://www.vishay.com/ppg?77266 (SQJA81EP)

For technical questions, contact:
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