–100 V P-Channel MOSFET Enables Higher Power Density

SQJ211ELP Best in Class Automotive MOSFET

VISHAY
The DNA of tech.

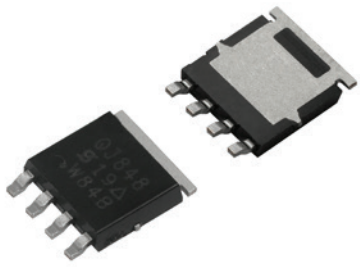
AUTOMOTIVE GRADE

ADVANTAGE

The SQJ211ELP features class-leading $R_{DS(on)}$ in a compact 6 mm by 5 mm package and provides a building block for load switching, battery, and main circuit protection in a wide variety of automotive applications.

KEY PRODUCT FEATURES

- ✓ AEC-Q101 qualified
- ✓ Typical $R_{DS(on)}$ of 24.2 mΩ / maximum $R_{DS(on)}$ of 30 mΩ
- ✓ Class-leading $R_{DS(on)}$ minimizes power losses
- ✓ Compact footprint of 32.8 mm²
- ✓ Gullwing leads optimized to achieve maximum relief for mechanical and thermal stresses for increased board-level reliability



MARKETS AND APPLICATIONS

AUTOMOTIVE

- 12 V to 48 V systems
- Battery management systems
- Braking control
- Body control modules
- DC/DC converters
- ECU
- e-Bikes
- On-board chargers

KEY PRODUCT BENEFITS

On-resistance	↓
Power losses	↓
PCB footprint for MOSFET	↓
Mechanical and thermal stress	↓
Current output	↑
Power density	↑
Board-level reliability	↑

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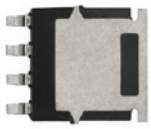
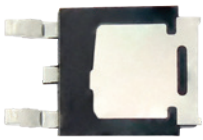
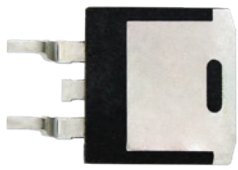
ADDITIONAL BENEFITS

- Compatible with logic-level operations
- Low Q_g reduces power losses from gate driving
- Class-leading $R_{DS(on)}$ reduces the power loss during conduction
- 26 % lower typical on-resistance than the best product in the DPAK
- 50 % smaller footprint than the DPAK

PowerPAK SO-8L	DPAK	D²PAK
		
≤ 32.8 mm²	~70 mm²	~140 mm²

- The operation of p-channel MOSFETs eliminates the need for a charge pump and enables simpler gate drive designs
- Enables the implementation of a high side switch, which allows the load to connect to ground directly and improves detection of ground faults