

SQJQ140E Automotive N-Channel 40 V MOSFET

Increase Efficiency, Power Density, and Overall System Performance in Automotive Applications



ADVANTAGE

The SQJQ140E provides a versatile building block to achieve energy-efficient, space-saving, and reliable automotive electronics.

KEY PRODUCT FEATURES

- ✓ AEC-Q101 qualified
- ✓ Micro-ohm specs: typical $R_{DS(ON)}$ of $440 \mu\Omega$ / maximum $R_{DS(ON)}$ of $530 \mu\Omega$
- ✓ Reduces power losses for increased efficiency
- ✓ Package with wire-free construction is capable of conducting high current
- ✓ Gullwing leads optimized to achieve maximum relief for mechanical and thermal stresses
- ✓ Increases board-level reliability
- ✓ Utilizes less than half the PCB footprint of the D²PAK and enables higher power density

MARKETS AND APPLICATIONS





AUTOMOTIVE

- 12 V systems
- Power steering / EPS
- Battery management
- Liquid pumps
- Cooling systems
- Motor drive control
- DC/DC converters
- Load switching

ENABLES HIGHER POWER DENSITY

- 64 % lower package height than the D²PAK
- 60 % smaller package footprint than the D²PAK

	PowerPAK 8 × 8 L	D ² PAK / TO-263
		
Dimensions	8.1 mm × 8 mm × 1.6 mm	10.4 mm × 15.9 mm × 4.5 mm
Footprint	64.8 mm ²	165 mm ²
Volume	103.7 mm ³	742.5 mm ³

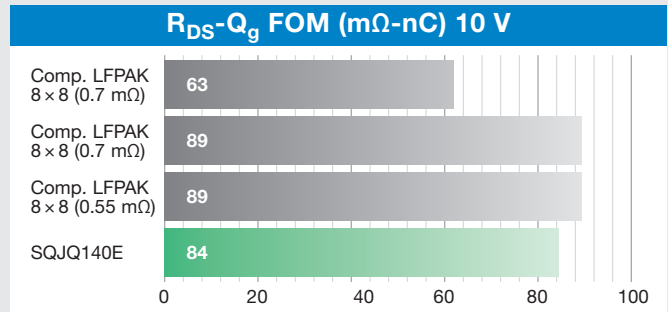
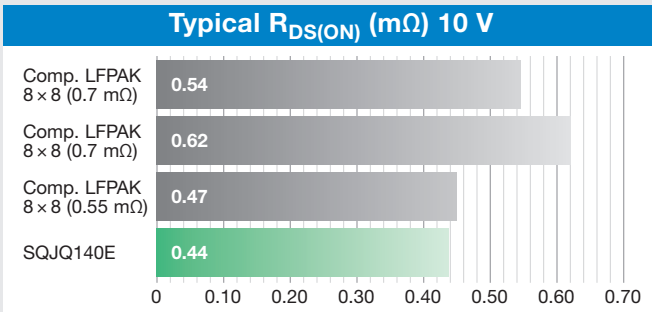
RESOURCES



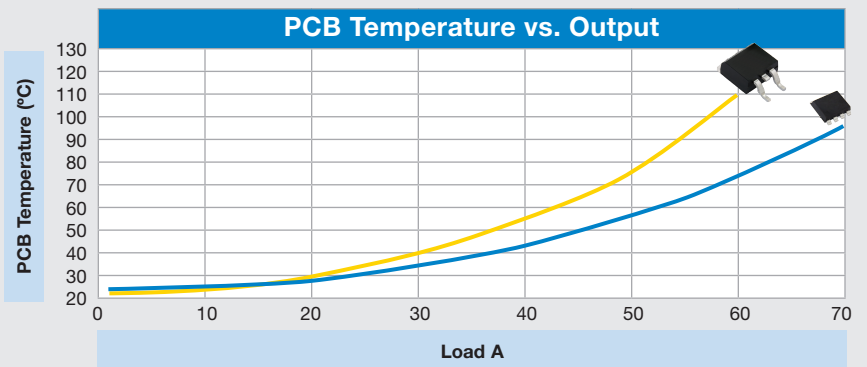
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ADDITIONAL BENEFITS

- Lowest $R_{DS(ON)}$ among devices in 8 mm by 8 mm packages with gullwing leads



- Lower PCB temperature reduces negative impacts on the performance of other electronic components
- Increases the performance of the overall system



- Improved package reduces the device's $R_{DS(ON)}$ and leads to lower temperatures at the drain pad of the MOSFET and on the PCB

