

NXP announces world's smallest high-performance MOSFET

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NXP Semiconductors, the independent company founded by Philips, today announced a new range of small signal MOSFET devices housed in one of the world's smallest packages, the SOT883. Boasting an ultra-small 1.0 x 0.6 mm footprint, NXP's SOT883 MOSFETs deliver power dissipation and performance comparable to SOT23, while occupying only 14 percent of the printed circuit board space.

Designed for use in a broad range of applications including DC/DC converter modules, power supplies for LCD TV and load switching for mobile phones and other portable devices, the SOT883 MOSFETs' ultra-small footprint, extremely low 0.5 mm profile and best-in-class switching speed and very low $R_{ds(on)}$ enable manufacturers to meet consumer demand for more compact and power-efficient products.

“Market demands for smaller portable devices with increased battery life are driving the race to fit sophisticated functionality into smaller and smaller form factors,” said Dean Montano, product marketing manager, NXP Semiconductors. “Built on NXP's proven Quad Flat Non-leaded technology, the SOT883 MOSFETs offer customers a power efficient and environmentally friendly package that still delivers the performance required by today's cellular phone and mobile computing applications.”

In addition to dramatically reducing the MOSFETs' footprint, NXP has eliminated the leads, which both frees up additional board space and improves thermal performance. This combination of superior thermal performance and $R_{ds(on)}$ values of less than 0.65 ohms at 2.5 V allows

NXP's newest MOSFETs to offer higher current carry capacity than currently available 1.0 x 0.6 mm MOSFETs. The new series also features best in class switching speed, with turn on times between 12-16 ns and turn-off times between 17-24 ns.

Manufactured using pure tin plating, high-efficiency packing techniques and green plastics that dispense with toxic flame retardants, the SOT883 MOSFET devices meet all environmental protection targets. The high packing density also fits 10,000 devices on a standard 180 mm reel, thus lowering assembly costs and inventory requirements.

The SOT883 is just one package offered by NXP in a portfolio of over 50 space-saving leadless packages with between two and 24 pins and dimensions ranging from 1.0 x 0.6 x 0.4 mm to 5.0 x 6.0 x 0.85 mm. These packages maximize the active silicon on the circuit board and minimize the use of raw materials to reduce costs. NXP offers the industry's broadest portfolio of multimarket semiconductors in leadless packages.

Source: NXP

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