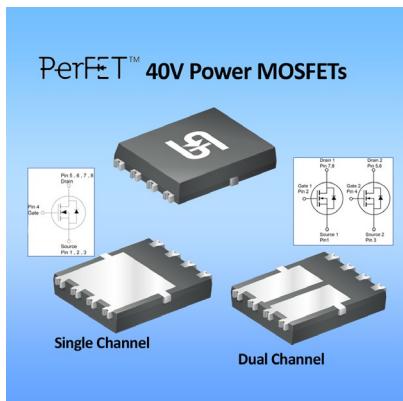




Taiwan Semiconductor PerFET™ Series of 40V MOSFETs Deliver Improved SMPS Performance

Advanced proprietary process delivers significant improvements in $R_{DS(ON)}$ and Switching FOM; NH Series packages' wettable flank leads promote reliability and facilitate automated optical inspection



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Brea, CA—July 14, 2022—[Taiwan Semiconductor](#), a global supplier of discrete power electronics devices, LED drivers, analog ICs and ESD protection devices introduces the [PerFET™ Series](#) of single- and dual-channel 40V power MOSFETs. Built on proprietary device structures and processes that enable exceptionally low on-state resistance and switching FOM (figure-of-merit), the PerFET device's achievement of 50% $R_{DS(ON)}$ and 40% FOM reduction puts this new portfolio at the industry's leading edge of performance. The 40V N-channel PerFET platform includes options for both standard (10V) and logic level (5V) gate-drive requirements while preserving rugged safe-operating area margin when switching voltage transients and avalanche occurs in switching applications.

The NH Series PerFET devices are housed in PDFN56U and is compatible with conventional SOP8 packages. Its wettable flank leads to improved solder joint reliability, lower DC resistance and automated optical inspection (AOI) during PCB assembly. Their reliability and performance are well suited to SMPS, server, DC-DC converter, telecom, motor driver and multicopter designs.

Manufactured to meet AEC-Q performance standards, the PerFET family features 175 °C operating junction temperature, 100% UIS and R_g tested and are RoHS compliant. The 12 single-channel and two dual-channel models in the NH Series are rated for 40V operation with operating currents of 34A (dual channel versions) and ranging from 54A to 100A (single channel versions).

"The new PerFET Series of 40V Power MOSFETs are the perfect solution in a range of SMPS applications," said Vice President, TSC Products, Sam Wang. "With the combination of low ON resistance, excellent FOM and innovative packaging, the NH Series compares favorably with the industry's best."

[Click here](#) for more information and links to complete product specifications, SPICE models and SnapEDA library of symbols, footprints and 3D models.

About Taiwan Semiconductor (TSC).

Recognized for more than 40 years for its core competence in discrete power rectifiers, Taiwan Semiconductor's expanded product portfolio provides a complete solution from one source: including trench Schottky's, MOSFETs, power transistors, LED driver ICs, analog ICs and ESD protection devices. A global enterprise with 2,000 over employees, TSC's production facilities in China and Taiwan are fully compliant with current automotive and environmental standards such as IATF16949, ISO9001 and ISO14001. Taiwan Semiconductor products are used in a vast array of applications in the electronics industry including automotive, computer, consumer, industrial, telecom and photovoltaic. Through strategic expansion of innovative manufacturing capabilities and its focus on pioneering efficient semiconductor solutions, TSC is the right choice for a successful and lasting business relationship.

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