

PerFET™

POWER MOSFET 40V

PerFET™ (NH Series), a family of products built on proprietary device structures and processes that enable exceptionally low on-state resistance and switching figure-of-merit (FOM - $Q_g \cdot R$); put this portfolio at the industry leading edge of performance. The process of PerFET™ is AECQ Qualified and available for automotive applications.



Official Website



Twitter

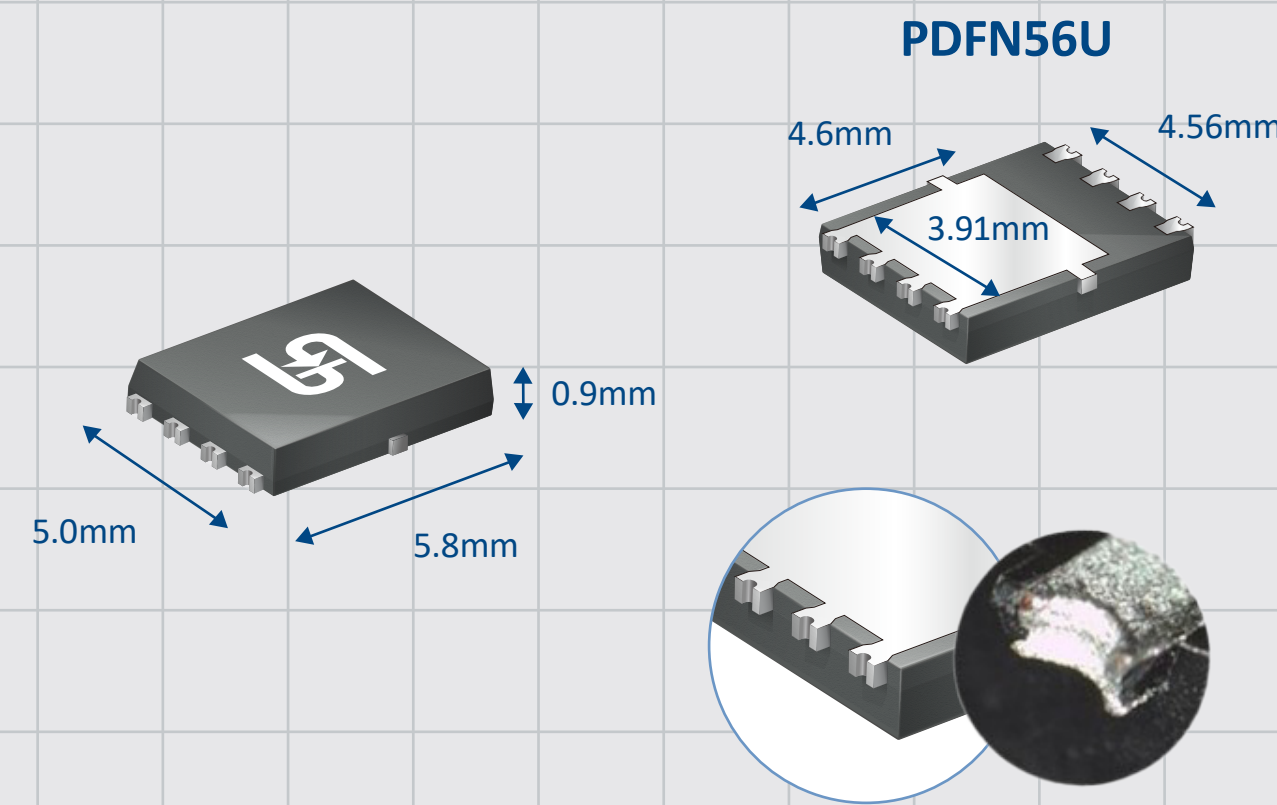


LinkedIn

For more questions: marketing@ts.com.tw

© 2023 TAIWAN SEMICONDUCTOR, CO., LTD. ALL RIGHTS RESERVED.

PACKAGE



PDFN56U and PDFN56DU configuration available. Its **wettable flank** leads improve solder joint reliability and AOI's accuracy during PCB assembly process.

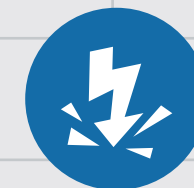
FEATURES

*compared with previous technology (NB Series).

ULTRA LOW ON-STATE RESISTANCE*

50%

Achieve ultra low $R_{DS(ON)}$ in smaller packages.



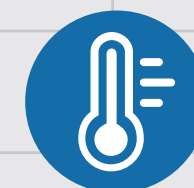
LOWER PARASITIC CAPACITANCE*

40% lower C_{iss}
90% lower C_{rss}

BETTER FOM ($Q_g \times R_{DS(ON)}$)*

40%

Improved switching performance by reduced parasitic AC parameters.



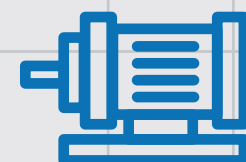
LOWER TEMPERATURE COEFFICIENT

The $R_{DS(ON)}$ value at temperatures of **-50 °C ~ 175 °C** presented less variation.

APPLICATIONS



AUTOMOTIVE



MOTOR



DC/DC
CONVERTER

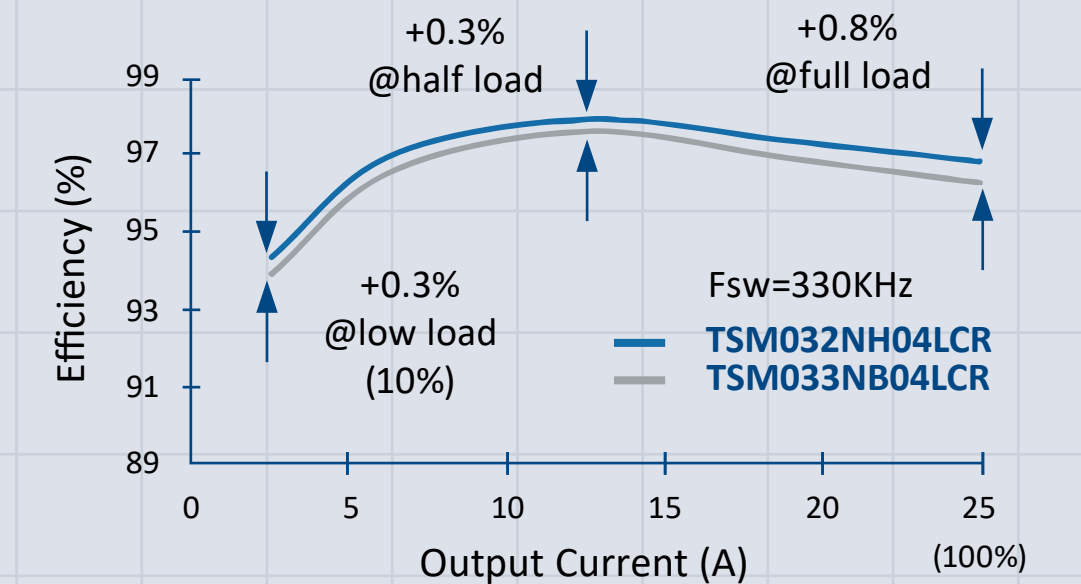


TELECOM

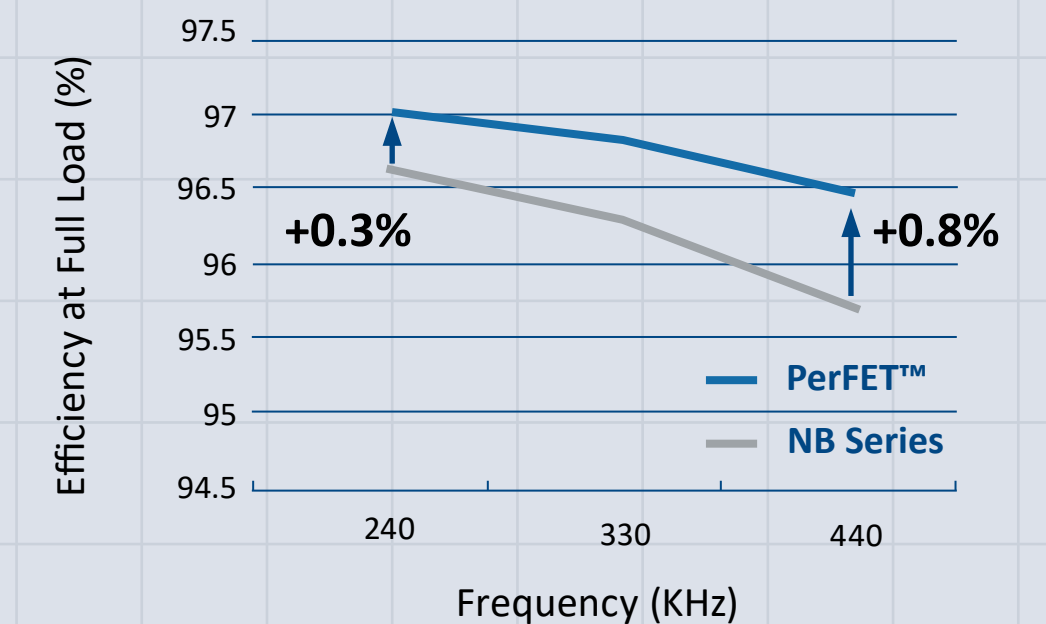


SMPS

THE PERFECT SOLUTION IN SMPS APPLICATIONS



TSM032NH04L achieves a much better efficiency performance compared to TSM033NB04L at 300W converter with synchronous rectification.



PerFET™ compared with the NB series applied in the SYNC-Buck converter with 240kHz to 440kHz switching frequency, it reduces the switching losses and increases efficiency.



TAIWAN
SEMICONDUCTOR

www.taiwansemi.com