STPOWER MOSFETs in the TO-LL leadless package

The latest innovation in SMD power packages



The new space-saving and thermally efficient leadless package

New STPOWER superjunction MDmesh M9 and DM9 series MOSFETs in the space-saving and thermally efficient TO-LL leadless package allows higher power density in more compact power converters.The TO-LL package is also available for the current MDmesh M6 and MDmesh DM6 series.

KEY FEATURES

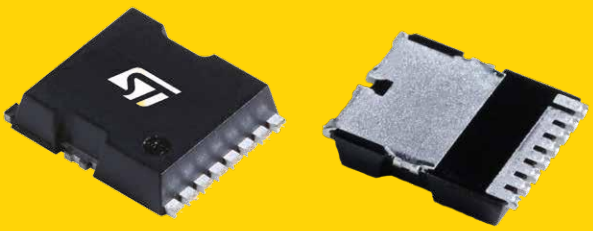
- Less board space required
- Distributed heat sinks
- Additional Kelvin source
- Reduced thickness (2.3 mm)
- High creepage distance (2.7 mm)

KEY BENEFITS

- Increased power density
- Competitive thermal dissipation
- Improvement in turn-on / turn-off efficiency

KEY APPLICATIONS

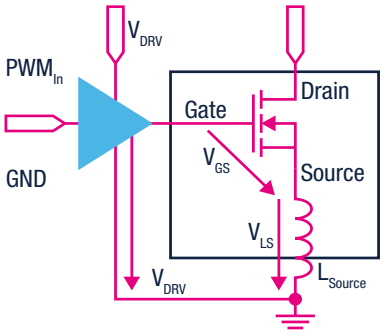
- Data centers and AI servers
- Telecom Power
- Solar microinverters



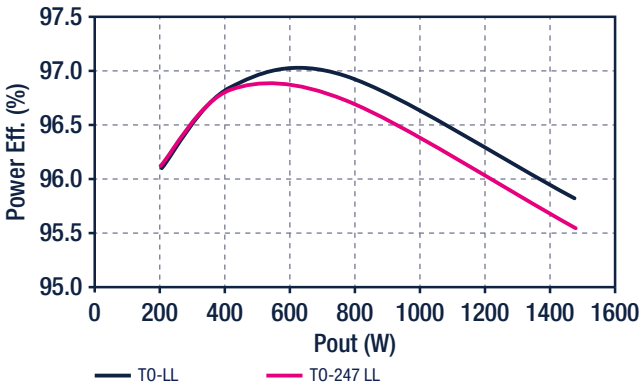
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TO-LL with STPOWER MOSFET MDmesh technologies

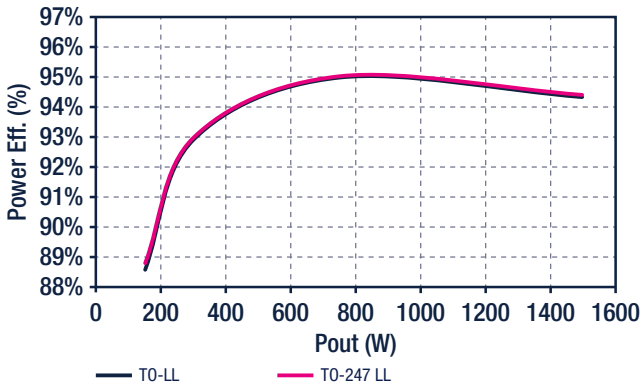
The TO-Leadless (TO-LL) package solution was tested against the TO-247 in the PFC and LLC sections of a 1.5 kW SMPS to compare their respective thermal performance and efficiency. The additional Kelvin-source lead generates significant efficiency gains in the PFC section at full load thanks to the reduction of the inductive effect on the turn-on commutation. The efficiency in the LLC section remains identical for both packages.



Power efficiency in PFC section



Power efficiency in LLC section



MDmesh M9

https://www.st.com/en/power-transistors/mdmesh-m9-series/products.html

MDmesh DM9

https://www.st.com/en/power-transistors/mdmesh-dm9-series/products.html

MDmesh M6

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MDmesh DM6

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