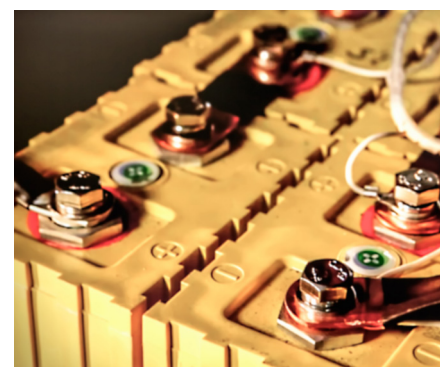




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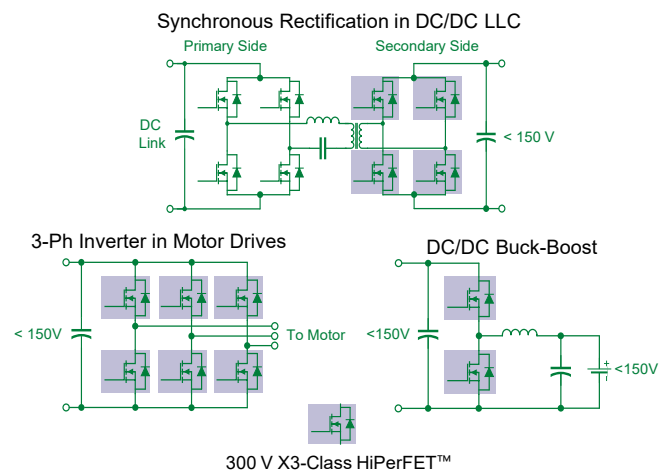
Expertise Applied | Answers Delivered



High Current (≥ 100 A) 300 V X3-Class Ultra Junction HiPerFET™

The high current 300 V Ultra Junction X3-Class HiPerFET™ devices from Littelfuse feature some of the lowest on-state resistances, as low as 5.5 mΩ in the TO-264 package and 4.6 mΩ in the SOT-227B (miniBLOC™).

Developed using a charge compensation principle and proprietary process, these 300 V HiPerFETs have one of the best-in-class figure of merit, $R_{DS(on)} \times Q_g$ (on-state resistance x gate-charge). Additionally, the fast body diode in these HiPerFETs featuring low reverse recovery charge and recovery time results in high efficiency in applications. These devices also display superior dv/dt performance and robust avalanche capability. These competitive benefits enable designers to address several design challenges in various applications.



$R_{DS(on),max}$ [mΩ]	I_{D25} [A]	TO-268-HV	TO-247	PLUS247	TO-264	SOT-227B
13.5	100	IXFT100N30X3HV	IXFH100N30X3	—	—	—
11	120	IXFT120N30X3HV	IXFH120N30X3	—	—	—
8.3	150	IXFT150N30X3HV	IXFH150N30X3	—	IXFK150N30X3	—
5.5	210	—	—	IXFX210N30X3	IXFK210N30X3	—
4.6	210	—	—	—	—	IXFN210N30X3

Features

- Low $R_{DS(on)}$ and high current capability
- Low gate charge Q_g
- Fast body diode with reduced Q_{rr} and t_{rr}
- Reduced junction-case thermal resistance R_{thJC}
- High power dissipation capability
- Superior dv/dt and high avalanche energy rating

Benefits

- Compact design with high power density
- Reduced paralleling effort and decreased part count
- Simplified driver reduces design effort
- Cost-efficient solution with ease of assembly
- Competitive thermal performance
- Improved reliability in application

Applications

- Industrial and process power supplies
- Telecom and data center power supplies
- Battery formation
- Battery energy storage systems
- DC load switch
- Robotics and servo controls



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