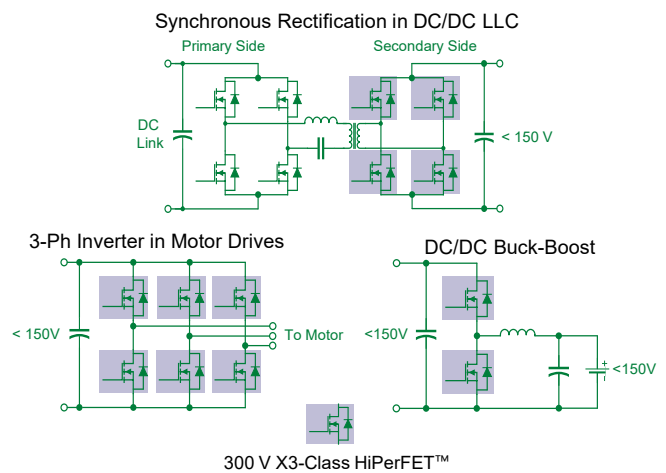

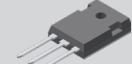
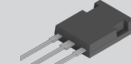




## High Current ( $\geq 100$ A) 300 V X3-Class Ultra Junction HiPerFET™

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  $\times$  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	–	–	–
		IXFT120N30X3HV	IXFH120N30X3	–	–	–
		IXFT150N30X3HV	IXFH150N30X3	–	IXFK150N30X3	–
		–	–	IXFX210N30X3	IXFK210N30X3	–
		–	–	–	–	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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