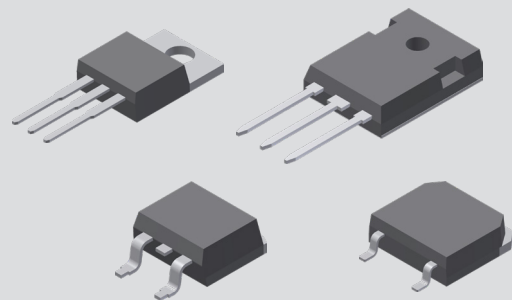
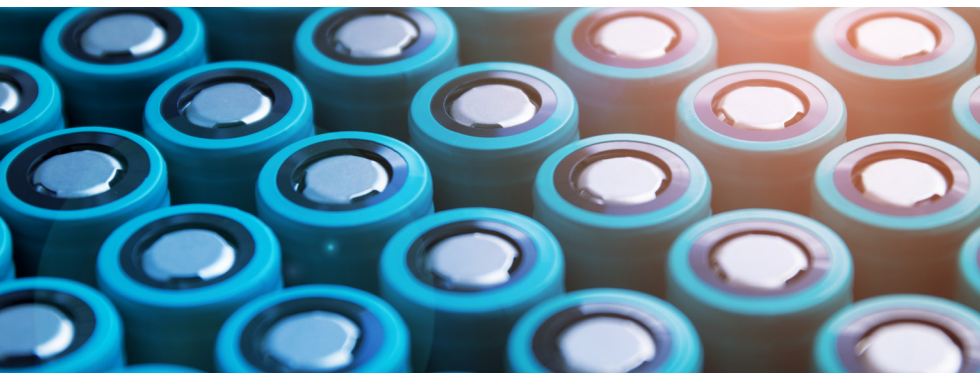




Littelfuse®


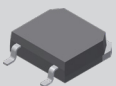
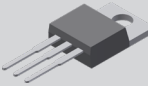
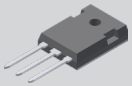
Expertise Applied | Answers Delivered



200V Ultrajunction X4-family Products

The Low $R_{DS(on)}$ MOSFETs for High Efficiency Application

Littelfuse 200V Ultra Junction X4-Class MOSFETs are available with 60A-220A nominal current ratings in TO-220, TO-247-3L, TO-263 and TO-268HV packages. These Power MOSFETs feature significantly reduced channel resistance $R_{DS(on)}$, improving the figure of merit (FOM) $R_{DS(on)} \times Q_g$ compared to its predecessor X3-Class. These benefits enable designers to achieve higher efficiency using simplified thermal design.

$R_{DS(on)max}$ [mΩ]	I_{D25} [A]	TO-263 	TO-268 HV 	TO-220 	TO-247 
21	60	IXTA60N20X4		IOTP60N20X4	IXTH60N20X4
13	86	IXTA86N20X4		IOTP86N20X4	
10.6	94	IXTA94N20X4		IOTP94N20X4	IXTH94N20X4
9.5	120			IOTP120N20X4	IXTH120N20X4
5.5	220		IXTT220N20X4HV		IXTH220N20X4

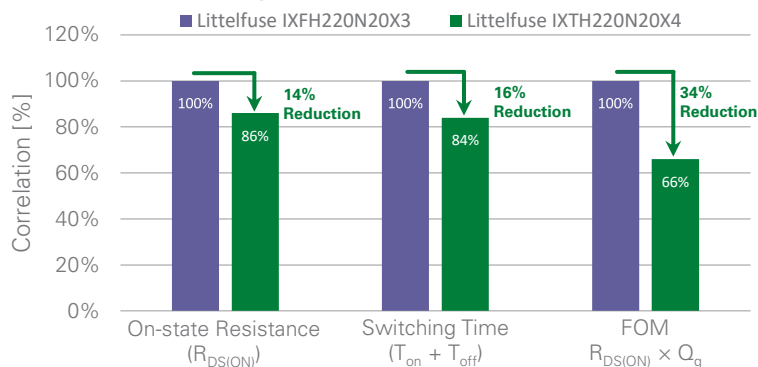
Applications

- Switched-Mode Power Supplies with low input voltage for telecom and server applications
- Battery circuits in forklifts, golf carts
- DC-DC converters with low input voltage
- Motor control
- Small Uninterrupted Power Supply for residential applications

Benefits

- Low static losses due to low on-state resistance $R_{DS(ON)}$
- Simplified thermal design due to low thermal resistance R_{thJC}
- High ruggedness against over-voltage due to high avalanche energy capability E_{AS}
- Low gate drive power demand due to reduced gate charge Q_g

200V Device Comparison – LFus 200V X3 vs. LFus 200V X4



Littelfuse®

Expertise Applied | Answers Delivered