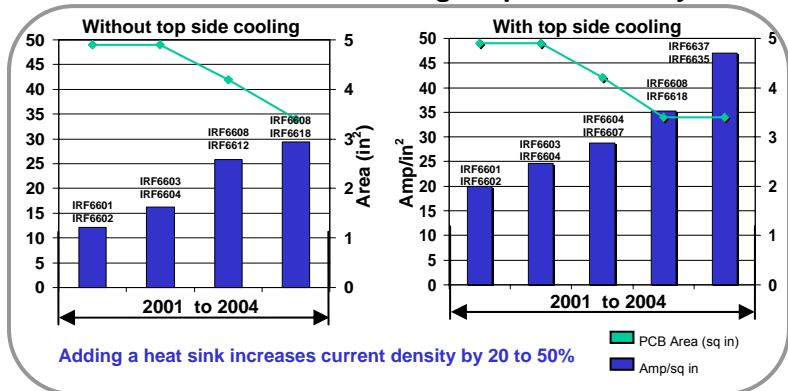


Electrical Engineer

DirectFET MOSFET for higher power density



Application examples

1) Class D Audio Amplifier using DirectFET MOSFET



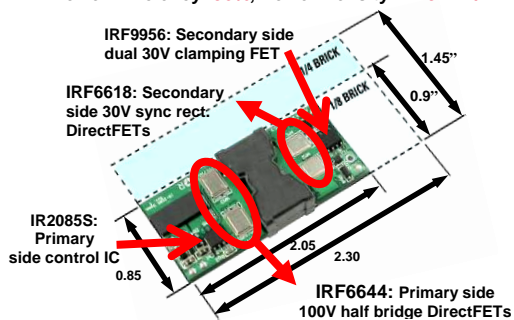
100W Amplifier without Heatsink

2) 2-phase Sync Buck POL $V_{IN} = 12V, V_{OUT} = 2.5V, 30A$



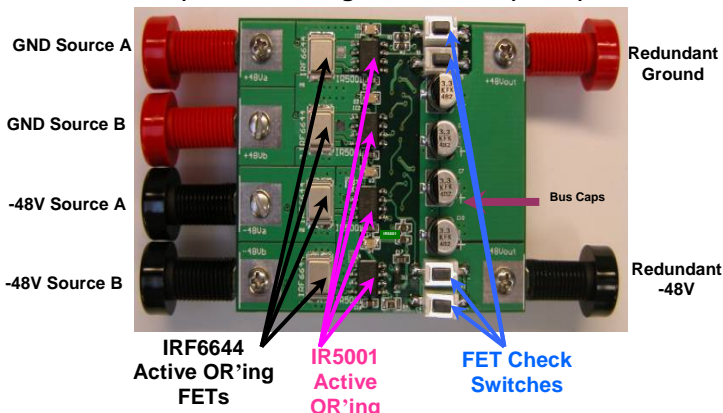
3) Half Bridge Converter With Sync Rectification (220W)

Power Efficiency: 96%, Power Density : 129.4 W/in²

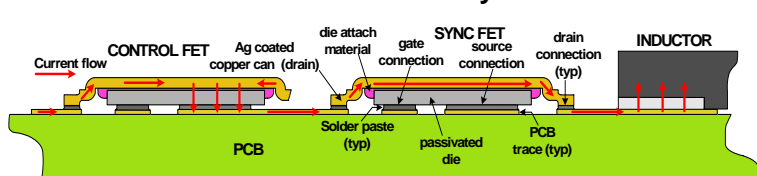


<http://www.irf.com/product-info/hexfet/dfapps.html>

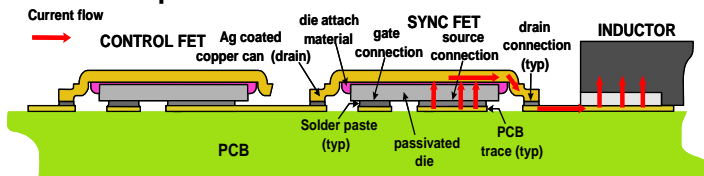
4) Active OR'ing demo-board (300W)



Synchronous Buck Regulator Example



Side view of current flow with Control FET on

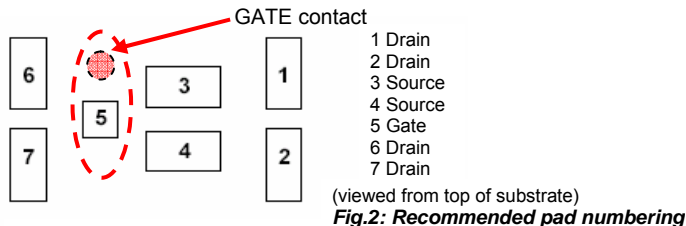


Side view of current flow with Sync FET on

<http://www.irf.com/product-info/hexfet/dfimpvsfreq.html>

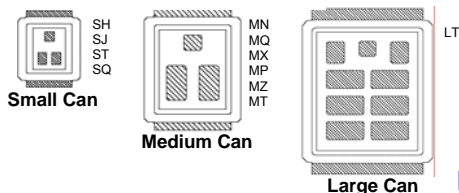
Suggested PAD numbering

If pad numbering is required to produce a component outline within the library of a CAD system, International Rectifier recommends that the convention shown in Fig. 2 is adopted. This makes it easier to discuss any issues that may arise during design and assembly.



<http://www.irf.com/product-info/hexfet/dfmarkings.html>

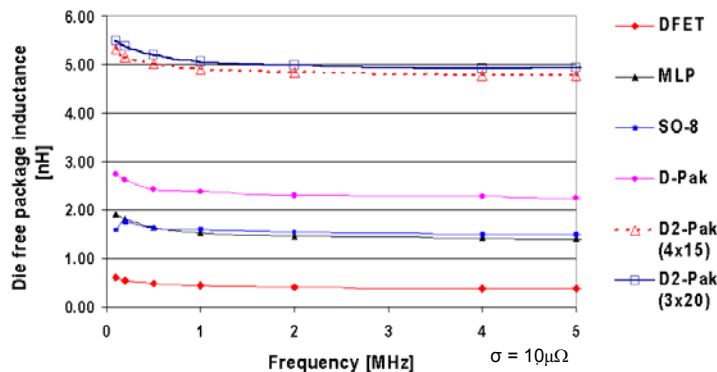
DirectFET outlines



The new method of outline identification breaks all of the low voltage devices into up to 3 die sizes within each can.

<http://www.irf.com/product-info/hexfet/dfboardlayout.html>

Package inductance vs. frequency



Notes: DirectFET device includes copper slug. All packages include inductance of tracks under package