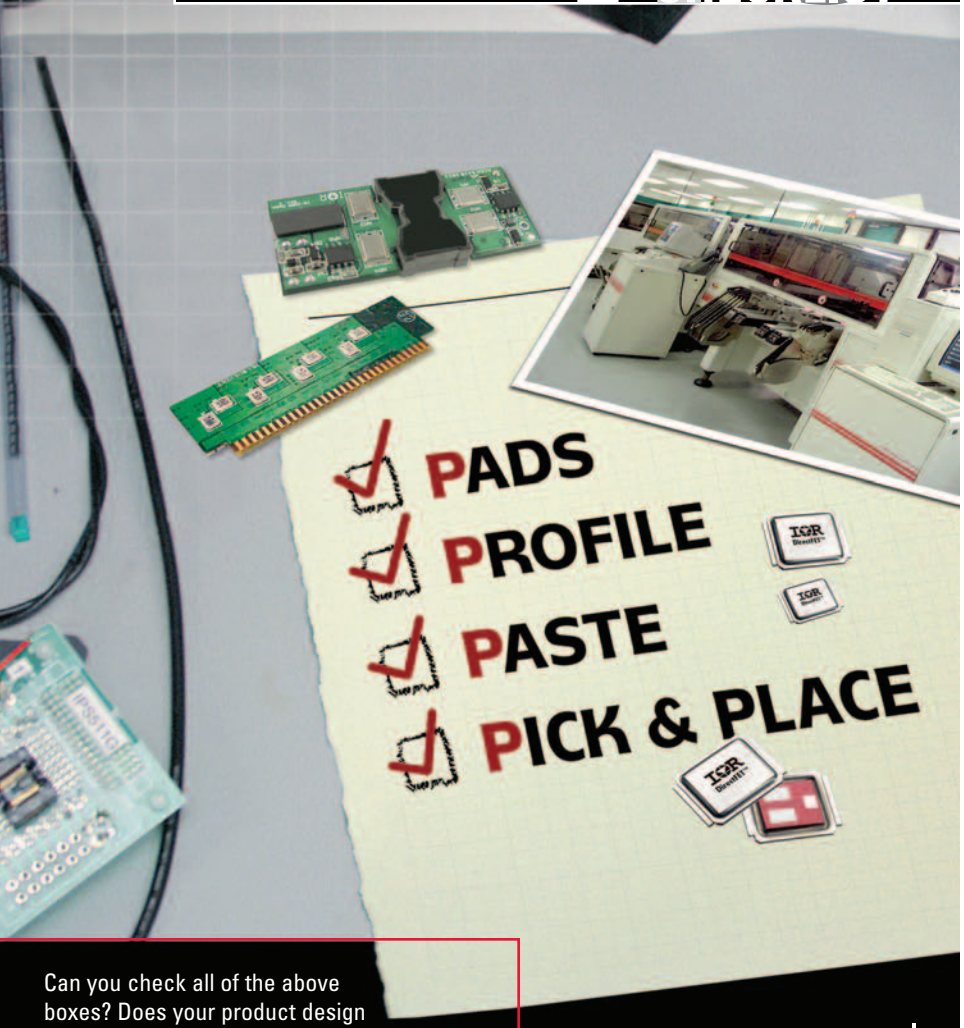
The International Rectifier DirectFET™ MOSFET 4Ps CHECKLIST



Can you check all of the above boxes? Does your product design and board assembly setup match the recommendations made by International Rectifier for all of the above 4Ps?

If so, then you are set for success.

If not, then see inside for more information on these four areas.

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THE POWER MANAGEMENT LEADER

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PbF:

All DirectFET MOSFET are leadfree and RoHS compliant.

Storage and Moisture Sensitivity

The plating configuration on DirectFET components is mildly photosensitive and can also be tarnished by the high levels of atmospheric pollution that occur in some industrialized areas. Therefore when not in use on the production line, the devices should be resealed in the antistatic bags in which they are supplied and should be kept out of direct sunlight

DirectFET components should be treated as MSL3 level devices. For further information please refer to application note AN1035 at www.irf.com

Application support:

- DirectFET™ Discovery Website (discovery.irf.com)
- DirectFET MOSFET User's Guide
- DirectFET MOSFET Thermal Rating Calculator
- Solutions to Design Challenges
- Board Mounting
- DirectFET MOSFET Movie – re-working
- Materials & Practices

For technical papers and application notes visit http://directfet.irf.com

Technical Assistance Centers

	North America	Europe	Asia/Pacific	Asia
Hours	8am-5pm PST	8.30-5.15 GMT	9am-6pm SST	9am-6pm
Phone	310 252 7105	+44 20 8645 8015	+65 6838 4632	++86 755 8329 6861
Fax	310 252 7903	+44 20 8645 8086	+65 6733 7994	++86 755 8329 6862

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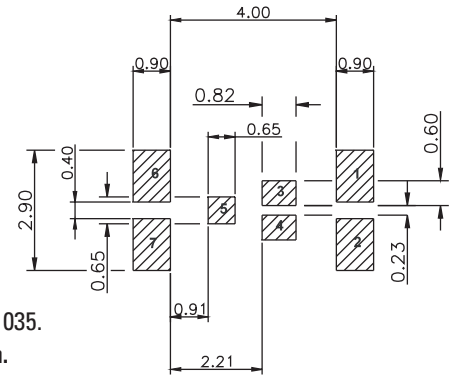
PADS

Ensure that the pad outline on your board matches the recommendations for each of the DirectFET™ product outlines being used.

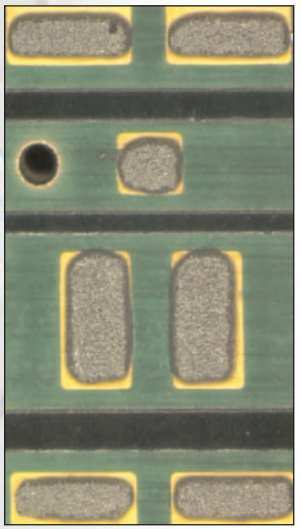


Outlines are shown on the device datasheet or Application Note AN1035. Both can be found at **www.irf.com.**

Possible outlines and pad layout are;

Small Can	Medium Can	Large Can
ST	MX	LT
SH	MT	
SQ	MN	
SJ	MP	
	MQ	
	MZ	

Please note that it is critical that the pad outlines on the board are checked as boards delivered from PCB vendor may differ from the original gerber design files



PASTE

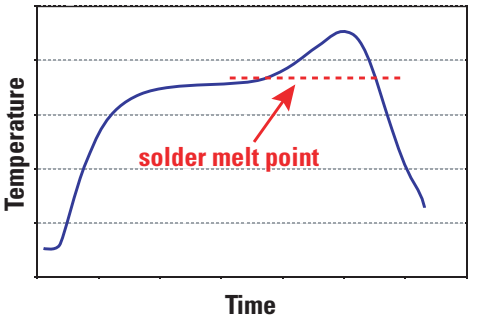
Solder paste volume is critical to achieving good solder joint quality and high production yields.

Ensure the ratio of solder paste volume to PCB pad area is correct.

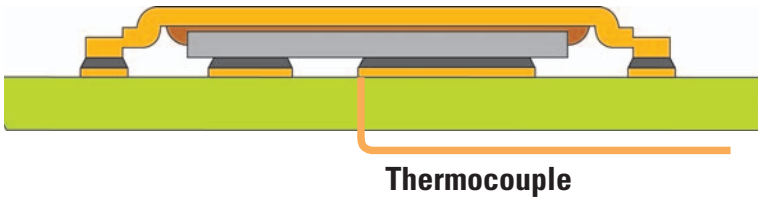
There are recommended stencil designs for each of IR's DirectFET MOSFET outlines based on a 6mil/150µm thick stencil. These recommendations can be found on each device datasheet and in Application Note AN1035. Both the datasheets and the application note can be found at **www.irf.com.**

PROFILE

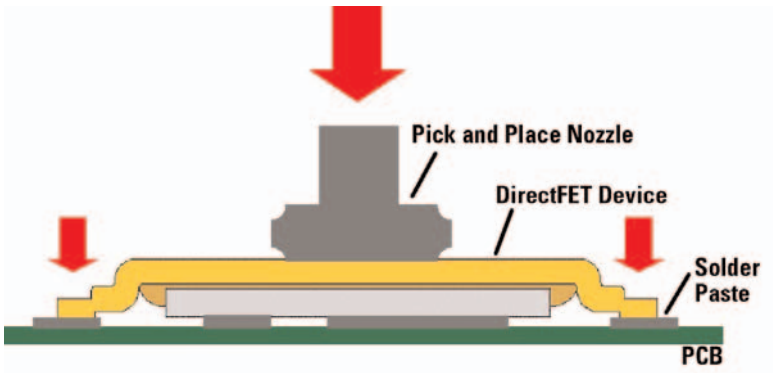
Ensure that the temperature profile seen by the DirectFET MOSFET meets at least the minimum profile requirements as specified by the solder paste vendor.



The temperature profile of the DirectFET MOSFET must be measured at the DirectFET MOSFET with a thermocouple 'buried' in the board.



PICK & PLACE



In order for all DirectFET MOSFET solder connections to be made, your Pick & Place machine should be set to give a placement force of **150 – 250g and/or an overtravel into the printed solder paste of 0.05 – 0.10mm** (0.002 – 0.004")