

# AC-DC Reference Design Kits

Reference Design	Part Number	Description
IRAC1150-300W	IR1150S	300W Continuous Conduction Mode Boost Converter for Power Factor Correction
IRAC1150-D2	IR1150S	One Cycle Control $\mu$ PFC Daughter Board
IRAC1166-100W	IR1166	+16V Low-side Smart Rectification 100W Flyback
IRAC5001-HS48V	IR5001	ORing function: +48V rail implementation
IRAC5001-HS100A	IR5001	ORing function: +12V rail implementation

For a list of all available reference designs: <http://www.irf.com/technical-info/refdesigns/>

## **IRAC1150-300W**

**300W Continuous Conduction Mode Boost Converter for Power Factor Correction**



**Free simulation tool for this circuit available  
in the myPOWER Online design center!**

**<http://mypower.irf.com/pfc>**

- Enables compliance with PFC regulations for Japan, Europe and China
- Ideal across a wide range of applications
- Universal AC input, 377 V DC output
- Programmable frequency (50kHz-200kHz)
- No AC line sensing
- Using IR1150S control IC

Design kit includes-

- Assembled and Tested demo board
- User Guide
- Schematic
- Bill of Materials
- Circuit Board Layout
- Datasheet

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## IRAC1150-D2

### One Cycle Control $\mu$ PFC Daughter Board



Free simulation tool for this circuit available in the myPOWER Online design center!

<http://mypower.irf.com/pfc>

- IEC1000-3-2 Compliant, Low Harmonic Distortion
- Brownout, Over Voltage & Open feedback loop protection
- Universal AC input
- Programmable frequency (50kHz-200kHz)
- Full load Start Up
- No Minimum Load Requirements
- Using IR1150S control IC

Design kit includes-

- Assembled and Tested demo board
- User Guide
- Schematic
- Bill of Materials
- Circuit Board Layout
- Datasheet

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## IRAC1166-100W

**+16V Low-side Smart Rectification 100W Flyback**



Free design tool for the Smart Rectifier™ circuit available at the myPOWER Online design center!

<http://mypower.irf.com>

- Universal AC input
- 16V @ 6.25A during active rectification mode
- Featuring heatsink less secondary rectification
- Employing **IR1166SPbF** Smart Rectifier controller and **IRF7853** MOSFETs

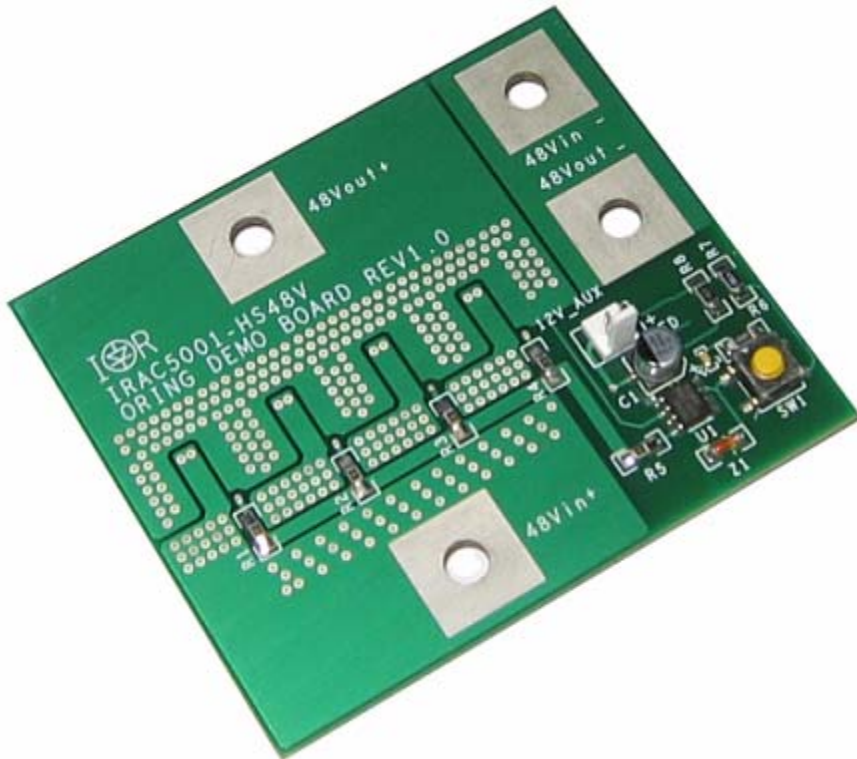
Design kit includes-

- Assembled and Tested demo board
- User Guide
- Schematic
- Bill of Materials
- Circuit Board Layout
- Datasheets

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# IRAC5001-HS48V

ORing function: +48V rail implementation



+48V, 50A continuous current

“FET Check” feature allows real-time ‘IC-good’ and ‘FET-good’ checking

< 4.5A peak reverse short circuit current

Featuring IR5001 Active ORing IC + IRF6644 DirectFET HEXFETs

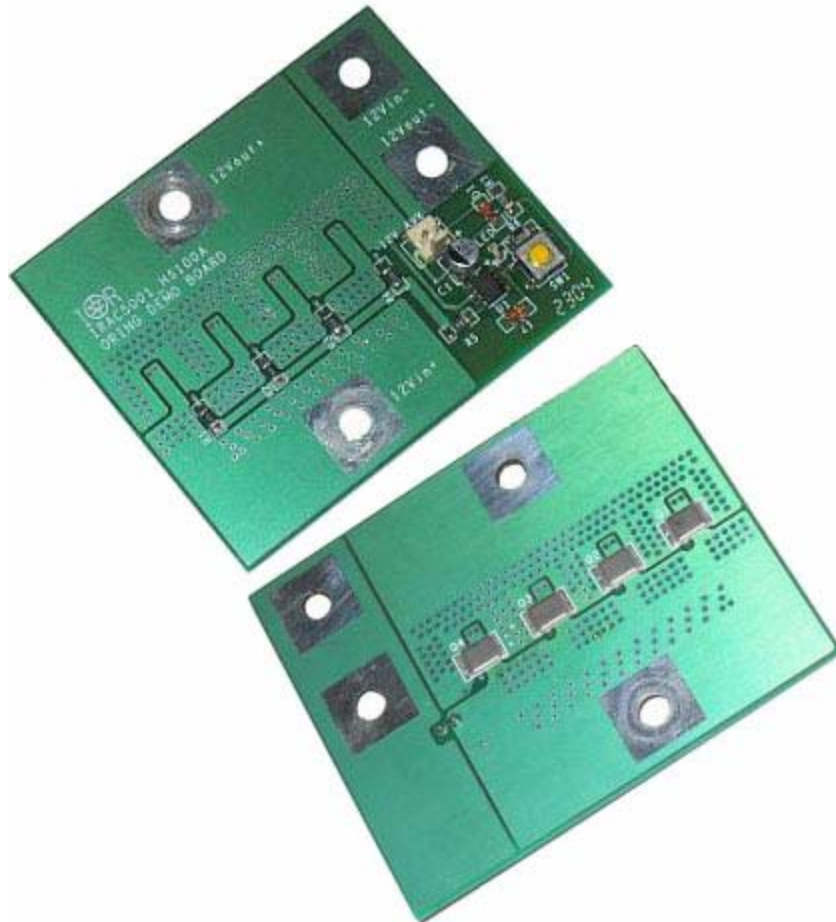
Design kit includes-

- Assembled and Tested demo board
- Application notes
- Schematic
- Bill of Materials
- Circuit Board Layout
- Datasheet

For a list of all available reference designs: <http://www.irf.com/technical-info/refdesigns/>

# IRAC5001-HS100A

ORing function: +12V rail implementation



+12V, 100A continuous current

0.5mΩ ORing system using IR5001 Active ORing IC + IRF6609 DirectFET HEXFETs

“FET Check” feature allows real-time ‘IC-good’ and ‘FET-good’ checking

< 10Apk reverse short circuit current

Design kit includes-

- Assembled and Tested demo board
- Application notes
- Schematic
- Bill of Materials
- Circuit Board Layout
- Datasheet

For a list of all available reference designs: <http://www.irf.com/technical-info/refdesigns/>