

DC-DC Reference Design Kits

Reference Design	Part Number	Description
IRDC3037	IRU3037	8-pin synchronous PWM controller, 200 KHz
IRDC3037A	IRU3037A	8-pin synchronous PWM controller, 400 KHz
IRDC3622D	IR3622M	Dual Output Reference Design using Dual Synchronous Buck Controller
IRDC3622S	IR3622M	Current Sharing Reference Design using Dual Channel Synchronous Buck Controller
IRDC3624	IR3624	High Performance Synchronous Buck Controller
IRDC3637	IR3637	Low Cost Synchronous Buck Regulator , 400 KHz
IRDC5001-LS370W	IR5001S	370W, -48V Active ORing for carrier class system boards
IRDC5001-LS48V	IR5001S	200W, -48V Active ORing for carrier class system boards
IRDCiP1201-A	iP1201	2-phase, 30A, 3.14-5.5VIN, 0.8-3.3VOUT synchronous buck converter reference design
IRDCiP1202-A	iP1202	2-phase, 30A, 5.5-13.2VIN, 0.8-3.3VOUT synchronous buck converter reference design
IRDCiP2001-A	iP2001	2-phase, 40A, 5-12VIN, 1-2VOUT multiphase buck converter reference design
IRDCiP2001-B	iP2001	3-phase, 60A, 5-12VIN, 1-2VOUT multiphase buck converter reference design
IRDCiP2001-C	iP2001	4-phase, 80A, 5-12VIN, 1-2VOUT multiphase buck converter reference design

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

IRDC3037

8-Pin Synchronous PWM controller



Ideal for Low cost on-board DC to DC applications
Internal 200KHz Oscillator
Soft-Start Function
Fixed Frequency Voltage Mode
1.25V Reference Voltage
Using IRU3037

Design kit includes-

- Assembled and Tested demo board
- Schematic
- Bill of Materials
- Datasheet
- DC-DC power management CD

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

IRDC3037A

8-Pin Synchronous PWM controller



Ideal for Low cost on-board DC to DC applications
Internal 400KHz Oscillator
Soft-Start Function
Fixed Frequency Voltage Mode
0.8V Reference Voltage
Using IRU3037A

Design kit includes-

- Assembled and Tested demo board
- Schematic
- Bill of Materials
- Datasheet
- DC-DC power management CD

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

IRDC3622D

Dual Output Supply using Dual Synchronous Buck Controller



Free configurable simulation for the
POWIR+™ chipsets!

<http://powirplus.irf.com>

- 12 Vin, 2.5 Vout @ 20A Iout and 1.8 Vout @ 20A Iout
- 350 KHz switching frequency per output
- Featuring IR3622MPbF with IRF6622 and IRF6629 DirectFET MOSFETs

Design kit includes-

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

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

IRDC3622S

Current Sharing using Dual Channel Synchronous Buck Controller



Free configurable simulation for the
POWIR+™ chipsets!

<http://powirplus.irf.com>

- 12 Vin, 1.8 Vout @ 60A Iout
- 375 KHz switching frequency per phase
- Featuring IR3622MPbF with IRF6622 and IRF6678 DirectFET MOSFETs

Design kit includes-

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

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

IRDC3624

High Performance Synchronous Buck Controller



- Programmable soft start ramp
- Over current protection
- 600 kHz switching frequency
- 12 Vin, 1.8 V out @ 6A
- Featuring IR3624 controller and IRF8910 dual MOSFET

Design kit includes-

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

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

IRDC3637

Low Cost Synchronous Buck Regulator



- Ideal for onboard DC to DC applications
- 5 Vin, 1.8 Vout @ 7A Iout
- 400 KHz switching frequency
- Programmable soft start
- Under voltage lockout
- Featuring IR3637

Design kit includes-

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

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

IRDC5001-LS370W

-48V Active ORing Reference design



Active ORing for carrier class system boards
Two -48V inputs (-36V to -75V range)
Up to 370W redundant power
Using IR5001S Active ORing ICs and
IRF6644 MOSFETs

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/>

IRDC5001-LS48V

-48V Active ORing Reference design



Active ORing for carrier class system boards
Two -48V inputs (-36V to -75V range)
Up to 200W redundant power
Using IR5001 Active ORing ICs and
IR7495 active ORing MOSFETs

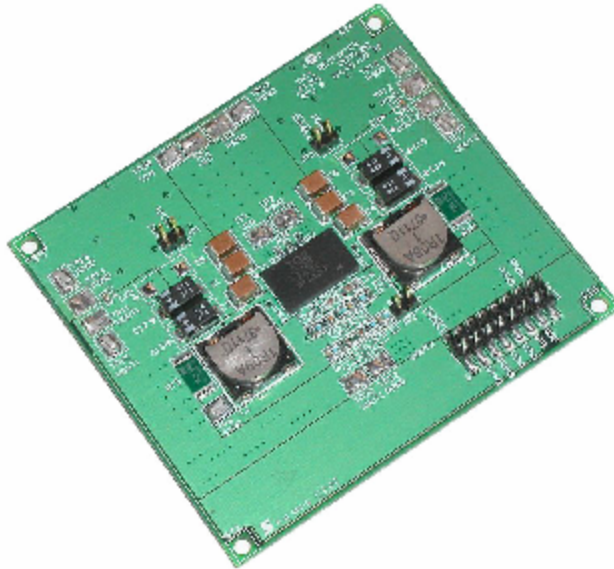
Design kit includes-

- 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/>

IRDCiP1201-A

Dual Output Synchronous Buck Converter



Free simulation of this board available at the myPOWER Online design center!

<http://mypower.irf.com>

- Fully optimized solution for medium current sync buck applications
- 2 Phases, Up to 15A per phase with double-sided heat sinking
- Independent or parallel configuration
- 3.14Vin – 5.5Vin, 0.8Vout – 3.3Vout, 90% max duty cycle
- 200kHz to 400kHz selectable switching frequency
- Using iP1201 Power Block

Design kit includes-

Assembled and Tested demo board

Application notes

Schematic

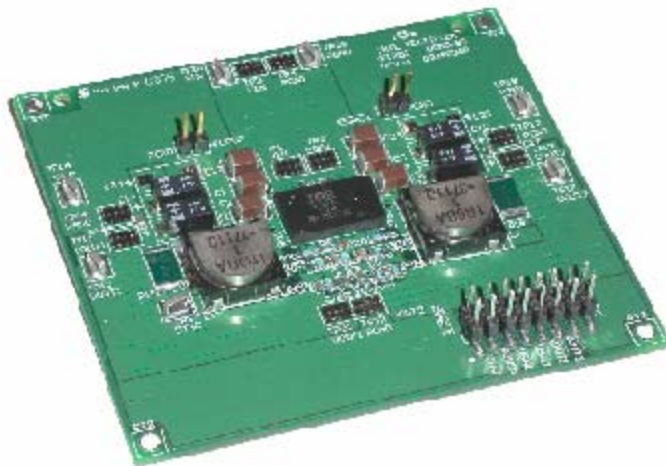
Bill of Materials

Datasheet

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

IRDCiP1202-A

Dual Output Synchronous Buck Converter



Free simulation of this board available at the myPOWER Online design center!

<http://mypower.irf.com>

- Fully optimized solution for medium current sync buck applications
- 2 Phases, Up to 15A per phase with double-sided heat sinking
- Independent or parallel configuration
- 5.5Vin-13.2Vin, 0.8Vout-3.3Vout, 90% max duty cycle
- 200kHz to 400kHz selectable switching frequency
- Using iP1202 Power Block

Design kit includes-

Assembled and Tested demo board

Application notes

Schematic

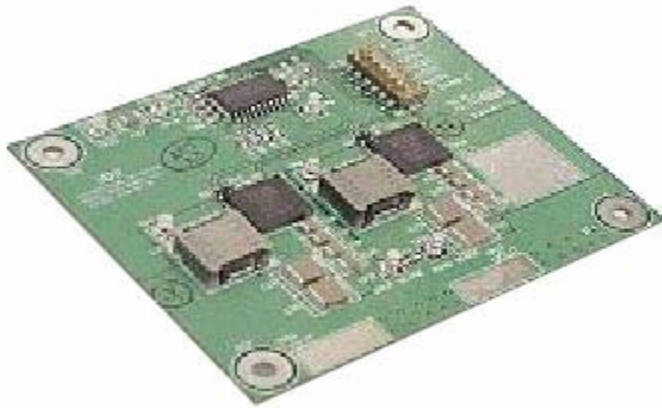
Bill of Materials

Datasheet

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

IRDCiP2001-A

2-phase Synchronous Buck Converter



- High efficiency solution for high current sync buck applications
- 2 Phases, Up to 20A per phase without airflow
- 5.0V_{in} – 12.0V_{in}, 1.1V_{out} – 1.85V_{out}
- 200kHz to 1MHz (per phase) selectable switching frequency
- Using iP2001 Power Block

Free simulation of this board available at the myPOWER Online design center!

<http://mypower.irf.com>

Design kit includes-

Assembled and Tested demo board

Application notes

Schematic

Bill of Materials

Datasheet

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

IRDCiP2001-B

3-phase Synchronous Buck Converter



Free simulation of this board available at the myPOWER Online design center!

<http://mypower.irf.com>

- High efficiency solution for high current sync buck applications
- 3 Phases, Up to 20A per phase without airflow
- 5.0V_{in} – 12.0V_{in}, 1.1V_{out} – 1.85V_{out}
- 200kHz to 1MHz (per phase) selectable switching frequency
- Using iP2001 Power Block

Design kit includes-

Assembled and Tested demo board

Application notes

Schematic

Bill of Materials

Datasheet

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

IRDCiP2001-C

4-phase Synchronous Buck Converter



- High efficiency solution for high current sync buck applications
- 4 Phases, Up to 20A per phase without airflow
- 5.0V_{in} – 12.0V_{in}, 1.1V_{out} – 1.85V_{out}
- 200kHz to 1MHz (per phase) selectable switching frequency
- Using iP2001 Power Block

Free simulation of this board available at the myPOWER Online design center!

<http://mypower.irf.com>

Design kit includes-

Assembled and Tested demo board

Application notes

Schematic

Bill of Materials

Datasheet

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