

# ACHIEVE UP TO 60% SPACE SAVINGS WITH IR'S FETKY® DEVICES

## THE IR ADVANTAGE

- ▶ Co-packaged MOSFET and Schottky diode simplify board layout
- ▶ 60% reduced footprint vs. discrete devices
- ▶ Optimized MOSFETs and Schottky rectifiers for increased efficiency
- ▶ N- and P-channel FETKY devices available from -55V to 30V
- ▶ The MOSFET and Schottky are mounted on the same copper heat spreader and due to their proximity, the PCB trace resistance and inductance is minimized

## SAMPLE APPLICATIONS

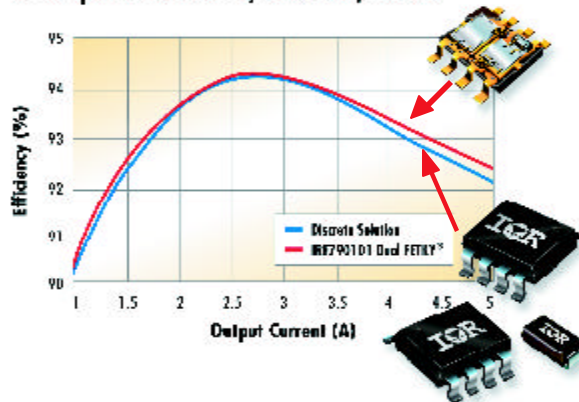
- ▶ Synchronous and standard DC-DC buck converters for notebooks, desktop PCs and peripherals
- ▶ Voltage Regulator Modules (VRM)
- ▶ Battery charging and load management in portable applications

International Rectifier's patented FETKY® devices are co-packaged HEXFET® Power MOSFETs and Schottky diodes. Co-packaging reduces packaging and assembly costs and increases power density in power subsystems. A FETKY device offers a substantial 60% space savings over the discrete solution which is essential to achieve high power densities in a small form factor required by portable applications.

A common application for FETKY devices is in a synchronous buck converter in which the Schottky diode carries current during conduction dead time. A FETKY device minimizes stray package and PCB trace inductance between the synchronous FET and the Schottky that parallels it, simplifying board layout and increasing efficiency.

IR's IRF7901D1 dual FETKY integrates all power components for a synchronous buck converter in a single SO-8 package. It offers 200% increased power density than a discrete solution and offers 94% efficiency in a 5A, sub 1V buck converter.

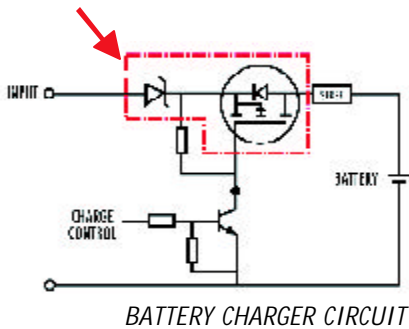
Efficiency Curves for 14VIN / 3.3 VOUT / 300kHz



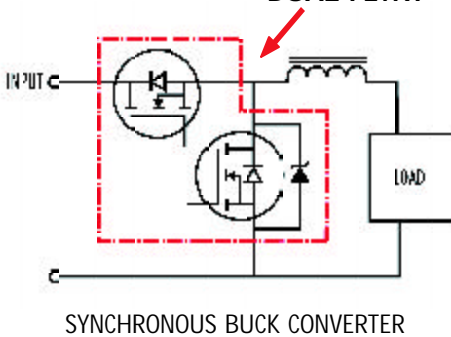
**ACHIEVE  
94% PEAK  
EFFICIENCY  
WITH IR'S  
DUAL FETKY®**

IR offers the broadest range of FETKY® devices for a wide variety of applications

P-CHANNEL FETKY®



DUAL FETKY®



IR's Dual FETKY®, IRF7901D1, integrates all power components for a synchronous buck converter into a single SO-8 package

Part #	$V_{DSS}$ (V)	$R_{DS(on)}$ max @10V (Ohms)	Package	$I_D$ @ 25°C (A)	$V_F$ @ $I_F$ (V)
IRL3103D1	30	0.014	TO-220	64	0.5 @ 1A
IRL3103D2	30	0.014	TO-220	64	0.57 @ 3A
IRL3103D1S	30	0.014	D <sup>2</sup> Pak	64	0.5 @ 1A
IRL3103D2S	30	0.014	D <sup>2</sup> Pak	64	0.57 @ 3A
IRL3303D1	30	0.026	TO-220	34	0.5 @ 1A
IRL3303D1S	30	0.026	D <sup>2</sup> Pak	34	0.5 @ 1A
IRF7807VD1	30	0.025 @ 4.5V	SO-8	8.3	0.5 @ 1A
IRF7807VD2	30	0.025 @ 4.5V	SO-8	8.3	0.54 @ 3A
IRF7353D1	30	0.029	SO-8	6.5	0.5 @ 1A
IRF7353D2	30	0.029	SO-8	6.5	0.57 @ 3A
IRF7421D1	30	0.035	SO-8	6.4	0.5 @ 1A
IRF7523D1	30	0.135	Micro8™	2.7	0.5 @ 1A
IRF7901D1	30	0.038	SO-8	6.2	0.52 @ 1A
Dual	30	0.032			
IRF7521D1	20	0.135 @ 4.5V	Micro8™	2.4	0.5 @ 1A
IRF7322D1	-20	0.180 @ -4.5V	SO-8	2.9	0.5 @ 1A
IRF7324D1	-20	0.09 @ -4.5V	SO-8	4.6	0.57 @ 3A
IRF7422D2	-20	0.058 @ -4.5V	SO-8	5.3	0.5 @ 1A
IRF7321D2	-30	0.1 @ -10V	SO-8	3.6	0.57 @ 3A
IRF7326D2	-30	0.058 @ -10V	SO-8	4.9	0.57 @ 3A
IRF7524D1	-20	0.270 @ -4.5V	Micro8™	1.7	0.5 @ 1A
IRF7534D1	-20	0.20 @ -4.5V	Micro8™	2	0.5 @ 1A
IRF7526D1	-30	0.200 @ -10V	Micro8™	1.7	0.5 @ 1A
IRF5803D2	-40	0.112 @ -10V	SO-8	3.4	0.51 @ 5A
IRF7342D2	-55	0.105 @ -10V	SO-8	3.4	0.61 @ 3A