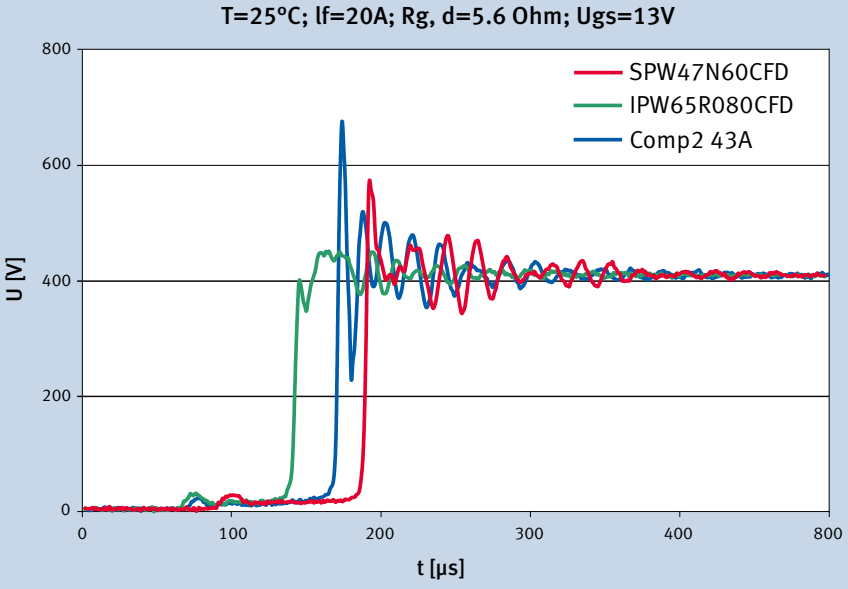
PRODUCT BRIEF

650V CoolMOS™ CFD2

Introduction of new market leading 650V CoolMOS™ technology with integrated fast body diode

With the new 650V CoolMOS™ CFD2 Infineon launches its second generation of its market leading high voltage CoolMOS™ MOSFET´s with integrated fast body diode. The new CFD2 devices are the successor of 600V CFD with improved energy efficiency. The softer commutation behavior and therefore better EMI behavior gives this product a clear advantage in comparison with competitor parts.

CFD2 is the first 650V MOSFET technology with integrated fast body diode on the market. The product portfolio provides all benefits of fast switching superjunction MOSFETs offering better light load effciency, reduced gate charge, easy implementation and outstanding reliability. The new CFD2 technology offers lower prices compared to its predecessor 600V CFD and is the best choice for resonant switching applications.



CFD2 shows limited voltage overshoot during hard commutation of conducted body diode

Applications

- Telecom
- Server
- Battery Charging
- Solar
- HID lamp ballast
- LED lighting

Features

- First 650V technology with integrated fast body diode on the market
- Limited voltage overshoot during hard commutation
- Significant Qg reduction compared to 600V CFD technology
- Tighter $R_{DS(ON)}$ max to $R_{DS(ON)}$ typ window
- Easy to design in
- Lower price compared to 600V CFD technology

Benefits

- Low switching losses due to low Qrr at repetitive commutation on body diode
- Self limiting di/dt and dv/dt
- Low Qoss
- Reduced turn on and turn of delay times
- Outstanding CoolMOS™ quality

Toplogies

- ZVS phase shifted full bridge
- LLC topologies
- AC / DC bridge
- 3-level inverter

www.infineon.com/cfd2

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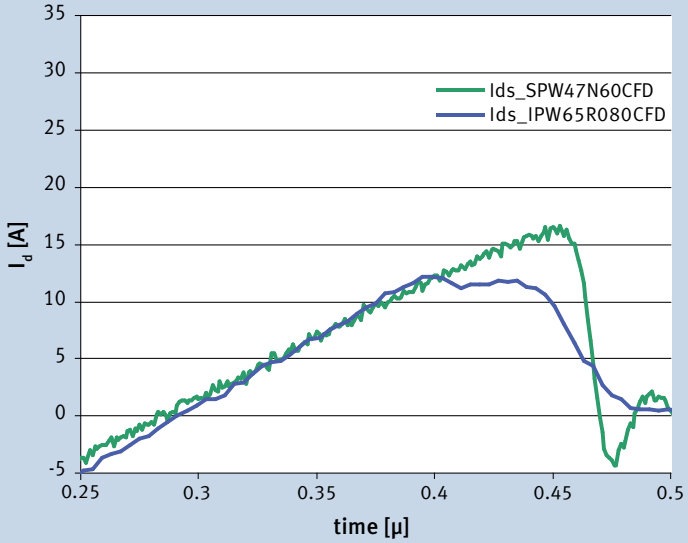
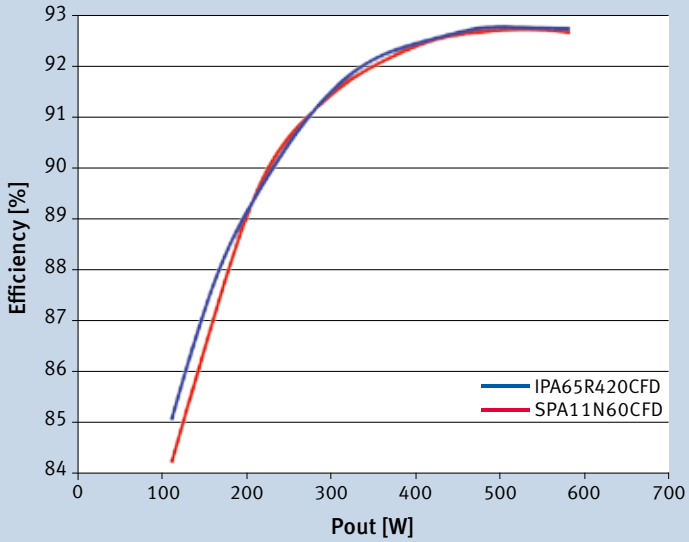
Low Qrr of CFD2 technoloy enables lower conduction losses and very fast switching



CFD vs. CFD2 efficiency comparison in a 12 V Server SMPS used Topologie ZVS FB @ 100 kHz



	DPAK (TO252)	D²PAK (TO253)	TO220FP (TO220)	TO220 (TO220)	I²PAK (TO263)	TO247 (TO247)
1K4 [3]	IPD65R1K4CFD					
950 [3]	IPD65R950CFD					
660 [1]	IPD65R660CFD	IPB65R660CFD	IPA65R660CFD	IPP65R660CFD	IPI65R660CFD	IPW65R660CFD
420 [2]	IPD65R420CFD	IPB65R420CFD	IPA65R420CFD	IPP65R420CFD	IPI65R420CFD	IPW65R420CFD
310 [2]		IPB65R310CFD	IPA65R310CFD	IPP65R310CFD	IPI65R310CFD	IPW65R310CFD
190 [2]		IPB65R190CFD	IPA65R190CFD	IPP65R190CFD	IPI65R190CFD	IPW65R190CFD
150 [2]		IPB65R150CFD	IPA65R150CFD	IPP65R150CFD	IPI65R150CFD	IPW65R150CFD
110 [2]		IPB65R110CFD	IPA65R110CFD	IPP65R110CFD	IPI65R110CFD	IPW65R110CFD
80 [1]						IPW65R080CFD
41 [2]						IPW65R041CFD

[1] Samples available Okt 2010
[2] Samples available March 2011
[3] Samples available Sept 2011

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