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(Infineon + @CYPRESS Strengthening the link between the real and the digital world

IPBE65R230CFD7A

650V CoolMOS[™] N-channel automotive SJ power MOSFET CFD7A

Overview **Parametrics** Documents

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power MOSFET CFD7A product family. As compared to the previous generation, CoolMOS™ CFD7A offers higher reliability and power density while increasing design flexibility.

> Home > Products > Power > MOSFET (Si/SiC) > 20V-800V Automotive MOSFET > 600V-800V N-Channel Automotive MOSFET > IPBE65R230CFD7A

When using Infineon's 650 V CoolMOS™ CFD7A technology in combination with the D²PAK 7-pin package, customers benefit from enhanced efficiency and thermal behavior. The Kelvin-source concept used in the D²PAK 7-pin (driver-source pin) overcomes the limitations caused by the source inductance and improves the switching

The 230mOhm IPBE65R230CFD7A in D2PAK 7-pin package is part of the automotive-qualified 650V CoolMOS™ SJ

losses and heat. Furthermore, the increased creepage distance of 4.2mm between drain and source/gate facilitates device usage for higher battery voltage classes up to 475V.

· Highest reliability in the field meeting automotive

Enabling of higher power density designs

Scalable as designed for use in PFC and DC-DC

IPBE65R230CFD7A

11.0 A

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lifetime requirements

Granular portfolio available

stage

performance. Resulting advantages at system level, especially at high currents, are the reduction of switching

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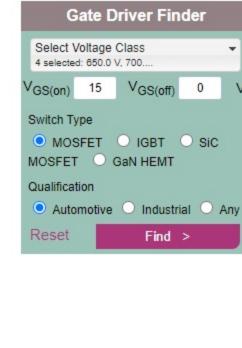
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1.4 MB





Summary of Features Benefits

· Efficiency improvements in hard- and soft-

AEC-Q101 qualified

on reliability standards

switching topologies up to 98.4% Kelvin-source concept for further efficiency improvement

· Battery voltages up to 475V without compromising

compared to CoolMOS™ CFDA Potential Applications

Intrinsic fast body diode with 30% lower Q_{rr}

· On-board chargers

LLC or full-bridge phase shift (ZVS)

Hard-switching topologies (with SiC diode)

 DC-DC stage of on-board chargers HV-LV DC-DC converters

· PFC boost-stages

Auxiliary power supplies

Parametrics

Parametrics

I_D (@25°C) max

I_D max

I _{Dpuls} max	44.0 A
Mounting	SMT
Operating Temperature min max	-40.0 °C 150.0 °C
P _{tot} max	63.0 W
Package	D2PAK 7pin (TO-263 7pin)
Polarity	N
Product Category	Power MOSFET HV CoolMOS™
Q _G (typ @10V)	23.0 nC
Q _G	23.0 nC
R _{DS (on)} (@10V) max	230.0 mΩ
R _{DS (on)} max	230.0 mΩ
Technology	CoolMOS [™] CFD7A
V _{DS} max	650.0 V
V _{GS(th)} min max	4.0 V 3.5 V 4.5 V
Documents	
+ Expand all	

+ Application Notes

+ Product Brief

Data Sheets

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+ Whitepaper

+ Product Selection Guide

Sales Product Name

Product Status

Package name

Halogen free

RoHS compliant

Order

OPN

Order online Buy online Completely lead free no

IPBE65R230CFD7A

active and preferred

PG-T0263-7

yes

yes

IPBE65R230CFD7AATMA1

Packing Size 1000 **Packing Type** TAPE & REEL Moisture Level **Moisture Packing** NON DRY Simulation Power MOSFET Simulation Models Download here

Innovation. Quality. Dedication. 650V CoolMOS™ CFD7A

0:49

Going above and beyond. How Infineon produces the

Get to know Infineon's Zero Defect approach and how Infineon goes

beyond the requirements when it comes to automotive MOSFET

· Be familiar with both dimensions of Infineon's Zero Defect approach, which aim at extending product lifetimes and reducing the number of

highest quality automotive MOSFETs

random failures, by exploring each one in detail

qualification

Watch eLearning

CoolMOS[™] CFD7A - On the fast lane in automotive applications

high-performing.

CFD7A

DCDC HV-LV

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Infineon's

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on demand webinars

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+ Simulation Models

automotive quality standards - going beyond AEC-Q101. The intrinsic fast body diode and the higher efficiency levels make it a sound device for PFC / DC-DC stages. Typical battery system voltages up to 475 V can be reached and the reduced switching losses result in excellent light- / fullload efficiency. On-board charger designs will become more compact and

The newly released HV SJ power MOSFET series, CoolMOS™ CFD7A, merges unrivaled technology know-how with the proven Infineon

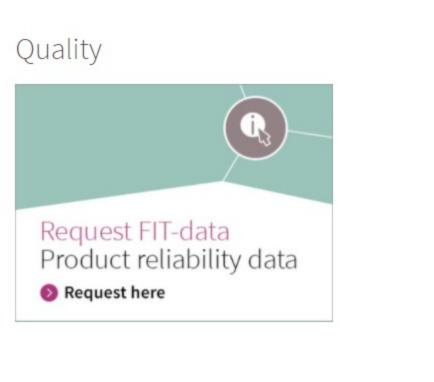
Training Going above and beyond Infineon How Infineon produces the highest quality automotive MOSFETs

On the fast lane in automotive applications: 650V CoolMOS™

Infineon CoolMOS™ CFD7A

Onboard charger

Global CO2 regulations have driven EV's establishment. We contribute to this green trend with our CoolMOS™ CFD7A - a real automotive hero!



Support Search the FAQs! Enter your search terms...

like the LLC.

CFD7A offers an integrated fast body CFD7A in this package makes use of the diode and can be used in standard PFC Kelvin source concept for improved topologies as well as resonant topologies

650 V CoolMOS™ CFD7A: Which

topologies are addressed by CFD7A?

I need FIT data for my product. How

(failure in time) data, please contact our

In order to get access to product FIT

can I get access to it?

support center at

Top 6 FAQs. Use the search bar above to show more!

efficiency, and offers an increased creepage distance of 4.2 mm, while being, of course, a robust package at the same... + Read more Technical Support

In order to enable us to process your inquiry as efficiently as possible and

ensure your case is duly reported, we

the following support form:...

kindly ask you to submit your request via

650 V CoolMOS™ CFD7A: What is the

key benefit of the D²PAK 7-pin?

time to market.... + Read more

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650 V CoolMOS™ CFD7A: What is the

All resonant topologies are susceptible to

conducting body diode under abnormal

recovery charge (Qrr), CFD7A is robust...

Partner Finder for support, software,

hardware, dev tools, services

conditions. Thanks to its ultra-low reverse

reliability in resonant topologies?

occasional hard-commutation on the



Q

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