

## Strengthening the link between the real and the digital world (/cms/en/about-infineon/company/cypress-acquisition/)

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> IPN60R2K0PFD7S



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Overview

### 600V CoolMOS™ PFD7 superjunction MOSFET in SOT-223 package

The 600V CoolMOS™ PFD7 superjunction MOSFET (IPN60R2K0PFD7S) complements the **CoolMOS™ (/cms/en/product/power/mosfet/500v-900v-coolmos-n-channel-power-mosfet/)** 7 offering for consumer applications. The IPN60R2K0PFD7S in a SOT-223 package features  $R_{DS(on)}$  of 2,000mOhm resulting in low switching losses. The IPN60R2K0PFD7S comes with a fast body diode ensuring a robust device and in turn reduced bill-of-material (BOM) for the customer. The industry-leading SMD package offering adds to PCB space savings and simplifies manufacturing.

This product family is tailored to ultrahigh power density as well as highest efficiency designs. The products primarily address ultrahigh density chargers, adapters and low-power motor drives. The 600V CoolMOS™ PFD7 offers improved light- and full-load efficiency over **CoolMOS™ (/cms/en/product/power/mosfet/500v-900v-coolmos-n-channel-power-mosfet/)** P7 and CE technologies resulting in an increase in power density by 1.8W/inch<sup>3</sup>.

### Summary of Features

- Very low FOM  $R_{DS(on)} \times E_{oss}$
- Integrated robust fast body diode
- Up to 2kV ESD protection
- Wide range of  $R_{DS(on)}$  values
- Excellent commutation ruggedness
- Low EMI
- Broad package portfolio

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## Benefits

- Minimized switching losses
- Power density improvement compared to latest CoolMOS™ charger technology
- Increased efficiency and improved thermal behavior compared to CoolMOS™ CE technology for low power drives applications
- BOM cost reduction and easy manufacturing
- Robustness and reliability
- Easy to select the right parts for design fine-tuning

## Potential Applications

- **Consumer** (</cms/en/applications/consumer/>)
- High density  
**Charger** (</cms/en/applications/consumer/mobile-devices/batteries-and-accessories/>) and  
**Adapter** (</cms/en/applications/solutions/power-supplies/laptop-adapter/>)
- **USB PD** (</cms/en/applications/solutions/power-supplies/usb-power-delivery/>)
- **Fridge** (</cms/en/applications/consumer/home-appliances/major-home-appliances/refrigerators/>)
- Fans
- Pumps



## Videos

### 600 V CoolMOS™ PFD7 for high-density adapter and-low power motor drives applications



4:43

This video highlights the key technology parameters and packages which make the 600 V CoolMOS™ PFD7 the perfect choice for high-density adapter and low-power motor drives applications.

## Training

### CoolMOS™ P7 and PFD7 for power and gardening tool charger

Find out our best-fit CoolMOS™ P7 and PFD7 technology in addressing key market trends and requirement of this emerging application.

› [Click to see more](#)

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## Introduction to Infineon's 600 V CoolMOS™ PFD7 technology





Check out Infineon's CoolMOS™ PFD7 technology and understand why we believe it is the best choice for you.

› **Click to see more** ([/cms/media/eLearning/PSS/PSS\\_eLearning\\_M1\\_Introduction-to-CoolMOS-PFD7-technology\\_english/presentation\\_html5.html](/cms/media/eLearning/PSS/PSS_eLearning_M1_Introduction-to-CoolMOS-PFD7-technology_english/presentation_html5.html))

## Infineon's CoolMOS™ PFD7 for Major Home Appliance Drives



Learn about the value of combining CoolMOS™ PFD7 and 2ED gate driver and improvements for motor drive applications.

› **Click to see more** ([/cms/media/eLearning/PSS/PSS\\_eLearning\\_M2\\_CoolMOS-PFD7-for-Major-Home-Appliance-drives\\_english/presentation\\_html5.html](/cms/media/eLearning/PSS/PSS_eLearning_M2_CoolMOS-PFD7-for-Major-Home-Appliance-drives_english/presentation_html5.html))

## Infineon's CoolMOS™ PFD7 for High Power Density Designs

Learn why Infineon's CoolMOS™ PFD7 is the ultimate choice for contemporary high-power density designs.

› **Click to see more** (/cms/media/eLearning/PSS/PSS\_eLearning\_M3\_PFD7-High-Power-Density-Designs\_english/presentation\_html5.html)



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