AIKB30N65DH5

Overview
Parametrics
Documents
Order
Design Support
Support

Follow

Buy online

Download Data Sheet

› EN Share
02_01 | 2020-09-22 | pdf | 1.5 MB

World-class low-cost power for fast-switching applications in small SMD packages

Energy efficiency is the most important aspect for electric vehicles and hybrid vehicles. Therefore, Infineon has developed the 650 V TRENCHSTOP™ 5 AUTO technology with H5/F5 optimization to enable highest efficiency fast switching automotive applications such as On-Board Charger, PFC, DC/DC and DC/AC.

TRENCHSTOP™ 5 AUTO is an IGBT technology that enables world's lowest losses for switching and conduction in its category. The resulting high efficiency enables either an increased cruising range or a downsizing of the battery for electric vehicles. For hybrid vehicles, it helps to reduce overall fuel consumption. The great performance of TRENCHSTOP™ 5 AUTO offers a cost-optimized solution where engineers were used to use MOSFETs only.

Moreover, TRENCHSTOP™ 5 AUTO technology in an SMD housing, like the D²PAK (PG-TO263-3), even further decreases IGBT solution costs by reducing cost on system and manufacturing level. This comes with the benefit of increased quality control due to automated processes.

Summary of Features

- TRENCHSTOP™ 5 technology with low VCEsat, optimized as H5 variant (High Speed Variant) with softer switching behavior for easier design-in
- 650V break-down voltage, 30A nominal current
- Co-packed with RAPID-1 fast and soft anti-parallel diode
- Very fast switching (up to 150kHz)
- Automotive qualified in accordance to Infineon quality standards
- Max junction temperature 175 °C
- **Highest efficiency**
  - very low conduction losses
  - very low switching losses
- Very low junction and case temperature
- SMD D²PAK package for low assembly costs and higher power density
- **Extremely robust**

Potential Applications

- On-Board Charger (mainly in the PFC stage)
- DC-DC or DC-AC
- Auxiliary drive (e.g. Motor drive)

Parametrics

Parametrics	AIKB30N65DH5
I_C (@ 25°) max	55 A
I_C (@ 100°) max	30 A
Switching Frequency	15-100 kHz
Technology	IGBT TRENCHSTOP™ 5 + EMCON 4
V_{CE} max	650 V

Documents

› Login to myInfineon to see all documents available

+ Expand all

+ Data Sheets

+ Product Brief

+ Material Content Sheet Info

+ Product Selection Guide

Order

Sales Product Name	AIKB30N65DH5
OPN Info	AIKB30N65DH5ATMA1
Product Status	active and preferred
Infineon Package name	PG-TO263-3
Standard Package name	D2PAK
Order online	Buy online
Completely lead free	no
Halogen free	yes
RoHS compliant	yes
Packing Size	1000
Packing Type	TAPE & REEL
Moisture Level	1
Moisture Packing	NON DRY

Design Support

Search for a topic

Clear All

Application: No options available

Type: Please select

All (5) PCB Design Data (4) Simulation Models (1)

PCB Design Data

zip
PCB Footprints and Symbols - AIKB30N65DH5 - Automotive IGBT Discretes - Cadence
01_00 | 2020-11-24 | 12 KB
Download Share › EN

zip
PCB Footprints and Symbols - AIKB30N65DH5 - Automotive IGBT Discretes - Altium
01_00 | 2020-11-24 | 527 KB
Download Share › EN

zip
PCB Footprints and Symbols - AIKB30N65DH5 - Automotive IGBT Discretes - Mentor
01_00 | 2020-11-24 | 2 KB
Download Share › EN

zip
PCB Footprints and Symbols - AIKB30N65DH5 - Automotive IGBT Discretes - Eagle
01_00 | 2020-11-24 | 2 KB
Download Share › EN

Simulation Models

zip
IGBT-AUTOMOTIVE 650V TRENCHSTOP5 H5 PLECS model
01_03 | 2022-02-28 | 33 KB
Download Share › EN

Support

Search the FAQs! Enter your search terms...

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

Technical Support
The best way to reach out to our Applications Engineers is through our **Infineon Developer Community**
Our Applications Engineers moderate the community to ensure all questions are…
+ Read more

Partner Finder for support, software, hardware, dev tools, services
Infineon's global network of partners offer products and services that complement our semiconductor device solutions to accelerate your development efforts and time to market. You can find them here:…
+ Read more

Package information
The package information is available on **our homepage**. Please note, that they are divided into the subcategories "Leaded and through-hole", "Surface Mounted Devices" and "Special Packages". You wi…
+ Read more

Notes on processing
Information regarding reflow profile, soldering temperature, soldering profile and further processing notes for most of the discrete products are mentioned in the Application Note.…
+ Read more

Design-in support
We offer design-in support for your application.
You can use our Infineon Solution Finder: **https://www.infineon.com/solutionFinder**…
+ Read more

Simulation Parameters/SPICE models
Please visit our Simulation Model Finder on the internet at **https://www.infineon.com/simulation**
Please select "Simulation Models (SPICE, S-parameters, SABER)"…
+ Read more

Ask for technical support | Call us toll-free or request a call back | Live chat with our Support Center | Ask our community for support