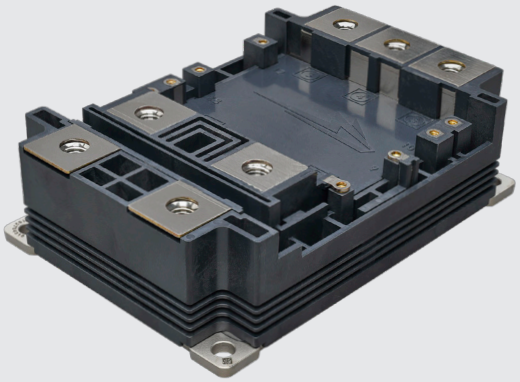
WOLFSPEED® SILICON CARBIDE 3300 V FAMILY

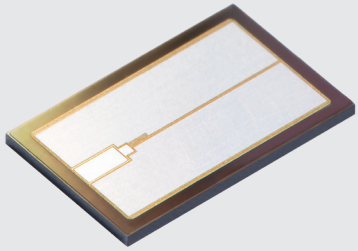
ENABLING HIGH EFFICIENCY AND RELIABILITY IN HIGH-POWER APPLICATIONS

Wolfspeed extends its Silicon Carbide technology leadership with the introduction of the 3300 V Silicon Carbide die and power module. This new technology node provides the system benefits of Silicon Carbide while maintaining reliability and mechanical ruggedness needed for today's medium-voltage, high-power conversion systems.

Wolfspeed's 3300 V LM power module is optimized for applications that require increased power density, high reliability, and faster switching. The LM module enables 175° C continuous junction temperature operation with high thermal conductivity Silicon Nitride (Si_3N_4) substrates to ensure mechanical robustness under extreme operating conditions. Designed for low $R_{DS(ON)}$, the module is easy to parallel and compatible with standard gate drive design.

The new 3300 V Bare Die Silicon Carbide MOSFET enables improved system efficiency, smaller form factor and higher temperature operation. The efficiency gained from moving from a silicon-based solution to Silicon Carbide can help enable smaller, lighter and more cost-effective designs.





PRODUCT PORTFOLIO

Product SKU	Blocking Voltage (V)	Nominal Current (A) at 25°C	$R_{DS(ON)}$ at 25°C (mΩ)	Description
CPM3-3300-R050A	3300	52	53	Industrial Qualified, Silicon Carbide Bare Die MOSFET
CAB600M33LM3	3300	770	2.7	Industrial Qualified, 770 A, Half-Bridge, LM3 Power Module

FEATURES

- Low $R_{DS(ON)}$
- Low stray inductance
- Increased thermal-mechanical performance
- High temperature operation
- AlSiC baseplate
- High thermal conductivity Silicon Nitride substrate

BENEFITS

- Reduced volume, weight, and overall system cost
- Faster switching
- Higher reliability
- Higher system efficiency
- Reduced cooling requirements
- Improved thermal cycling and longer lifetime

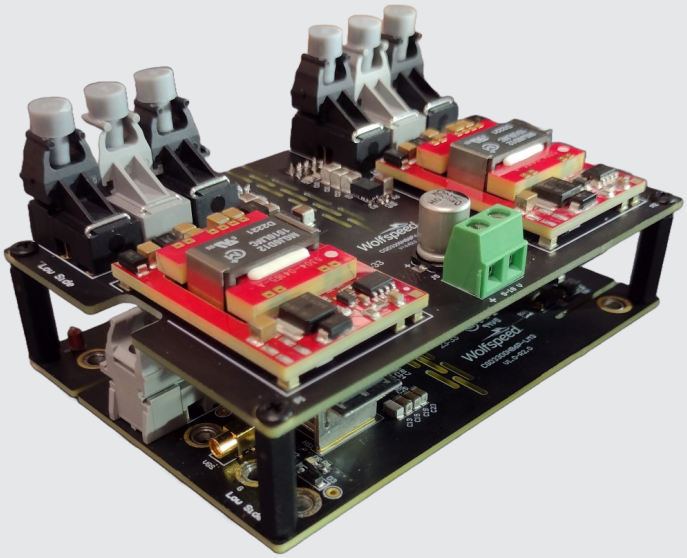
APPLICATIONS

- Heavy-duty industrial E-Mobility: Transportation, construction, agriculture, mining, logging
- Ultra fast DC chargers
- Industrial motor drives
- Uninterruptible power supplies (UPS)
- Marine and aerospace propulsion
- Terrestrial power distribution systems
- High voltage direct current (HVDC) and flexible AC transmission systems (FACTS) controllers

WOLFSPEED'S 3300 V SILICON CARBIDE FAMILY OFFERS HIGH RELIABILITY AND MECHANICAL RUGGEDNESS FOR HIGH-POWER APPLICATIONS

FEATURED DESIGN TOOLS

Wolfspeed offers time saving design support tools for its Silicon Carbide products to help you get up and running quickly. These evaluation tools help you learn best practices and give you a starting point for working with Wolfspeed's Silicon Carbide. All design files available are complimentary, so that you can quickly understand and implement our designs into your end-system and modify as-needed to fit your specific design requirements.



Evaluation Gate Driver Board Optimized
for the 3300 V LM Module Family

Why Wolfspeed Silicon Carbide?

Wolfspeed Invented the Silicon Carbide MOSFET
35+ years of Silicon Carbide power with 12+ trillion installed field hours

Wolfspeed is Investing for the Future
#1 market share in Silicon Carbide technology, with the world's first, largest, and only 200 mm Silicon Carbide fabrication facility

17+ Years of Diode and MOSFET Production
Thousands of customers with millions of MOSFETs, Diodes and Modules

Focused Development and Customer Support
ALL resources dedicated to developing Silicon Carbide capacity, devices, packages, and to providing superior applications support

We Provide Silicon Carbide Solutions

» Silicon Carbide power devices

» Silicon Carbide expertise—this is all we do

» Application reference designs

» Expert systems engineering support
» Visit forum.wolfspeed.com

» SpeedFit™ online simulation platform

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