Product Brief

**Wolfspeed Silicon Carbide 650V MOSFET Family**

Lowest conduction and switching losses in the industry, enabling smaller, lighter, and highly efficient power conversion

Wolfspeed's 3rd Generation 650V MOSFET technology is optimized for high performance power electronics applications, including server power supplies, electric vehicle charging systems, energy storage systems, UPS, Solar (PV) inverters, and consumer electronics.

**Key features**
- Low On-State Resistance over Temperature
- Low Parasitic Capacitances
- Fast Diode with ultra low reverse recovery
- High Temperature Operation (TJ = 175°C)
- Kelvin Source Pin
- Industry Standard Through-Hole & SMT Packages

**Key benefits**
- Improves System Efficiency with lower switching and conduction losses
- Enables high switching frequency operation
- Improves System Level Power Density
- Reduces System Size, Weight and Cooling Requirements
- Enables new hard switching topologies (Totem-Pole PFC)

![Enabling Highest System Efficiency](chart.png)
Wolfspeed Silicon Carbide 650V MOSFET Family

Lowest conduction and switching losses in the industry, enabling smaller, lighter, and highly efficient power conversion

Compared with silicon, our 650V Silicon Carbide MOSFETs enable:

- 75% lower switching losses
- ½ the conduction losses
- 3x higher power density

When coupled with Wolfspeed’s industry-leading 6th generation (C6D) Schottky diodes, power supply designers can realize performance levels that meet or exceed the requirements of even the most demanding applications.

Product portfolio

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Package</th>
<th>TSSOP-8</th>
<th>R_DS(on) (Ω)</th>
<th>I_D @ 25°C (A)</th>
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</thead>
<tbody>
<tr>
<td>C3M0015065K</td>
<td>TO-247-4</td>
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<td>15mΩ</td>
<td>120A</td>
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Why Wolfspeed SiC?

- Wolfspeed invented the SiC MOSFET in 2011
  30+ years of SiC power with 7+ trillion installed field hours

- Wolfspeed is Investing for the Future
  #1 market share in SiC technology, 30X capacity by 2024

- 17+ Years of Diode and MOSFET Production
  Thousands of customers with millions of MOSFETs and diodes

- Focused Development and Customer Support
  **ALL** resources dedicated to developing SiC capacity, devices, packages, and to providing superior applications support

We Provide

- SiC power devices
- SiC expertise – this is **all** we do
- Application reference designs
- Systems expert engineering support
- Online simulation platform

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