WOLFSPEED® AUTOMOTIVE QUALIFIED 1200 V, 450 A ALL-SILICON CARBIDE CONDUCTION-OPTIMIZED, HALF-BRIDGE MODULE EAB450M12XM3

Delivering the industry’s highest power density in its class for unsurpassed efficiency, brought to you by the leaders in Silicon Carbide.

Wolfspeed®’s automotive qualified XM3 power module maximizes the benefits of Silicon Carbide, while keeping the module and system design robust, simple and cost effective. With half the weight and volume of a standard 62 mm module, the XM3 power module maximizes power density while minimizing loop inductance and enabling simpler power bussing. The optimized package enables 175°C continuous junction operation, with a high reliability silicon nitride (Si3N4) power substrate to ensure mechanical robustness under extreme conditions. The XM3 is a perfect fit for demanding automotive applications such as traction drives, DC fast chargers, and automotive testing equipment.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Blocking Voltage</th>
<th>Nominal Current (A)</th>
<th>$R_{DS(ON)}$ at 25°C</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAB450M12XM3</td>
<td>1200 V</td>
<td>450 A</td>
<td>2.6</td>
<td>Automotive grade, Half-Bridge, C3M™ Conduction-Optimized MOSFETs</td>
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</tbody>
</table>

**FEATURES**
- High Power Density Footprint
- Implements Conduction Optimized C3M™ Silicon Carbide MOSFET Technology
- Silicon Nitride Insulator and Copper Baseplate

**BENEFITS**
- Simple, Low Inductance Design
- Increased Junction Temperature Operation
- Voltage Sensing For Gate Driver Overcurrent Protection

**APPLICATIONS**
- Motor & Traction Drives
- Vehicle Fast Chargers
- Automotive Test Equipment
- More Electric Aircraft / eVTOL
ENABLING HIGH EFFICIENCY AND HIGH POWER DENSITY IN THE MOST DEMANDING AUTOMOTIVE APPLICATIONS

FEATURED DESIGN TOOLS

300 kW High Performance 3-Phase Inverter Reference Design with a power density of 32 kW/L
[CRD300DA12E-XM3]

600 kW High Performance Dual 3-Phase Inverter Reference Design with a power density of 72 kW/L
[CRD600DA12E-XM3]

[KIT-CRD-CIL12N-XM3]

Why Wolfspeed Silicon Carbide?

Wolfspeed invented the Silicon Carbide MOSFET
30+ years of Silicon Carbide power with 7+ trillion installed field hours

Wolfspeed is investing for the Future
#1 market share in Silicon Carbide technology, 30x capacity by 2024

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 Cardibe 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
» Online simulation platform

TO LEARN MORE, VISIT US AT WOLFSPEED.COM/POWER