

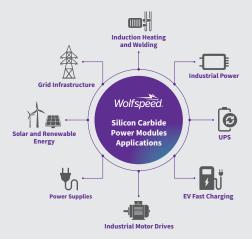
# **WOLFSPEED® POWER MODULES**

# PROVIDING THE MOST EXTENSIVE LINEUP OF MODULES TO DATE, SERVING INDUSTRIAL, CRITICAL ENVIRONMENT, AND MOBILITY MARKETS

Silicon Carbide technology has shown performance improvements over traditional silicon (Si) components across the board, including lower power losses, faster switching, higher operating temperatures, greater power density, and overall higher efficiency. Wolfspeed's upgraded portfolio of power modules can provide these advantages in industry standard footprints and optimized footprints, even in the most demanding applications. Wolfspeed's power modules are designed to provide system scalability and flexibility. They come with a variety of features, providing higher ampacity, smaller size, and scale from 1 amp to nearly 1000 amps, which makes them a perfect fit for your power designs.

#### **MODULE PRODUCT PORTFOLIO**

	Part Number	Blocking Voltage (V)	Nominal Current (A)	R <sub>DS(ON)</sub> (mΩ) at 25°C
G PLATFORM Standard 56.7mm	CAB006A12GM3	1200	200	6
	CAB006A12GM3T NEW	1200	200	6
	CAB006M12GM3	1200	200	6
	CAB006M12GM3T NEW	1200	200	6
	CAB008A12GM3	1200	181	8
	CAB008A12GM3T NEW	1200	181	8
	CAB008M12GM3	1200	160	8
	CAB008M12GM3T NEW	1200	160	8
	CAB011A12GM3	1200	141	11
	CAB011A12GM3T NEW	1200	141	11
	CCB016M12GM3	1200	50	16
	CCB016M12GM3T NEW	1200	50	16
X PLATFORM Optimized 53mm	CAB450M12XM3	1200	450	2.6
	EAB450M12XM3	1200	450	2.6
	CAB425M12XM3	1200	425	3.2
	CAB400M12XM3	1200	400	4
	CAB320M17XM3	1700	320	3.5
RM 2mm	CAB760M12HM3	1200	760	1.33
	CAR600M12HN6	1200	600	
	CAS480M12HM3	1200	480	2.29
FO 6 6	CAB760M12HM3R	1200	760	1.33
H PLATFORM Optimized 62mm	CAB650M17HM3	1700	650	1.67
	CAR600M17HN6	1700	600	
	CAB500M17HM3	1700	500	2.5
	CAS380M17HM3	1700	380	3.3
L PLATFORM Medium 100mm x 140mm	CAB600M33LM3*	3300	707	2.7



	Part Number	Blocking Voltage (V)	Nominal Current (A)	R <sub>DS(ON)</sub> (mΩ) at 25°C			
	CAB530M12BM3	1200	530	2.6			
	CAS530M12BM3	1200	530	2.6			
	WAS530M12BM3	1200	530	2.6			
	WAB400M12BM3	1200	400	3.25			
	WAS350M12BM3	1200	350	4			
<u>⊸</u> Ę	CAS350M12BM3	1200	350	4			
B PLATFORM Standard 62mm	CAS300M12BM2	1200	300	4.2			
	WAB300M12BM3	1200	300	4			
	WAS175M12BM3	1200	175	8			
	CAS175M12BM3	1200	175	8			
	CAS120M12BM2	1200	120	13			
	WAS310M17BM3	1700	310	4.29			
	CAS310M17BM3	1700	310	4.29			
	CAS300M17BM2	1700	225	8			
	CAS300M17BM2	1700	300	8			
F PLATFORM Standard 33.8mm	CAB011M12FM3	1200	117	11			
	CAB011M12FM3T	1200	117	11			
	CCB032M12FM3	1200	30	32			
	CCB021M12FM3	1200	30	21			
	CCB021M12FM3T	1200	30	21			
	CCB032M12FM3T	1200	30	32			
	CBB032M12FM3	1200	37	32			
	CBB032M12FM3T	1200	37	32			
	CBB021M12FM3	1200	48	21			
	CBB021M12FM3T	1200	48	21			
	CAB016M12FM3	1200	84	16			
	CAB016M12FM3T	1200	84	16			

\*Coming Soon

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## WOLFSPEED® POWER MODULES

#### Wolfspeed WolfPACK<sup>™</sup> Silicon Carbide Power Modules



Wolfspeed's WolfPACK family of products (FM3/GM3) delivers power in a baseplate-less, press-fit-interconnect housing. The product line features the newly released full bridge configuration along with six-pack and half-bridge

options. Numerous power stages can benefit from the advantages of Silicon Carbide. Products now feature a pre-applied thermal interface material to support fast and easy processing. The new GM3 Aluminum Nitride Substrate dramatically reduces thermal resistance, lowers junction temperature for given loss, enhances power cycling lifetime for given losses, and enables higher utilization of Silicon Carbide performance.

### Wolfspeed's BM Industry-Standard 62-mm Footprint Power Modules



The family of BM 62 mm modules comes in 1.2 kV and 1.7 kV half-bridge topologies that deliver up to 530 A. Material for these modules have been selected to target different operating

conditions. Wolfspeed offers THB-80 qualified housing material option to provide additional robustness for applications against harsher environment.

#### Wolfspeed's XM Silicon Carbide Power Modules



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 simple power bussing. The XM3's Silicon Carbide optimized

packaging enables 175°C continuous junction operation with a high reliability silicon nitride (Si<sub>3</sub>N<sub>4</sub>) power substrate to ensure mechanical robustness under extreme conditions.

#### Wolfspeed's HM Silicon Carbide Power Modules



The HM3 family of devices offers Wolfspeed's highest-power-density power modules available. With a lightweight Aluminum Silicon Carbide (AlSiC) baseplate,

compact footprint that supports high currents (<800 A), and low inductance at high frequencies, the HM3 delivers a Silicon Carbide-optimized footprint with unprecedented power density.

#### **Wolfspeed's LM Silicon Carbide Power Modules**



Wolfspeed's LM power modules offer the benefits of Silicon Carbide in power density sensitive applications, with high reliability and repeatability in an even wider range of

power systems. The optimized packaging enables 175°C continuous junction operation, with a high-reliability Silicon Nitride (Si3N4) power substrate to ensure mechanical robustness under extreme conditions and a lightweight AlSiC baseplate. Designed for low  $R_{DS(ON)}$ , the modules are easy to parallel and compatible with standard gate drive design.



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