

Product brief

CIPOS™ Maxi IPM

IM818 series 1200 V/5–10 A

Infineon's high-performance CIPOS™ Maxi Intelligent Power Modules (IPMs) integrate various power and control components to increase reliability, optimize PCB size and system costs. It is designed to control three-phase AC motors and permanent magnet motors in variable speed drives applications such as low-power motor drives, pumps, fan drives and active filters for HVAC (heating, ventilation, and air conditioning). The existing portfolio offers 5 A and 10 A in 1200 V class up to 1.8 kW power rating. The smallest package in 1200 V IPM class offers highest power density and best performance in its class.

IM818 is the first 1200 V IPM that integrated an optimized 6-channel SOI gate driver to provide built-in deadtime that prevents damage from transients. The product concept is especially adapted to power applications, which require excellent thermal performance and electrical isolation as well as meeting EMI requirements and overload protection.

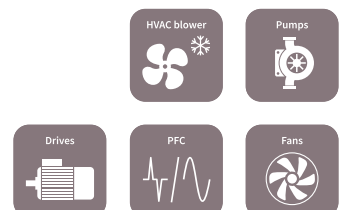
Applications

- > Pumps
- > Blowers
- > Fan motors
- > Active filter (active power factor correction) for HVAC
- > Low-power general purpose drives (GPI, servo drives)



Key features

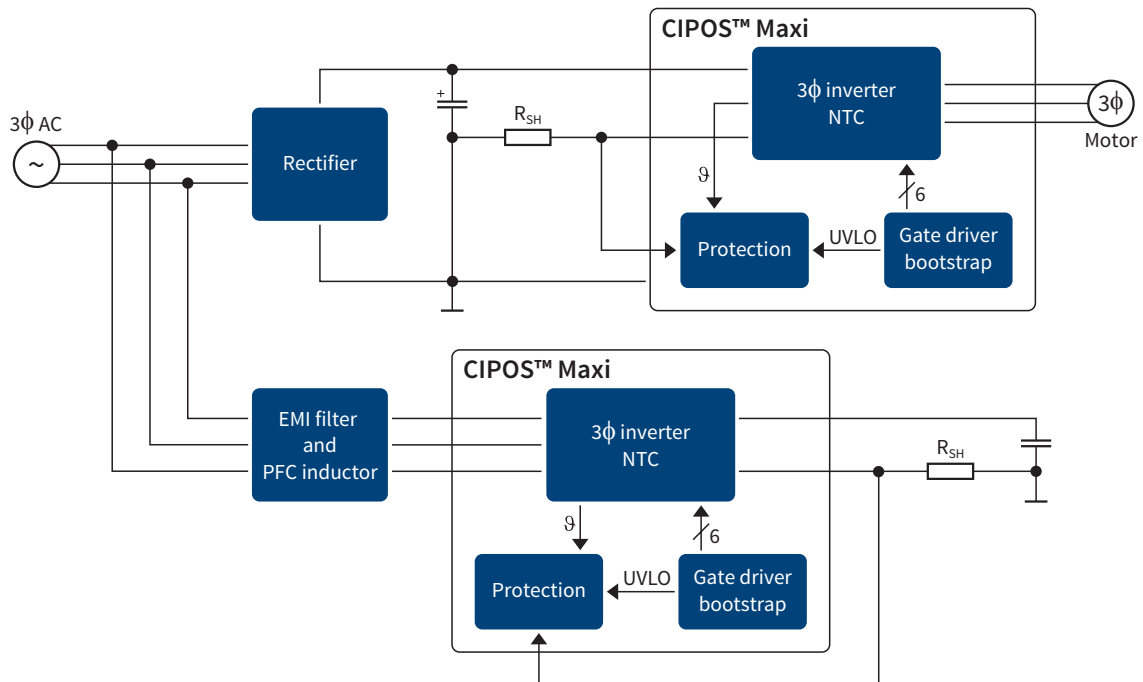
- > Totally isolated dual-in-line molded module with DCB
- > Application-specific performance
- > 1200 V TRENCHSTOP™ IGBT 4
- > Rugged 1200 V SOI gate driver technology with protection against transients
- > Allowable negative V_S potential up to -11 V for signal transmission at $V_{BS} = 15$ V
- > Integrated bootstrap functionality
- > Overcurrent shutdown
- > Undervoltage lockout at all channels
- > All of six switches turn off during protection
- > Cross-conduction prevention
- > Low-side emitter pins accessible for all phase current monitoring (open emitter)
- > Programmable fault clear timing
- > Enable input
- > UL-certified thermistor (85 k Ω)
- > Lead-free terminal plating, RoHS-compliant



CIPOS™ Maxi

Intelligent Power Modules (IPM) 1200 V/5–10 A

Block diagram



Product	Package	Voltage [V]	Nominal current @ 25 °C [A]	Nominal current @ 80 °C [A]	Power up to [kW]	T_{jmax} [°C]	Remark
IM818-SCC	DIP 36X23D	1200	8	5	1.2	150	-
IM818-MCC	DIP 36X23D	1200	16	10	1.8	150	-

Published by
Infineon Technologies AG
81726 Munich, Germany

© 2018 Infineon Technologies AG.
All Rights Reserved.

Please note!

THIS DOCUMENT IS FOR INFORMATION PURPOSES ONLY AND ANY INFORMATION GIVEN HEREIN SHALL IN NO EVENT BE REGARDED AS A WARRANTY, GUARANTEE OR DESCRIPTION OF ANY FUNCTIONALITY, CONDITIONS AND/OR QUALITY OF OUR PRODUCTS OR ANY SUITABILITY FOR A PARTICULAR PURPOSE. WITH REGARD TO THE TECHNICAL SPECIFICATIONS OF OUR PRODUCTS, WE KINDLY ASK YOU TO REFER TO THE RELEVANT PRODUCT DATA SHEETS PROVIDED BY US. OUR CUSTOMERS AND THEIR TECHNICAL DEPARTMENTS ARE REQUIRED TO EVALUATE THE SUITABILITY OF OUR PRODUCTS FOR THE INTENDED APPLICATION.

WE RESERVE THE RIGHT TO CHANGE THIS DOCUMENT AND/OR THE INFORMATION GIVEN HEREIN AT ANY TIME.

Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.