

Power Modules



flow 1B housing
72 x 36 x 16 mm

Intelligent Power Module (IPM) with optional PFC

New flowIPM family with integrated driver circuit and shunt resistors.

General Features:

- Output power at 230V input: up to 2kW
- 1~ Rectifier, 3~ Inverter
- Optional PFC circuit with Si or SiC boost diode
- Integrated gate drivers with complete bootstrap circuit
- Overcurrent protection
- Ultra low inductive design with integrated DC-capacitor
- Laser trimmed shunt resistors for PFC and inverter current
- Temperature Sensor
- 17mm housing, optional with Press-fit pins or phase change material

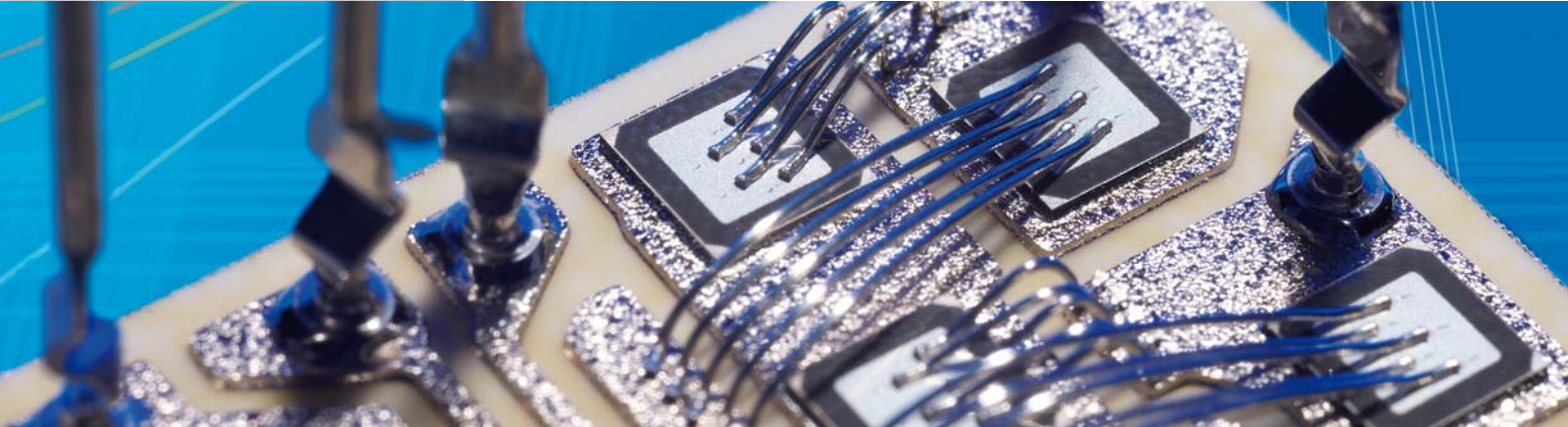
Applications:

- Standard motor drives
- Fans, pumps, air-conditioning
- Professional power tools
- Washing machines, refrigerators

Short Description:

Most common for *flowIPM* are applications like motor driver circuits up to 1kW output power. The optional PFC circuit helps to gain the maximum possible power efficiency. The compact design and sophisticated thermal management provides the optimum solution for crowded mechanical environments.

Vincotech's *flowIPM* integrates not only the inverter part, but also rectifier and PFC circuit. The complete driver circuit is also integrated to the module with no need of additional external components. With the integrated shunts, a high-precision current sensing of the PFC and inverter part is possible.



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Family Members:

Type	Pwr	fsw PFC	Components
1B06INA004SA	1kW	-	Inverter: 600V/4A
1B06INA010SA	2kW	-	Inverter 600V/10A
1B06IPA004MF	1kW	50 – 100kHz	Inverter: 600V/4A PFC: 600V/350mΩ + ultrafast FRED
1B06IPA004MC	1kW	100 – 200kHz	Inverter: 600V/4A PFC: 600V/350mΩ + SiC Diode
1B06IPA010MF	2kW	50 – 100 kHz	Inverter 600V/10A PFC: 600V/190mΩ + ultrafast FRED
1B06IPA010MC	2kW	100 – 200kHz	Inverter: 600V/10A PFC: 600V/190mΩ + SiC Diode

Schematic:

