MIPAQ™base

Shunt Modules featuring IGBT4

The new MIPAQ™ family of Infineon is offering Modules Integrating Power, Application and Quality.

One of the first family members is MIPAQ™base which provides an IGBT sixpack plus current sense shunts inside. Due to the integration of specially designed shunts, the performance of this module family with regard to system cost is excellent.

These modules in sixpack configuration with NTC are available in the well-proven EconoPACK™3 housing with 75A, 100A and even 150A nominal current. The integrated shunt for current measurement makes current sensors or external shunts redundant. While external shunts can generate significant heat on the inverter's PCB, the integration of shunts into the IGBT module allows an improved distribution of heat to the heat sink. External current sensors are often quite costly and require valuable space. Thus, MIPAQ™base shunt modules save space, reduce system cost, help to manage the temperature on the PCB while allowing very high measurement accuracy.

Infineon's IGBT4 technology makes it possible to increase the power density of IGBT modules. This is how MIPAQ™ base shunt modules featuring IGBT4 can be realized up to 150A nominal current in 1200V for the six pack configuration with NTC resistor for temperature sensing. IGBT4 does not only provide approx. 20% lower switching losses than IGBT3 but also a significantly higher power cycling capability. The operation junction temperature of IGBT4 is 150°C offering even more output power and more reliability for a variety of applications.

Hence, MIPAQ™base supports our customers in mastering the challenge of designing powerful and compact inverters at low costs, contributing to energy savings to improve profitability and protect our environment at the same time.

By using MIPAQ™base, the application will benefit from eliminating large external shunts and hotspots on the PCB. MIPAQ™base will allow an easy and highly reliable phase current measurement.

Applications

- Industrial drives
- Ideal for inverters used in machine tools

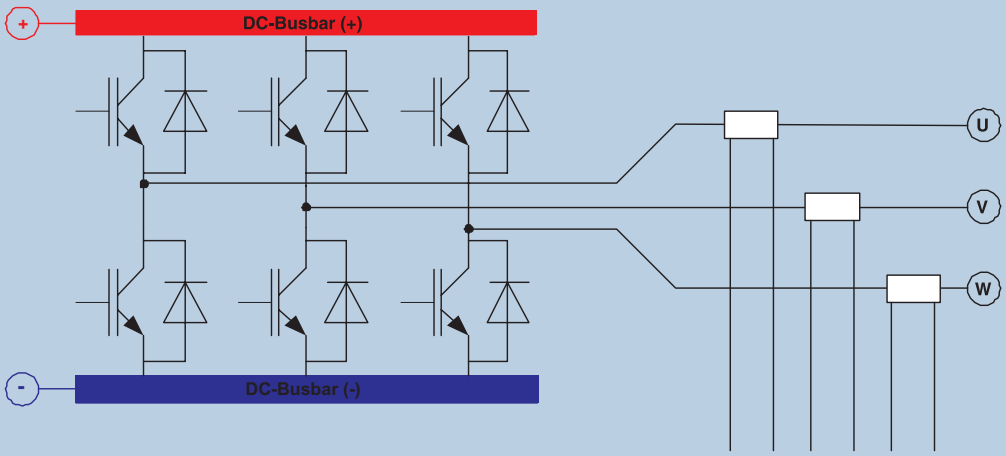
Key Benefits

- Compact modules with a height of only 17mm
- Well-proven Econo design
- Sixpack configuration with shunts and NTC
- Allows accurate current measurement
- Up to 150A nominal current
- Saves space and system cost
- Ideal for low inductive system designs
- 150°C operation junction temperature
- Excellent power cycling capability
- High power density for compact inverter designs
- UL/CSA Certification by UL1557 E83336
- RoHS compliant

www.infineon.com/MIPAQ

High Power Semiconductors

Never stop thinking



Technical features

- Optimized thermal situation for shunt
- Shunt values matched to rated chip current
- Shunts provide outstanding power cycling capabilities

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Information

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Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

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