

## Data Sheet DB01-FF450R17ME3

### Basic Board for Infineon EconoDual Modules FF450R17ME3

#### Abstract

The DB01-FF450R17ME3 is a basic board to be used with dual-channel driver 2SD316EI-17 for reliable driving and safe operation of Infineon IGBT modules FF450R17ME3.

The basic board DB01-FF450R17ME3 (with driver 2SD316EI-17) is fully matched to IGBT module FF450R17ME3. Its plug-and-play capability makes it ready to operate immediately after mounting. The user needs invest no effort in designing or adjusting it to a specific application.

#### Product Highlights

- ✓ Plug-and-play solution
- ✓ Suitable for FF450R17ME3
- ✓ No electrolytic capacitors
- ✓ Extremely reliable; long service life
- ✓ Shortens application development time

#### Applications

- ✓ Three-phase inverters
- ✓ Motor drives
- ✓ UPS
- ✓ Power-factor correctors
- ✓ Wind-power converters
- ✓ Welding
- ✓ SMPS
- ✓ and many others

## Data Sheet

**Important: Please refer to the relevant manuals!**

This data sheet contains only product-specific data for the basic board. Information specific to the relevant driver can be found in the corresponding data sheet.

A detailed description, must-read application notes and general data applicable to this driver family are found in: "Description and Application Manual, Dual-Channel Driver 2SD316EI for the EconoDual Modules".

### Dimensions

Dimensions: 62 x 100 mm.

Height including driver: 21 mm (30 mm with connector X1 and flat cable).

Mounting principle: soldered onto an EconoDual IGBT module FF450R17ME3.

### Absolute Maximum Ratings

Parameter	Remarks	Min	Max	Units
Input power per channel	Note 1		3	W
Switching frequency	Note 2		18	kHz
DC link voltage	Note 3		1200	V
Operating temperature		-40	+85	°C
Storage temperature		-40	+90	°C

All data refer to +25°C unless otherwise specified

### Electrical Characteristics

Short-circuit protection	Remarks	Min	Typ.	Max	Units
$V_{ce}$ -monitoring threshold	Betw. aux. terminals	3.65			V
Response time	Note 4	11.3			µs

Gate output	Remarks	Min	Typ.	Max	Units
Turn-on gate resistor $R_{g(on)}$		3.2			Ω
Turn-off gate resistor $R_{g(off)}$		10			Ω

Electrical insulation	Test conditions	Min	Typ.	Max	Units
Creep path between both channels		10			mm

All data refer to +25°C unless otherwise specified

### Footnotes to the key data

- 1) The input power is limited by the on-board gate resistors.
- 2) If the specified max. switching frequency is exceeded, the gate resistors may overheat.
- 3) This limit is due to active clamping. Refer to the "Description and Application Manual, Dual-Channel Driver 2SD316EI for the EconoDual Modules".
- 4) Pulse width of the direct output of the gate drive unit (excluding the gate-resistor delay).

### Important Notice

The data contained in this product data sheet is intended exclusively for technically trained staff. Handling all high-voltage equipment involves risk to life. Strict compliance with the respective safety regulations is mandatory!

Any handling of electronic devices is subject to the general specifications for protecting electrostatic-sensitive devices according to international standard IEC 747-1, Chapter IX or European standard EN 100015 (i.e. the workplace, tools, etc. must comply with these standards). Otherwise, this product may be damaged.

### Disclaimer

This data sheet specifies devices but cannot promise to deliver any specific characteristics. No warranty or guarantee is given – either expressly or implicitly – regarding delivery, performance or suitability.

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## Data Sheet

**Ordering Information**

<b>Related IGBT</b>	<b>CONCEPT Driver Type #</b>
Infineon (eupec) FF450R17ME3	2SD316EI-17
<b>Connection</b>	<b>CONCEPT Modular Cable Type #</b>
2SD316EI-17 to DB01-FF450R17ME3	MIC01A (2 items per driver)
<b>Related IGBT</b>	<b>CONCEPT Basic Board Type #</b>
Infineon (eupec) FF450R17ME3	DB01-FF450R17ME3

**Information about Other Products**

For other drivers and evaluation systems

Internet: [www.IGBT-Driver.com](http://www.IGBT-Driver.com)

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