

## Data Sheet EB01-FS450R17KE3

# Basic Board for Infineon Econopack+ Modules FS450R17KE3

### Abstract

The EB01-FS450R17KE3 is a basic board to be used with six-channel driver 6SD312EI for reliable driving and safe operation of Infineon IGBT modules FS450R17KE3.

The basic board EB01-FS450R17KE3 (with driver 6SD312EI) is fully matched to IGBT module FS450R17KE3. 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 FS450R17KE3
- ✓ 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

## Basic Board 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, Six-Channel Driver 6SD312EI for the Econopack+ Modules".

### Dimensions

Dimensions: 162 x 100 mm.

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

Mounting principle: soldered onto an Econopack+ IGBT module FS450R17KE3.

### 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**

<b>Short-circuit protection</b>	<b>Remarks</b>	<b>Min</b>	<b>Typ.</b>	<b>Max</b>	<b>Units</b>
V <sub>ce</sub> -monitoring threshold	Betw. aux. terminals		3.65		V
Response time	Note 4		11.3		μs
<b>Gate output</b>	<b>Remarks</b>	<b>Min</b>	<b>Typ.</b>	<b>Max</b>	<b>Units</b>
Turn-on gate resistor R <sub>g(on)</sub>			3.2		Ω
Turn-off gate resistor R <sub>g(off)</sub>			10		Ω
<b>Electrical insulation</b>	<b>Test conditions</b>	<b>Min</b>	<b>Typ.</b>	<b>Max</b>	<b>Units</b>
Creep path between channels			9		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, Six-Channel Driver 6SD312EI for the Econopack+ Modules".
- 4) Pulse width of the direct output of the gate drive unit (excluding the gate-resistor delay).

## Basic Board Data Sheet

### 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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### Technical Support

CONCEPT provides expert help for your questions and problems:

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

### Quality

The obligation to high quality is one of the central features laid down in the mission statement of CT-Concept Technology AG. The quality management system covers all stages of product development and production up to delivery. The drivers of the SCALE series are manufactured to the ISO 9001 standard.

### Ordering Information

The general terms and conditions of delivery of CT-Concept Technologie AG apply.

Related IGBT	CONCEPT Driver Type #
Infineon (eupec) FS450R17KE3	6SD312EI
Connection	CONCEPT Modular Cable Type #
6SD312EI to EB01-FS450R17KE3	MIC01A (6 items per driver)
Related IGBT	CONCEPT Basic Board Type #
Infineon (eupec) FS450R17KE3	EB01-FS450R17KE3

### © Manufacturer

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 Version of 2007-03-19