

## Data Sheet EB01-FS450R12KE3

# Basic Board for Infineon EconoPACK+ Modules FS450R12KE3

### Abstract

The EB01-FS450R12KE3 is a basic board to be used with six-channel driver 6SD312EI for reliable driving and safe operation of Infineon IGBT modules FS450R12KE3.

The basic board EB01-FS450R12KE3 (with driver 6SD312EI) is fully matched to IGBT module FS450R12KE3. 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 FS450R12KE3
- ✓ 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 FS450R12KE3.

**Absolute Maximum Ratings**

Parameter	Remarks	Min	Max	Units
Input power per channel	Note 1		3	W
Switching frequency	Note 2		22	kHz
DC link voltage	Note 3		800	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>
$V_{ce}$ -monitoring threshold	Betw. aux. terminals		3.4		V
Response time	Note 4		10		$\mu$ s
<b>Gate output</b>	<b>Remarks</b>	<b>Min</b>	<b>Typ.</b>	<b>Max</b>	<b>Units</b>
Turn-on gate resistor $R_{g(on)}$			1.5		$\Omega$
Turn-off gate resistor $R_{g(off)}$			10		$\Omega$
<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).

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### 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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### Ordering Information

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

Related IGBT	CONCEPT Driver Type #
Infineon (eupec) FS450R12KE3	6SD312EI
Connection	CONCEPT Modular Cable Type #
6SD312EI to EB01-FS450R12KE3	MIC01A (6 items per driver)
Related IGBT	CONCEPT Basic Board Type #
Infineon (eupec) FS450R12KE3	EB01-FS450R12KE3

### Information about Other Products

#### For drivers adapted to other high-voltage or high-power IGBT modules

Direct link: [www.IGBT-Driver.com/go/plug-and-play](http://www.IGBT-Driver.com/go/plug-and-play)

#### For other drivers and evaluation systems

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

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