Data Sheet DB01-FF300R17ME3

Basic Board for Infineon EconoDUAL Modules FF300R17ME3

Abstract

The DB01-FF300R17ME3 is a basic board to be used with dual-channel driver 2SD316EI-17 for reliable driving and safe operation of Infineon IGBT modules FF300R17ME3.

The basic board DB01-FF300R17ME3 (with driver 2SD316EI-17) is fully matched to IGBT module FF300R17ME3. 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 FF300R17ME3
- ✓ 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 FF300R17ME3.

Absolute Maximum Ratings

Parameter	Remarks	Min	Max	Units
Input power per channel	Note 1		3	W
Switching frequency	Note 2		28	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 $R_{g(on)}$			5		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.

CT-Concept Technology AG reserves the right to make modifications to its technical data and product specifications at any time without prior notice. The general terms and conditions of delivery of CT-Concept Technology AG apply.

Data Sheet

Ordering Information

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

Related IGBT	CONCEPT Driver Type #
Infineon (eupec) FF300R17ME3	2SD316EI-17

Connection	CONCEPT Modular Cable Type #
2SD316EI-17 to DB01-FF300R17ME3	MIC01A (2 items per driver)

Related IGBT	CONCEPT Basic Board Type #
Infineon (eupec) FF300R17ME3	DB01-FF300R17ME3

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

For other drivers and evaluation systems

Please click: www.IGBT-Driver.com

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