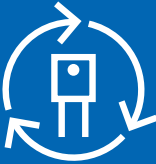


SiC devices contribute to

High efficiency 

Miniaturization 

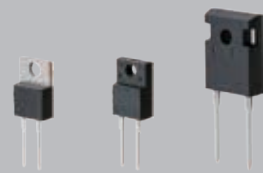
High power density 

Power supplies

By optimizing surface structure and applying thin wafer process technologies, the 2nd Generation products achieve low conduction loss (low V_F), high surge current capability (high I_{FSM}), and high heat dissipation compared to conventional products (1st Generation SiC Schottky barrier diodes). These features contribute to high efficiency, miniaturization, and high power density of power supplies.



- **Increase power efficiency**
Approximately 18% lower conduction loss than conventional products
- **Decrease device temperature**
Lower conduction loss than conventional products in whole temperature range
- **Enhanced reliability**
Approximately 64% higher surge current capability



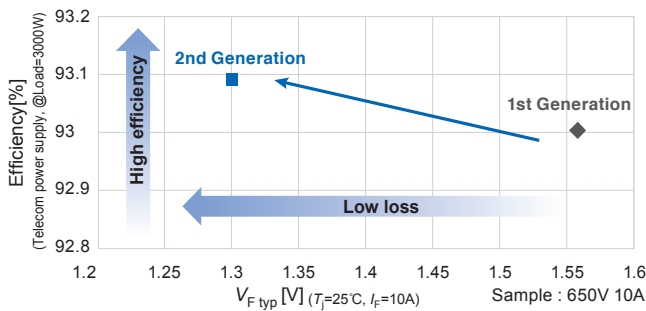
Packages : TO-220-2, TO-220F-2, TO-247-2
Applications: Servers, communication equipments, UPSs, power conditioning systems, general-purpose power supplies, quick chargers for EVs, etc.



1. Increase power efficiency

Lower V_F contribute to approximately 18% lower conduction loss than conventional products. Contribute to higher efficiency, miniaturization, and higher power density of power supplies.

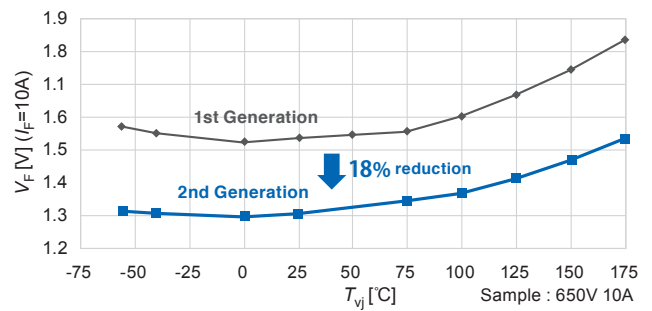
V_F - Efficiency



2. Decrease device temperature

Lower V_F (approximately 18%) than conventional products in whole temperature range. Decrease device temperature and contribute to the miniaturization of heat sinks.

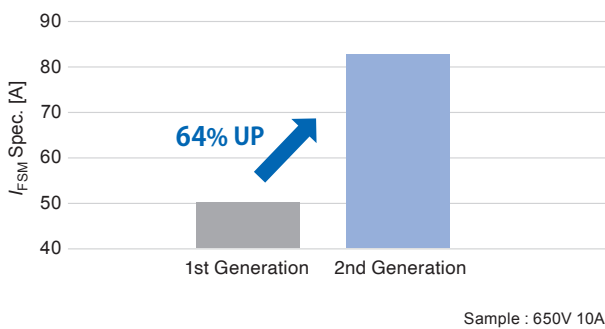
$V_F - T_{vj}$



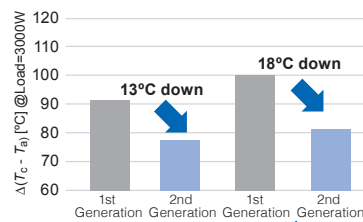
3. Enhanced reliability

Achieve both low V_F and high surge capability (I_{FSM}). Increase I_{FSM} rated value from 50A to 82A (64% increase)

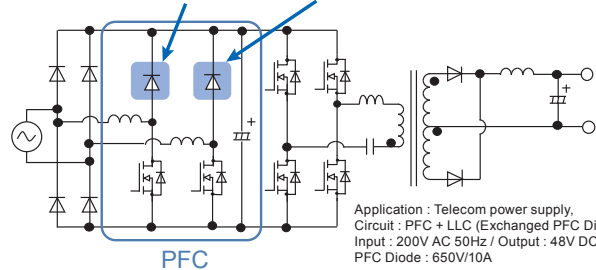
I_{FSM}



Temperature rise



Decrease device temperature by 18°C by simply replacing conventional products with 2nd Generation SiC SBDs



Product Lineup

Rated Voltage	I_F [A]	6	8	10	20	40
650V	TO-220-2	FDC2PT06S65	FDC2PT08S65	FDC2PT10S65		
	TO-220F-2	FDC2AT06S65	FDC2AT08S65	FDC2AT10S65		
1200V	TO-247-2				FDC2WT20S120	FDC2WT40S120

⚠ Safety Precautions

- * Before using this product, read the "Instruction Manual" and "Specifications" carefully, and consult with the retailer from which you purchased this product as necessary to use this product correctly.
- * The product must be handled by a technician with the appropriate skills.

Fuji Electric Co., Ltd.

URL www.fujielectric.com/products/semiconductor/
Gate City Ohsaki, East Tower, 1-11-2, Ohsaki, Shinagawa-ku, Tokyo 141-0032, Japan Tel:+81-3-5435-7156

- Fuji Electric Hong Kong Co., Ltd. Unit 1601-03 & 05, 16/F., Tower II, Grand Century Place, No. 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong Tel: +852-2664-8699
- Fuji Electric Taiwan Co., Ltd. 10F, No.168, Song Jiang Road, Taipei, Taiwan Tel: +886-2-2515-1820
- Fuji Electric Asia Pacific Pte. Ltd. 151 Lorong Chuan, #03-01/01A, New Tech Park, SINGAPORE 556741 Tel: +65-6533-0014
- Fuji Electric India Private Ltd. 119(Part), 120, 120A, Electrical and Electronics Industrial Estate, Perungudi, Chennai - 600096, Tamil Nadu, India Tel: +91-44-40004200
- Fuji Electric Corp. of America 50 Northfield Avenue Edison, NJ 08837, USA Tel: +1-732-560-9410
- Fuji Electric Europe GmbH Goethering 58, 63067 Offenbach am Main, F.R. GERMANY Tel: +49-69-6690290

2022-3 FOLS PDF

The contents of this document are subject to change without notice.