

**SUPER FAST RECTIFIER DATA SHEET**
**FEATURES**

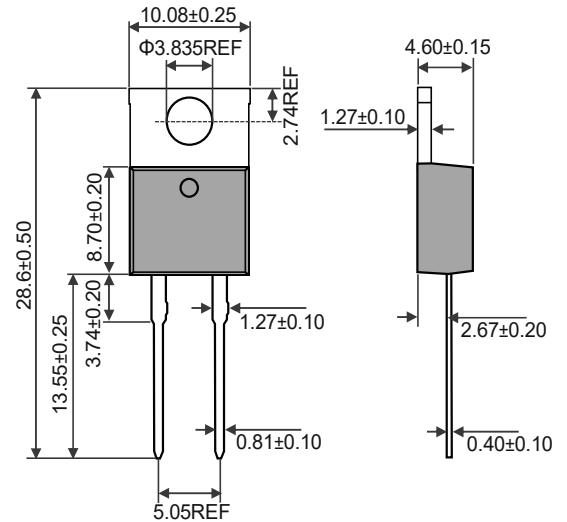
- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- RoHs Product.

**MECHANICAL DATA**

Mainly used in switching power supply, PWM pulse width modulator, inverter as a freewheeling and other electronic circuits, high-frequency rectifier diode, diode or damping diode use


**TO-220AC**

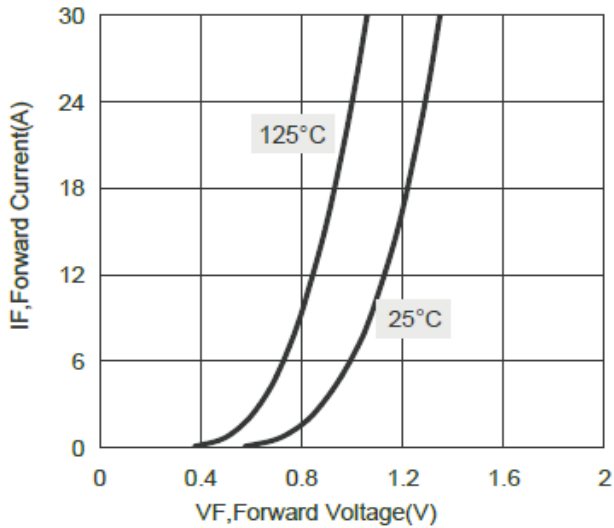
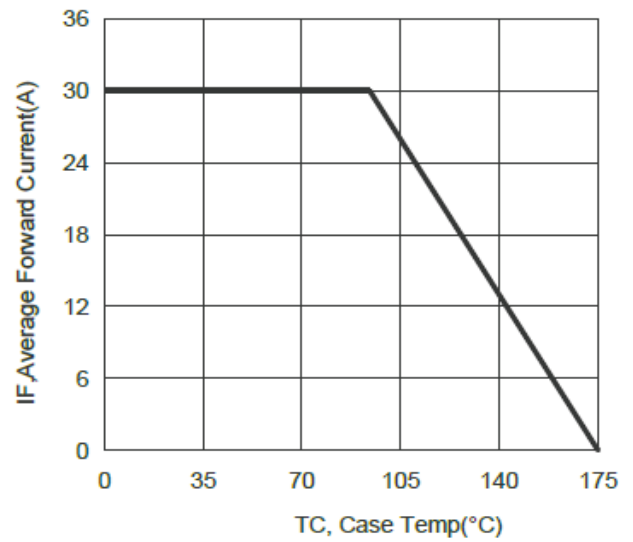
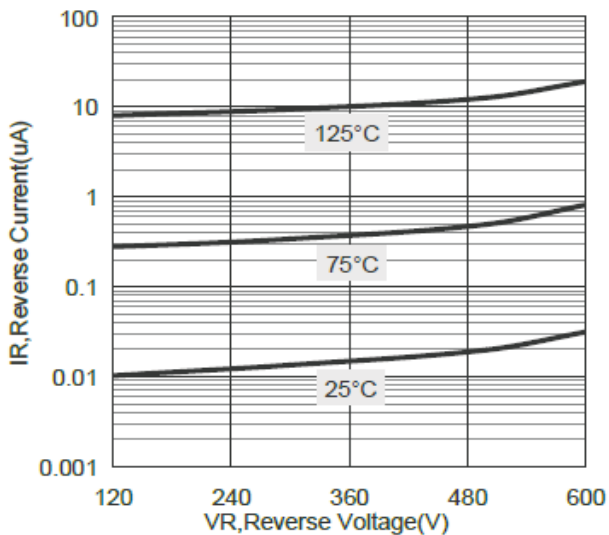
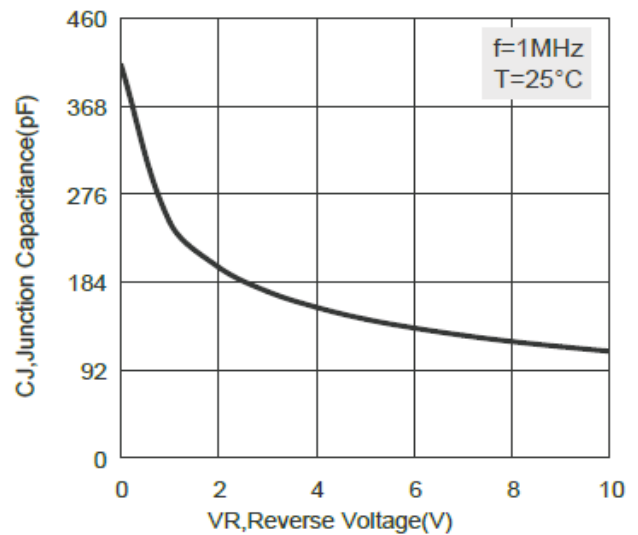
Unit: mm


**Absolute Maximum Ratings(Ta=25°C unless otherwise noted)**

Item	Symbol	Data	Unit
Maximal Inverted Repetitive Peak Voltage	VRRM	600	V
Average Rectified Forward Current(Rated VR=20Khz Square Wave)-50% duty cycle	IFAV	30	A
Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method)	IFSM	300	A
Operating Junction Temperature	TJ	-40~175	°C
Storage Temperature	TSTG	-40~175	°C
Typical Thermal Resistance(per leg)	Package=TO-220AC-A RθJC	1.5	°C/W

**Electricity Character Per Diode(Ta=25°C unless otherwise noted)**

Item	Test Condition	Value(min)	Value(typ)	Value(max)	Unit	
VB	IR = 100uA	600	—	—	V	
IR	VR = 600V	TJ = 25°C	—	10	μA	
		TJ = 125°C	—	0.1	mA	
VF	IF = 30A	TJ = 25°C	—	1.3	V	
		TJ = 125°C	—	1.1	1.25	V
CJ	VR = 0V, f=1MHz	—	420	—	pF	
TRR	IF=0.5A, IR=1.0A, IREC=0.25A, TJ =25°C	—	—	50	ns	
TRR		TJ = 25°C	—	53	—	ns
		TJ = 125°C	—	192	—	
IRRM	IF=30A di/dt=-200A/us VRM=400V	TJ = 25°C	—	6	—	A
		TJ = 125°C	—	13	—	
Qrr		TJ = 25°C	—	160	—	nC
		TJ = 125°C	—	1179	—	

**RATINGS AND CHARACTERISTIC CURVES**
**Fig1. Typical Forward Current and Forward Voltage**

**Fig2. Typical Current Derating Curve, Per Element**

**Fig3. Typical Reverse Current and Reverse Voltage**

**Fig4. Typical Junction Capacitance and Reverse Voltage**


## **Disclaimer**

DACO Semiconductor reserves the right to make modifications, enhancements, improvements, corrections, or other changes to this document and any product described herein without prior notice. For the most up-to-date version, please visit our website.

DACO Semiconductor makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does DACO Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any liability, including without limitation special, consequential or incidental damages.

Purchasers are responsible for its products and applications using DACO Semiconductor products, including compliance with all laws, regulations, and safety requirements or standards, regardless of any support or application information provided by DACO Semiconductor. "Typical" parameters that may be provided in DACO Semiconductor datasheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typical" must be validated for each customer application by the customer's technical experts.

DACO Semiconductor products are not designed, authorized, or warranted to be suitable for use in life support, life-critical or safety-critical systems, or equipment, nor in applications where failure or malfunction of DACO Semiconductor's product can reasonably be expected to result in personal injury, death or severe property or environmental damage. DACO Semiconductor accepts no liability for the inclusion and/or use of DACO Semiconductor's products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

Purchasers who buy or use DACO Semiconductor products for any unintended or unauthorized applications are required to indemnify and absolve DACO Semiconductor, its suppliers, and distributors from any claims, costs, damages, expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that DACO Semiconductor was negligent regarding the design or manufacture of the part.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval system, or otherwise, without the prior written permission of DACO Semiconductor Co., Ltd.