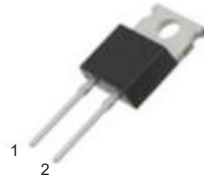


SUPERFAST RECTIFIER DATA SHEET
FEATURES

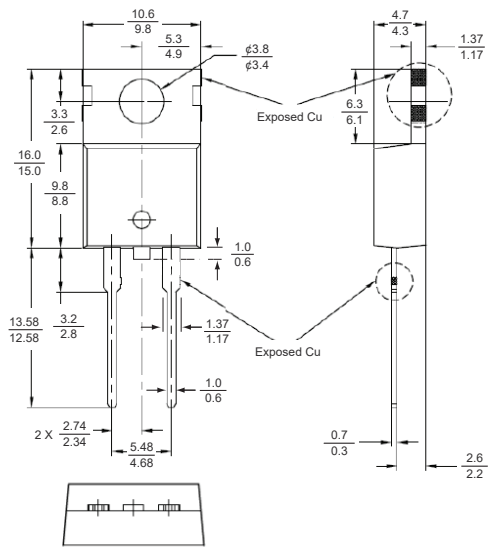
- Ultrafast Recovery
- 175°C Operating Junction Temperature
- High Frequency Operation
- Low IR Value
- High Surge Capacity
- Epitaxial Chip Construction

MECHANICAL DATA

- Switched Mode Power Supply
- Freewheeling Diode, Snubber Diode
- UPS


TO-220AC

Unit: mm


Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified
Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V_{RRM}		1200	V
Continuous forward current	$I_{F(AV)}$	$T_A=110^\circ\text{C}$	30	A
Single pulse forward current	I_{FSM}	$T_A=25^\circ\text{C}$	250	A
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHz	50	A
Operating junction	T_J		175	$^\circ\text{C}$
Storage temperatures	T_{stg}		-55 to +175	$^\circ\text{C}$

Electrical characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_R	$I_R=100\mu\text{A}$	1200			V
Forward voltage	V_F	$I_F=30\text{ A}$		2.8	3.3	V
		$I_F=30\text{ A}, T_J=125^\circ\text{C}$		2.4	3.0	V
Reverse leakage current	I_R	$V_R=V_{RRM}$			30	μA
		$T_J=150^\circ\text{C}, V_R=1200\text{V}$			300	μA
Reverse recovery time	T_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$			55	ns
		$I_F=1\text{A}, V_R=30\text{V}, di/dt=200\text{A}/\mu\text{s}$		30	40	ns

Thermal characteristics

Parameter	Symbol	Typ	MAX	Units
Junction-to-Case	R_{thJC}	-	2.5	$^\circ\text{C}/\text{W}$

RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Forward current derating curve

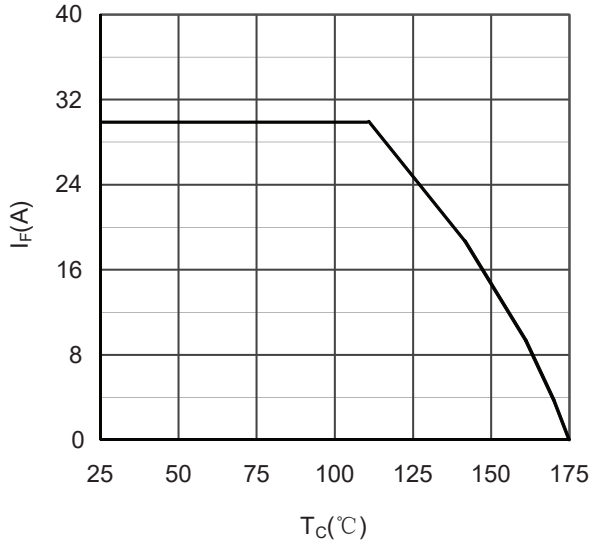


Fig. 2 - Typical forward characteristics

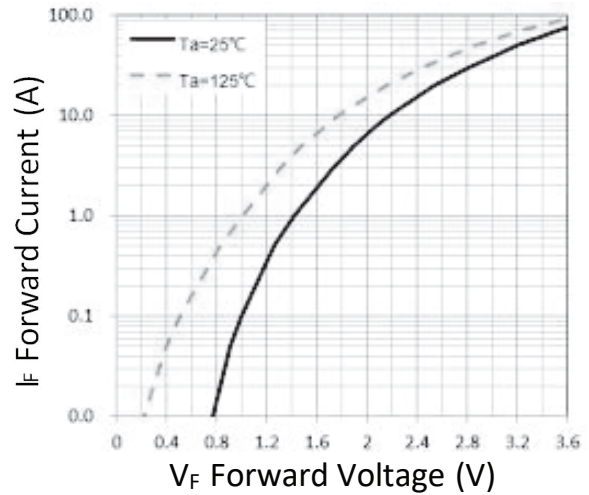


Fig. 3 - Typical reverse characteristics

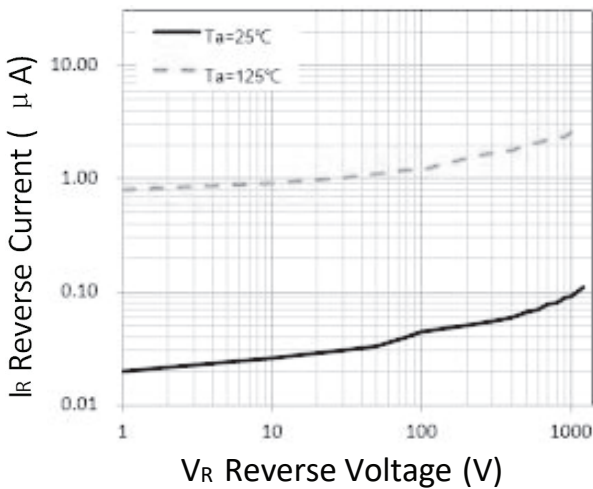


Fig. 4 - Forward surge current derating curve

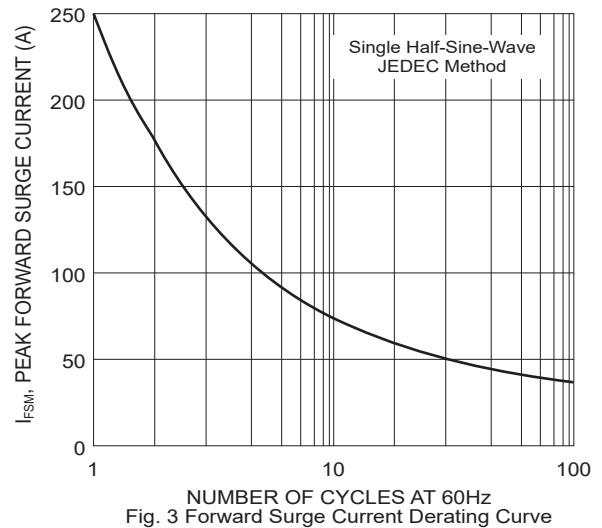


Fig. 3 Forward Surge Current Derating Curve

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.

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.