



GLASS PASSIVATED SUPERFAST RECTIFIER 15A

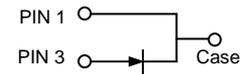
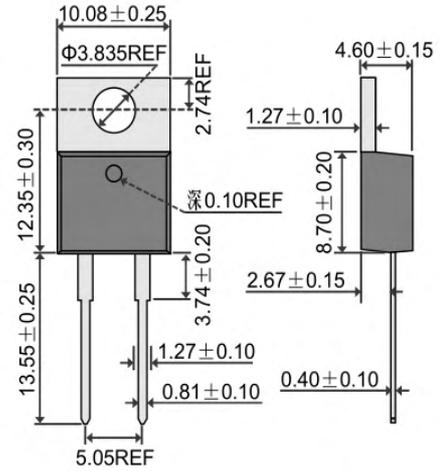
Features

- Fred Chip Planar Construction
- Superfast 35nS and 50nS Recovery Time
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- Soft Recovery Characteristics
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: TO-220A, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.9 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 0.6 N.m Max.
- Lead Free: For RoHS / Lead Free Version

TO-220AC



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	UF1501	UF1502	UF1503	UF1504	UF1506	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	100	200	300	400	600	V
Working Peak Reverse Voltage	V _{RWM}	100	200	300	400	600	V
DC Blocking Voltage	V _R	100	200	300	400	600	V
RMS Reverse Voltage	V _{R(RMS)}	70	140	210	280	420	V
Average Rectified Output Current @T _C = 100°C	I _O	15					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	200					A
Forward Voltage @ I _F = 15A	V _{FM}	1.05		1.25		1.5	V
Peak Reverse Current @T _C = 25°C At Rated DC Blocking Voltage @T _C = 100°C	I _{RM}	10 500					μA
Reverse Recovery Time (Note 1)	t _{rr}	35		50			nS
Typical Junction Capacitance (Note 2)	C _J	175				145	pF
Thermal Resistance Junction to Ambient	R _{θJA}	73					°C/W
Thermal Resistance Junction to Case	R _{θJC}	1.5					°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175					°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



RATINGS AND CHARACTERISTIC CURVES

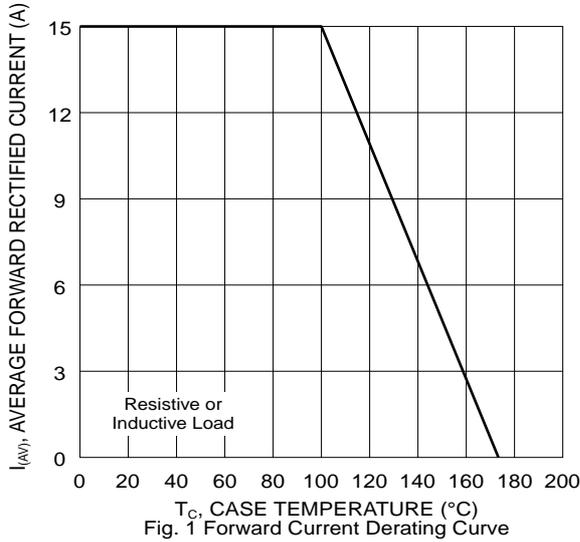


Fig. 1 Forward Current Derating Curve

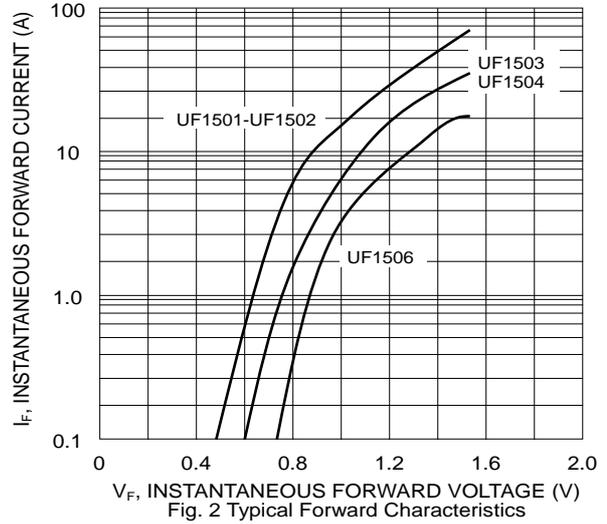


Fig. 2 Typical Forward Characteristics

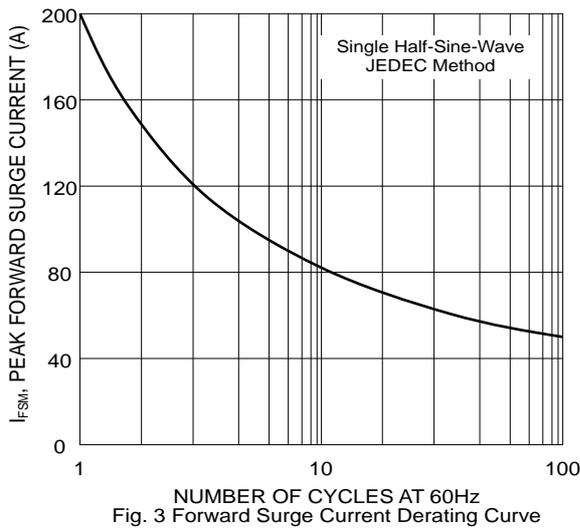


Fig. 3 Forward Surge Current Derating Curve

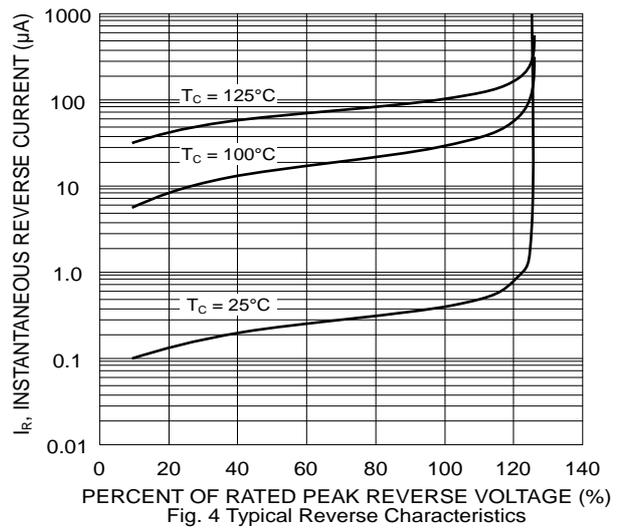


Fig. 4 Typical Reverse Characteristics

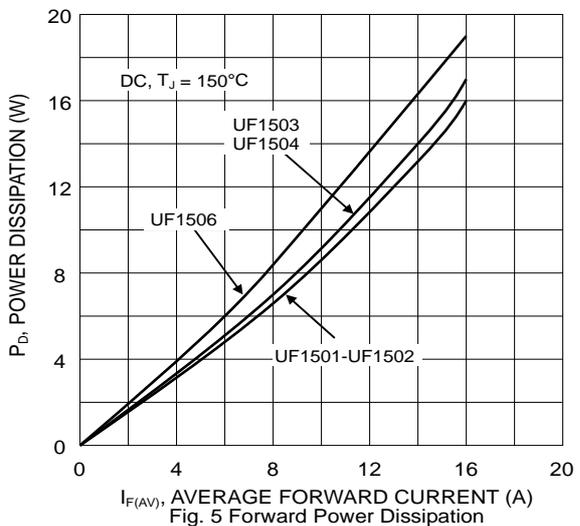


Fig. 5 Forward Power Dissipation

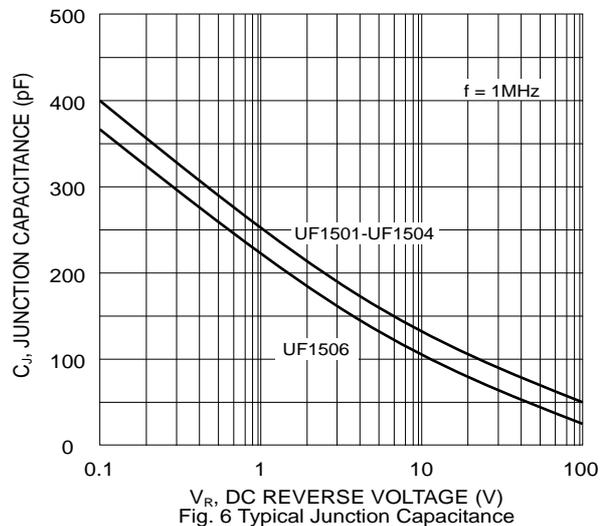


Fig. 6 Typical Junction Capacitance



PACKAGING INFORMATION

BULK

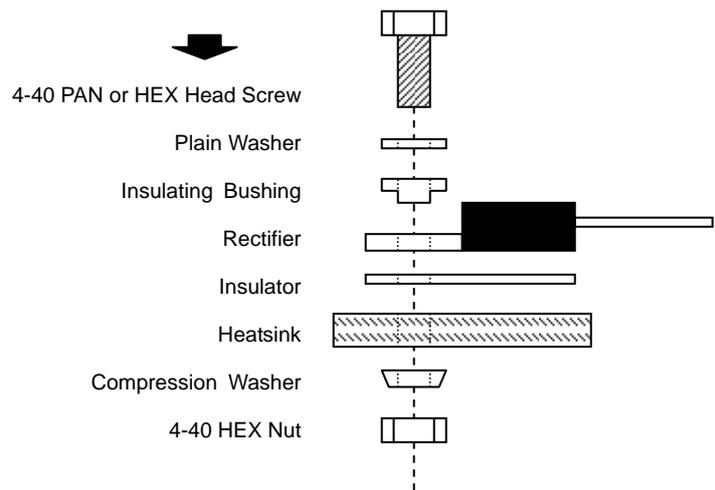
Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	558 x 150 x 40	1,000	570 x 235 x 170	5,000	11.85

RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink potential. 4-40 hardware is used.

Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package. The insulating bushing inside the mounting hole will insure the screw threads do not contact the metal base.

The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation.





Disclaimer

DACO Semiconductor reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein.

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 and all liability, including without limitation special, consequential or incidental damages.

Purchasers is 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 applications information provided by DACO Semiconductor. "Typical" parameters which may be provided in DACO Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by 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 accept no liability for 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 buy or use DACO Semiconductor products for any such unintended or unauthorized application, Purchasers shall indemnify and hold DACO Semiconductor and its suppliers and distributors harmless against all claims, costs, damages, and 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 any information storage or retrieval system, or otherwise, without the prior written permission of DACO Semiconductor Co., Ltd.