# RDBF251 THRU RDBF2510

**SINGLE PHASE 2.5 AMP FAST GLASS PASSIVATED BRIDGE RECTIFIER**

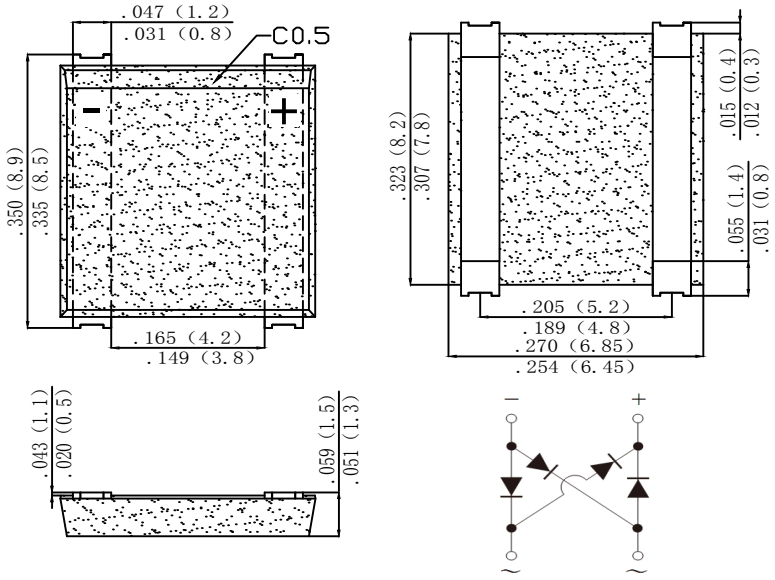
## Features

- Glass Passivated Die Construction
- Low leakage
- Ideal for printed circuit board
- Surge overload rating-120A peak
- Designed for Surface Mount Application
- Plastic Material-UL Flammability 94V-0

## Mechanical Data

- Case: DBF, molded plastic
- Terminals:Plated Leads Solderable per MIL-STD-202,Method208
- Polarity:As Marked on Case
- Mounting Position:Any
- Marking:Type Number

DBF




dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.
Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPE NUMBER | SYMBOL | RDBF251 | RDBF252 | RDBF254 | RDBF256 | RDBF258 | RDBF2510 | UNITS |
|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{DC}$ | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{RMS}$ | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1)@$T_C$=90℃ | IF(AV) | 2.5 | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 120 | | | | | | A |
| $I^2t$ Rating for Fusing (t < 8.3ms) | $I^2t$ | 59.76 | | | | | | $A^2s$ |
| Forward Voltage per element @IF=2.5A | $V_{FM}$ | 1.3 | | | | | | V |
| Maximum reverse recovery time (Note 2) | $T_{RR}$ | 150 | | | 250 | 500 | | ns |
| Peak Reverse Current @$T_A$=25℃<br>At Rated DC Blocking Voltage @$T_A$=125℃ | $I_R$ | 5.0<br>200 | | | | | | uA |
| Typical Junction Capacitance per leg (Note 2) | $C_J$ | 41 | | | | | | pF |
| Typical Thermal Resistance per leg | $R_{\theta JA}$<br>$R_{\theta JC}$ | 70<br>15 | | | | | | ℃/W |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55to+150 | | | | | | ℃ |

Note:1. Mounted on glass epoxy PC board with 1.3mm solder pad.
2. Reverse Recovery Test Conditions: $I_F$=0.5A, $I_R$=1.0A, $I_{RR}$=0.25A.
3.Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Fig. 1 Output Current Derating Curve

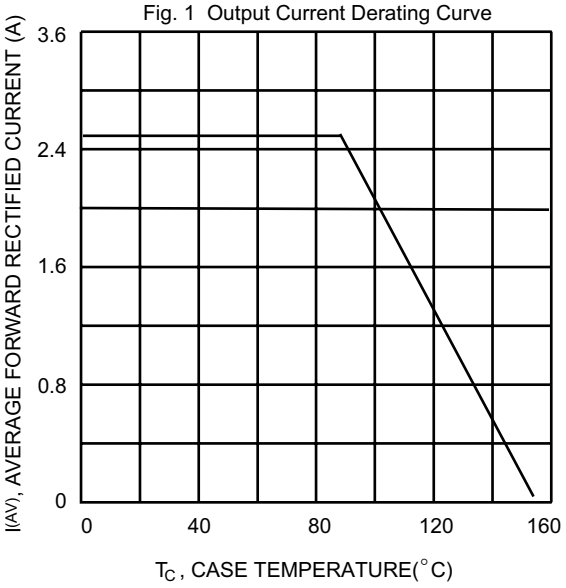



Fig. 2 Typical Forward Characteristics (per leg)

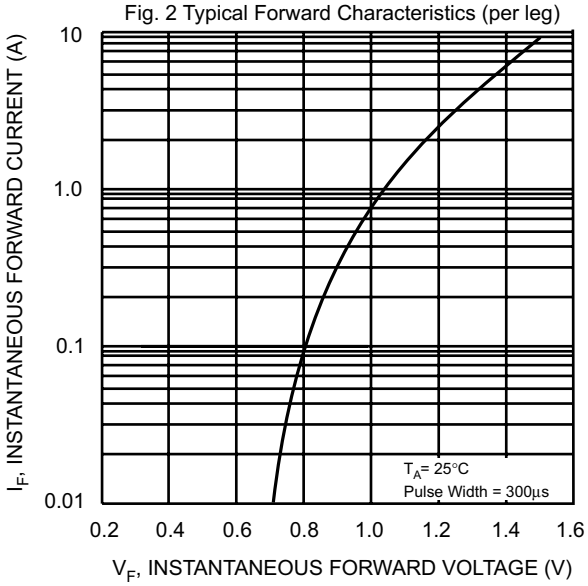



Fig. 3 Maximum Peak Forward Surge Current (per leg)

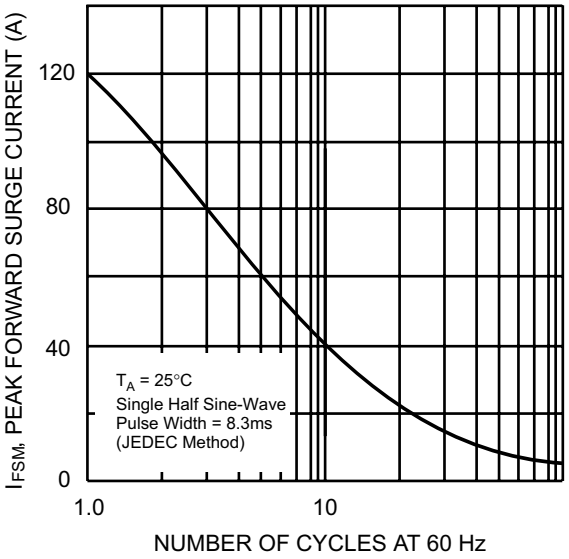



Fig. 4 Typical Junction Capacitance

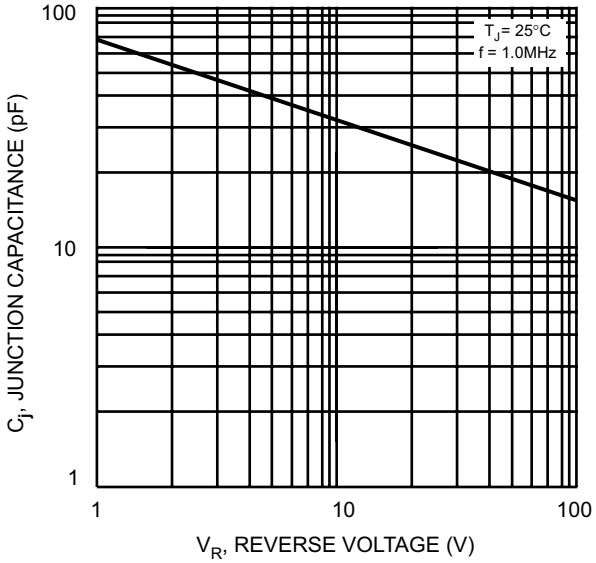



FIG.5 TYPICAL REVERSE CHRACTERISTICS

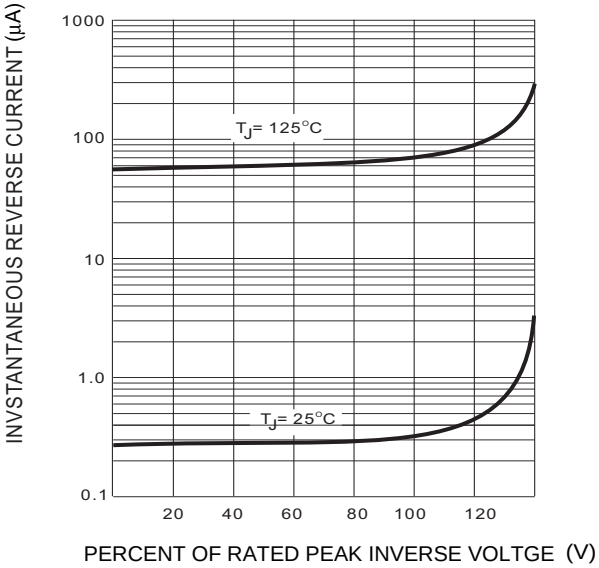
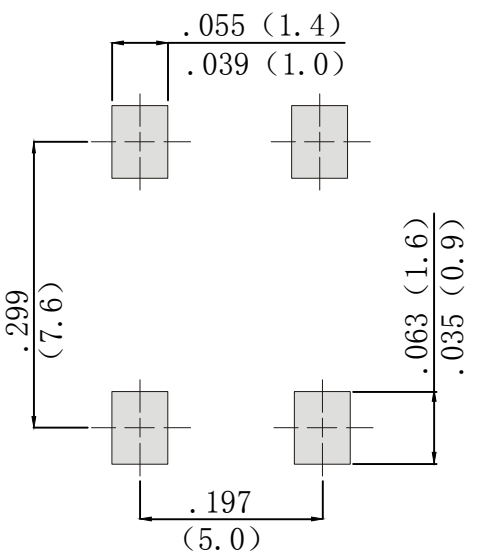



FIG.6 MOUNTING PAD LAYOUT



## Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from DIYI.
- DIYI reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- DIYI disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- DIYI does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications.

  DIYI makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify DIYI for any damages resulting from such improper use or sale.
- Since DIYI uses lot number as the tracking base, please provide the lot number for tracking when complaining.