



## SINGLE-PHASE BRIDGE RECTIFIER

**DF005 THRU DF10  
DB101 THRU DB107**

**VOLTAGE RANGE**

**50 to 1000 Volts**

**CURRENT**

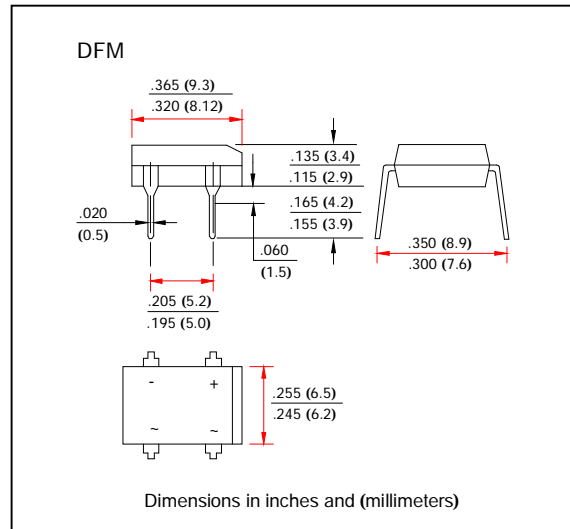
**1.0 Ampere**

### FEATURES

- Glass passivated chip junction
- High forward surge current capability
- Ideal for printed circuit board
- High temperature soldering guaranteed:  
260°C/10 seconds at terminals

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Terminals solderable per MIL-STD-202E method 208C
- Polarity: Molded on body
- Mounting position: Any
- Weight: 0.04 ounce, 1.0 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|  | SYMBOLS                 | DF005<br>DB101 | DF01<br>DB102 | DF02<br>DB103 | DF04<br>DB104 | DF06<br>DB105 | DF08<br>DB106 | DF10<br>DB107 | UNIT                 |                  |
|--|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------|------------------|
| Maximum Reverse Peak Repetitive Voltage  | $V_{RRM}$               | 50             | 100           | 200           | 400           | 600           | 800           | 1000          | Volts                |                  |
| Maximum RMS Voltage  | $V_{RMS}$               | 35             | 70            | 140           | 280           | 420           | 560           | 700           | Volts                |                  |
| Maximum DC Blocking Voltage  | $V_{DC}$                | 50             | 100           | 200           | 400           | 600           | 800           | 1000          | Volts                |                  |
| Maximum Average Forward Rectified Output Current, 0.06" (1.5mm) lead length at $T_A=40^\circ\text{C}$ (Note 2) | $I_{(AV)}$              | 1.0            |               |               |               |               |               |               | Amps                 |                  |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on rated load (JEDEC Method)            | $I_{FSM}$               | 50             |               |               |               |               |               |               | Amps                 |                  |
| Rating for Fusing ( $t < 8.3\text{ms}$ )   | $I^2t$                  | 10             |               |               |               |               |               |               | $\text{A}^2\text{s}$ |                  |
| Maximum Instantaneous Forward Voltage drop<br>Per Bridge element 1.0A  | $V_F$                   | 1.1            |               |               |               |               |               |               | Volts                |                  |
| Maximum Reverse Current at rated DC blocking voltage per element   | $T_A=25^\circ\text{C}$  | $I_R$          |               |               |               |               |               |               | 5                    | $\mu\text{Amps}$ |
|  | $T_A=125^\circ\text{C}$ |                |               |               |               |               |               |               | 0.5                  | mAmps            |
| Typical Junction Capacitance (Note 1)  | $C_J$                   | 25             |               |               |               |               |               |               | pF                   |                  |
| Typical Thermal Resistance (Note 2)  | $R_{\theta JA}$         | 40             |               |               |               |               |               |               | $^\circ\text{C/W}$   |                  |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$          | -55 to +150    |               |               |               |               |               |               | $^\circ\text{C}$     |                  |

- Notes:**
1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
  2. Unit mounted on P.C.B. with 0.51"×0.51" (13×13mm) copper pads.



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VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 1.0 Ampere

## RATINGS AND CHARACTERISTIC CURVES DF005 THRU DF10 DB101 THRU DB107

FIG. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

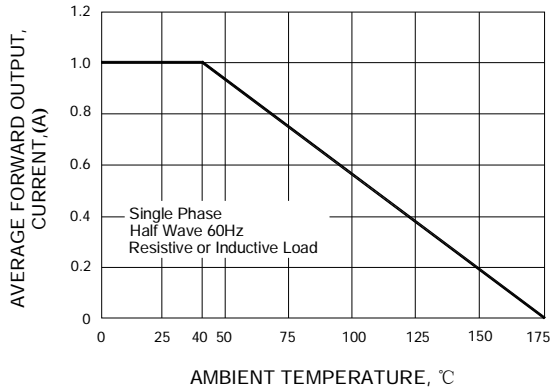


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

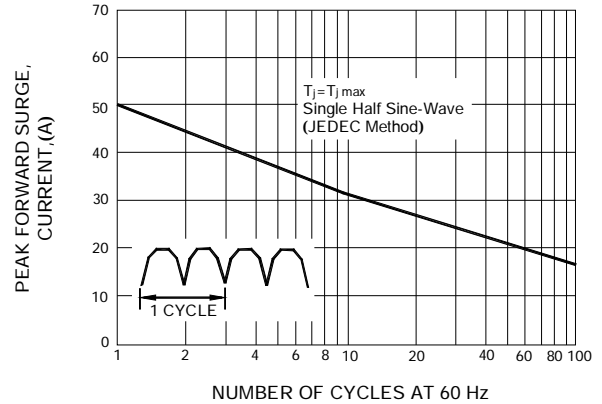


FIG. 3- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

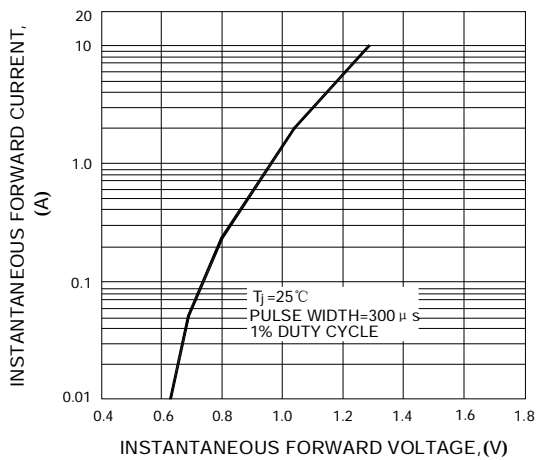


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

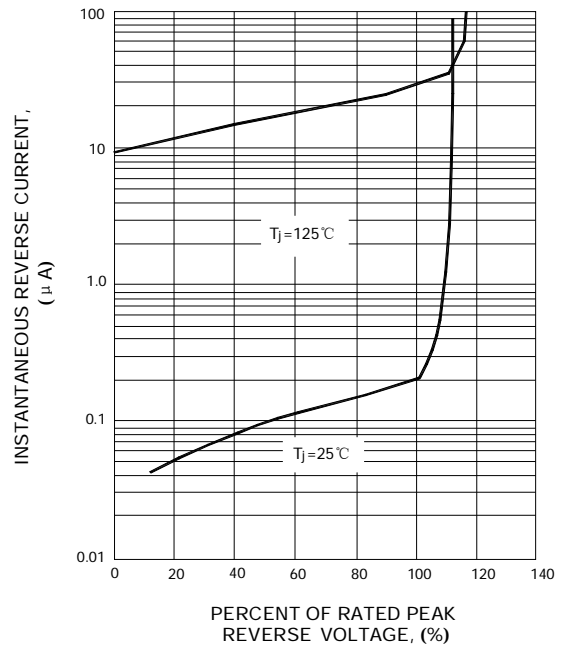


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

