# DF005S THRU DF10S

## SINGLE-PHASE GLASS PASSIVATED SILICON SURFACE MOUNT BRIDGE RECTIFIER

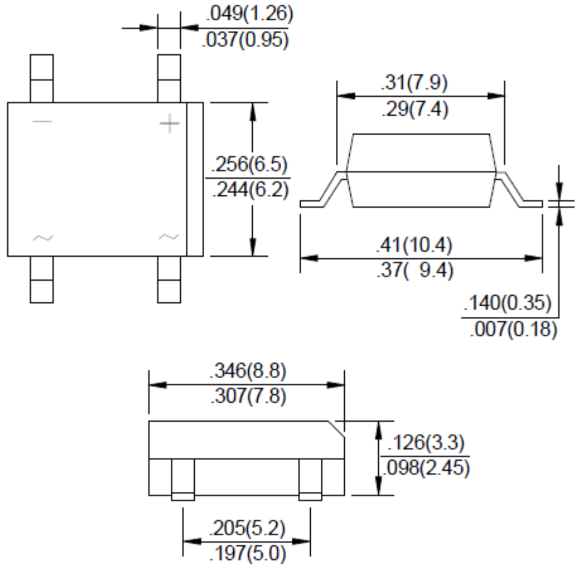
**Reverse Voltage - 50 to 1000 V**
**Forward Current - 1 A**

### Features

- High surge overload rating of 50 A peak
- Ideal for printed circuit board
- Low forward voltage drop
- Glass passivated chip junction

### Mechanical Data

- Case: Molded plastic, DB-S
- Epoxy: UL 94V-0 rate flame retardant
- Terminal: Leads solderable per MIL-STD-202, method 208 guaranteed
- Mounting position: Any



Dimensions in inches and millimeter

### 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%.

| Parameter | Symbols | DF005S | DF01S | DF02S | DF04S | DF06S | DF08S | DF10S | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_A$ = 40 °C [2] | $I_{(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half-sine -wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 50 | | | | | | | A |
| Maximum Forward Voltage at 1 A DC | $V_F$ | 1.1 | | | | | | | V |
| Maximum Reverse Current at Rated DC Blocking Voltage $T_A$ = 25 °C<br>$T_A$ = 125 °C | $I_R$ | 5<br>500 | | | | | | | µA |
| Typical Junction Capacitance [1] | $C_J$ | 25 | | | | | | | pF |
| Typical Thermal Resistance [2] | $R_{\theta JA}$ | 40 | | | | | | | °C/W |
| Typical Thermal Resistance [2] | $R_{\theta JL}$ | 15 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$ ,$T_{stg}$ | - 55 to + 150 | | | | | | | °C |

[1] Measured at 1 MHz and applied reverse voltage of 4 V DC.

[2] Units mounted P.C.B. with 0.5 x 0.5" (13 x 13 mm) copper pads.

**Fig. 1 - Derating Curve Output Rectified Current**

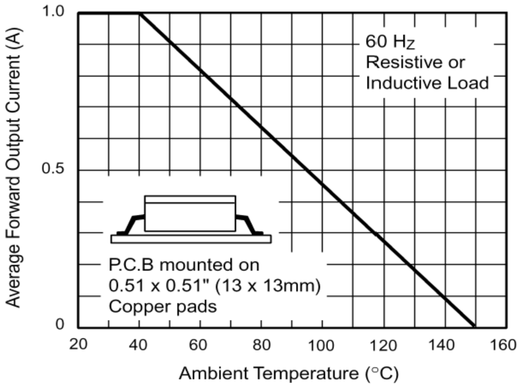


**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**

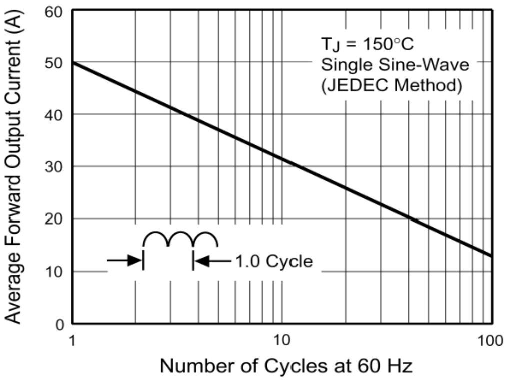


**Fig. 3 - Typical Forward Characteristics Per Leg**

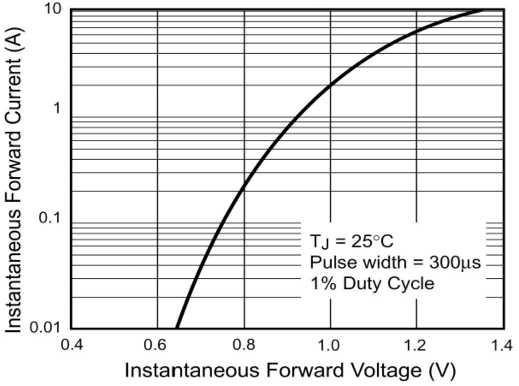


**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**

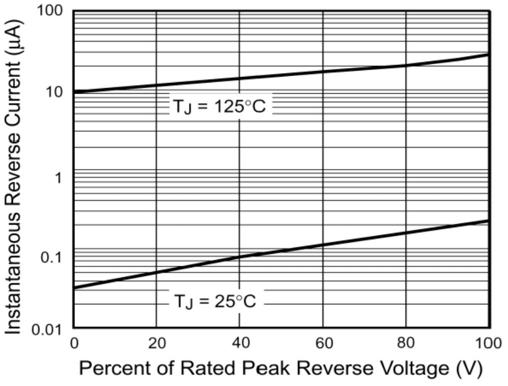


**Fig. 5 - Typical Junction Capacitance Per Leg**

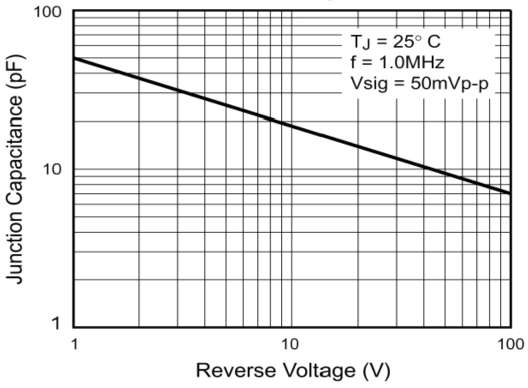


**Fig. 6 - Typical Transient Thermal Impedance**