

# DF005S THRU DF10S

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

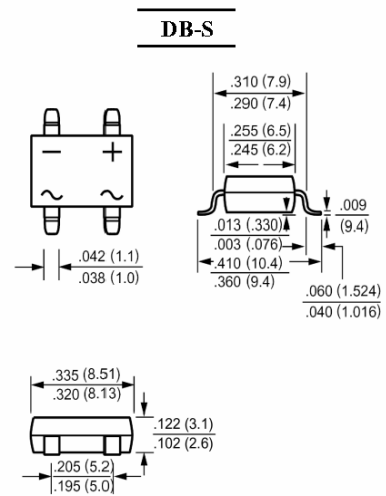
**Reverse Voltage – 50 to 1000 V**  
**Forward Current – 1 A**

### 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 (millimeters)**

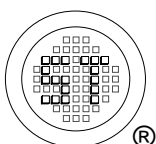
### Maximum Ratings and Electrical Characteristics

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 $T_A = 40^\circ\text{C}$ <sup>2)</sup>	$I_{(AV)}$	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 $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$	$I_R$					5				$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$					25				pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$					40				$^\circ\text{C/W}$
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JL}$					15				$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_S$					- 55 to + 150			$^\circ\text{C}$	

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V DC.

<sup>2)</sup> Units mounted P.C.B. with 0.5 X 0.5" (13 X 13 mm) copper pads.

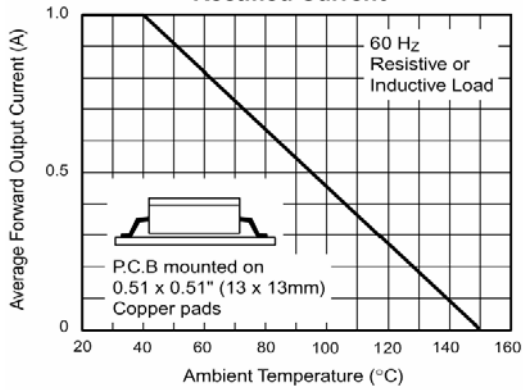


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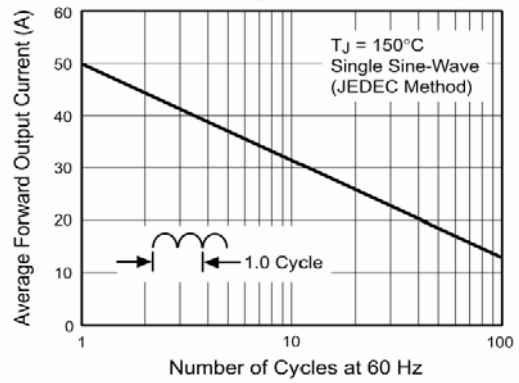


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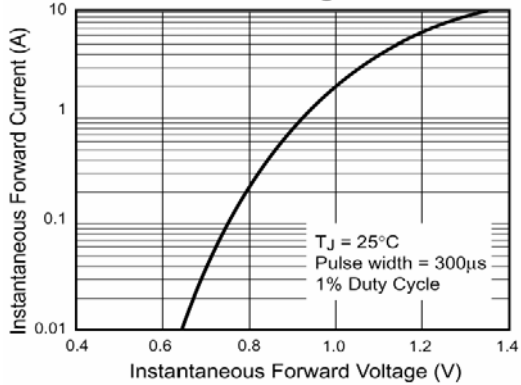
**Fig. 1 - Derating Curve Output Rectified Current**



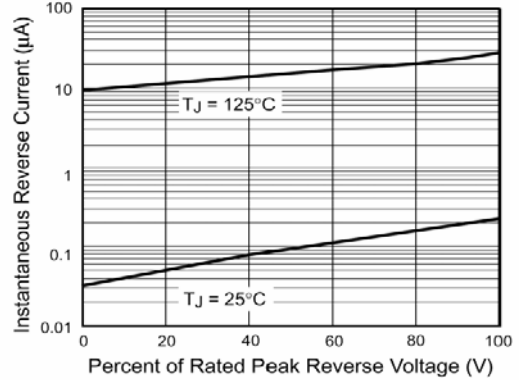
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



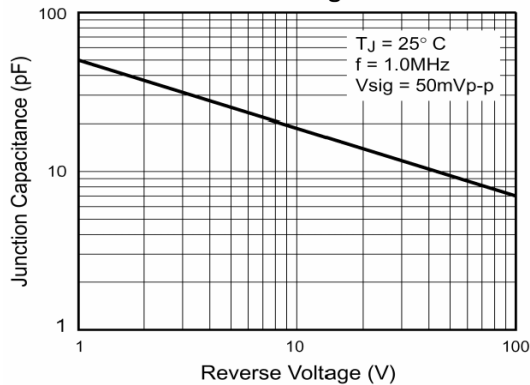
**Fig. 3 - Typical Forward Characteristics Per Leg**



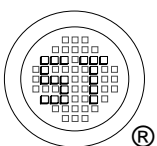
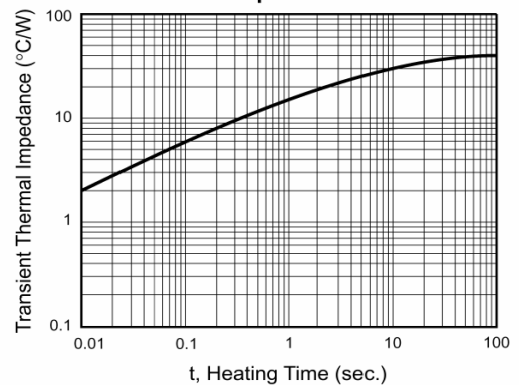
**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**



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



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



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