

DF005S THRU DF10S

SINGLE-PHASE GLASS PASSIVATED SILICON SURFACE MOUNT BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 V

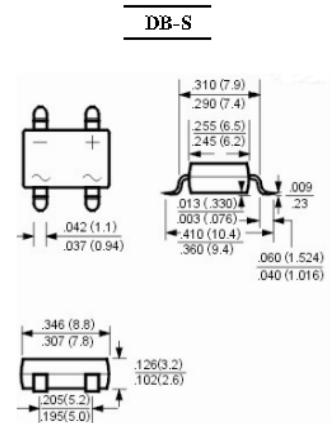
Forward Current - 1 A

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 $T_A = 40^\circ\text{C}$ 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 $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	5 500							μA
Typical Junction Capacitance ¹⁾	C_J	25							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	40							$^\circ\text{C/W}$
Typical Thermal Resistance ²⁾	$R_{\theta JL}$	15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150							$^\circ\text{C}$

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.

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Fig. 1 - Derating Curve Output Rectified Current

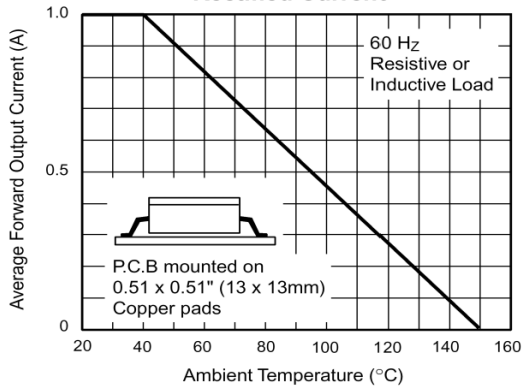


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

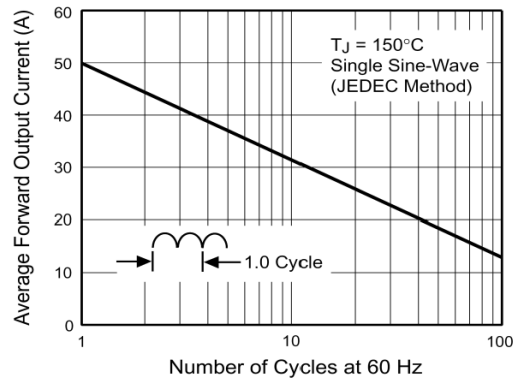


Fig. 3 - Typical Forward Characteristics Per Leg

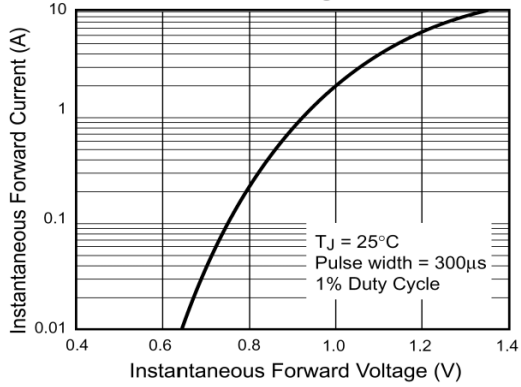


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

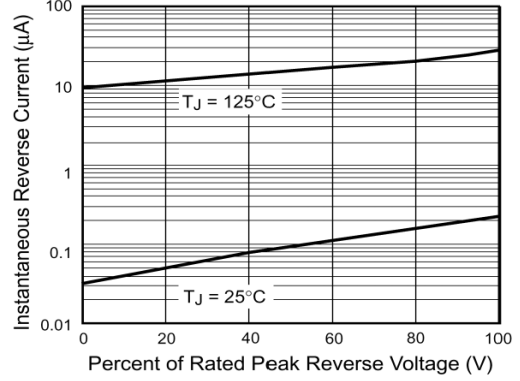


Fig. 5 - Typical Junction Capacitance Per Leg

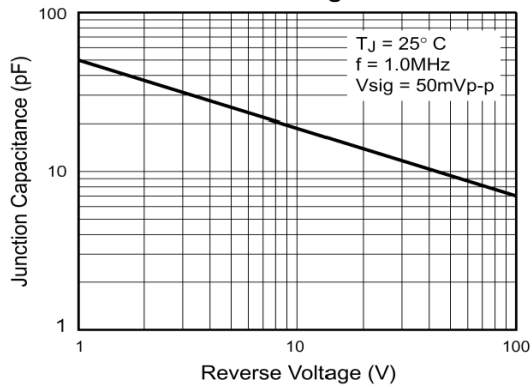
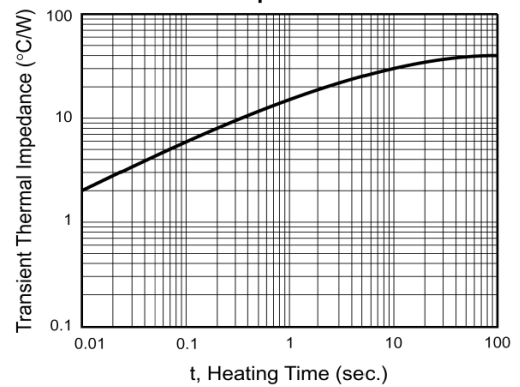


Fig. 6 - Typical Transient Thermal Impedance



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