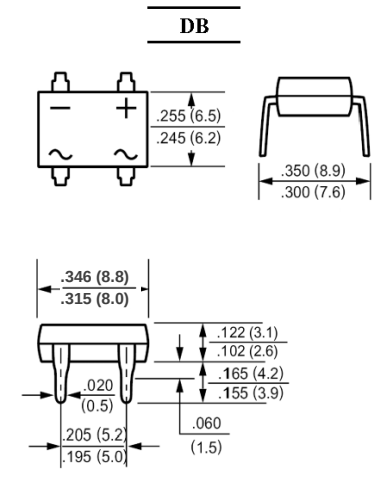
DF005 THRU DF10

SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

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



Dimensions in inches and (millimeters)

Features

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

Mechanical Data

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

Absolute Maximum Ratings and Characteristics

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

Parameter	Symbols	DF005	DF01	DF02	DF04	DF06	DF08	DF10	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	$I_{F(AV)}$	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	V_F	1.1							V
Maximum Reverse Voltage at T_A = 25 °C	I_R	5							μA
at Rated DC Blocking Voltage at T_A =125 °C		500							
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 4V.
[2] Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.5 X 0.5″ (13 X 13 mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Derating Curve Output Rectified Current

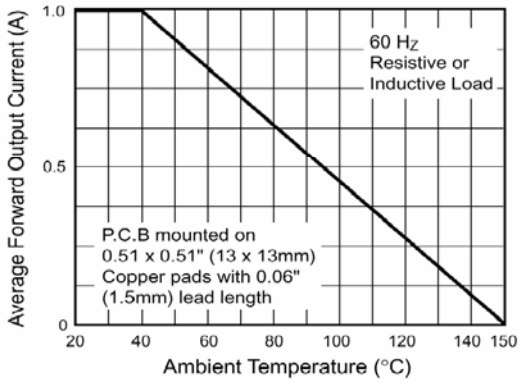


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

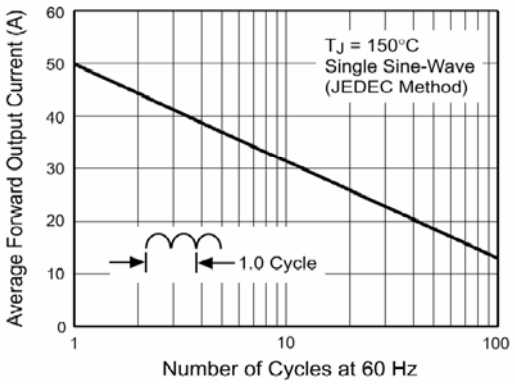


Fig. 3 - Typical Forward Characteristics Per Leg

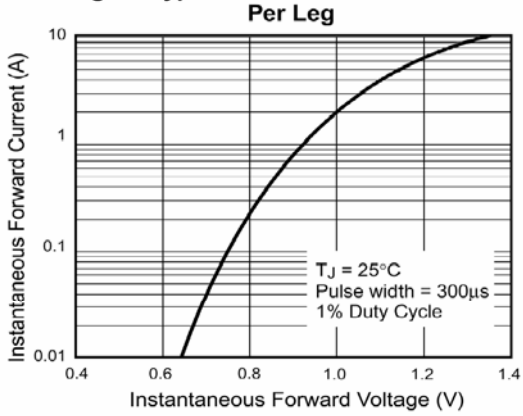


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

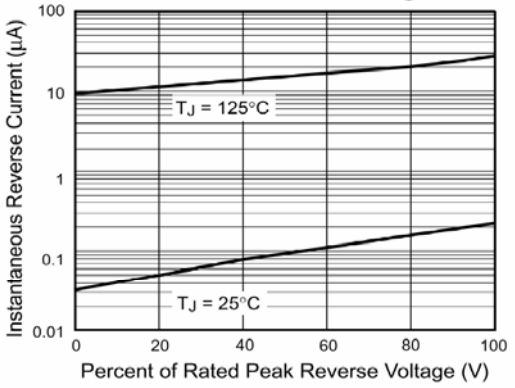


Fig. 5 - Typical Junction Capacitance Per Leg

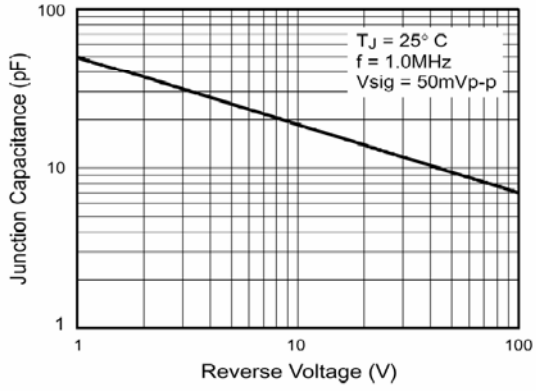


Fig. 6 - Typical Transient Thermal Impedance