



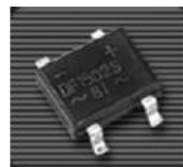
SYNSEMI SEMICONDUCTOR

DF005S thru DF10S

Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

Features

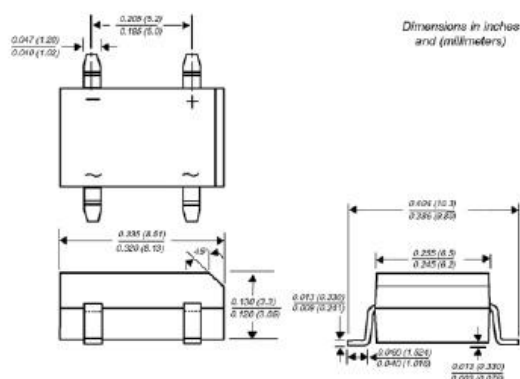
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junctions
- ◆ High surge overload rating of 50 Amperes peak
- ◆ Ideal for printed circuit boards
- ◆ High temperature soldering guaranteed:
260°C/10 seconds at 5 lbs. (2.3kg) tension



DFS

Mechanical Data

- ◆ Case: Molded plastic body over passivated junctions
- ◆ Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Polarity symbols marked on body
- ◆ Mounting Position: Any
- ◆ Weight: 0.04oz., 1.0g



Maximum Ratings and Electrical Characteristics

($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbols	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	Units
Maximum repetitive peak reverse 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 output rectified current at $T_A=40^\circ\text{C}$ (Note 2)	I_{FAV}	1.0							Amp
Peak forward surge current single half sine-wave superimposed on rated load (JEDEC Method) $T_A=150^\circ\text{C}$	I_{FSM}	50.0							Amps
Rating for fusing ($t < 8.3\text{ms}$)	Pt	10							A^2sec
Max. instantaneous forward voltage drop per leg at 1.0A	V_F	1.1							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage per leg $T_A=125^\circ\text{C}$	I_R	5.0 500							μA
Typical junction capacitance per leg (Note 1)	C_j	25							pF
Typical thermal resistance per leg (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

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

DF005S thru DF10S

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

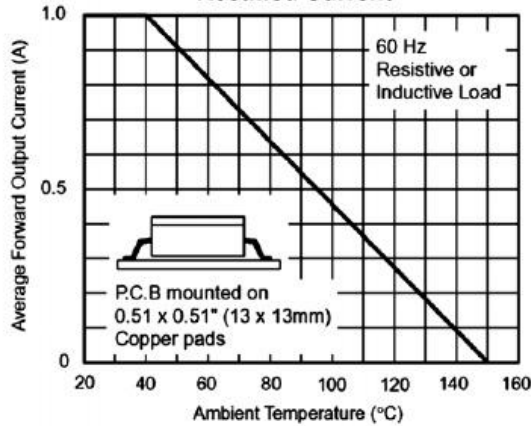


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

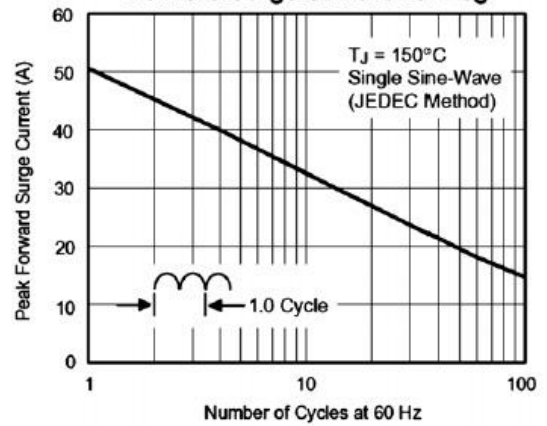


Fig. 3 - Typical Forward Characteristics Per Leg

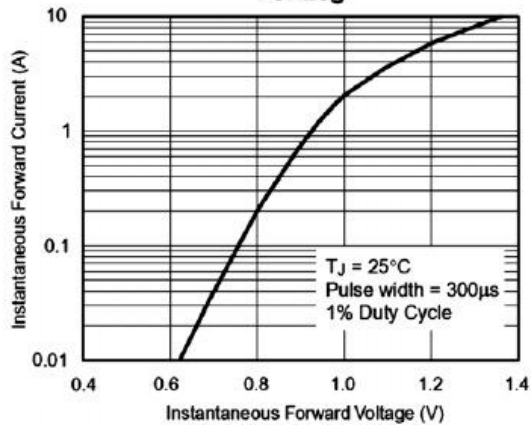


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

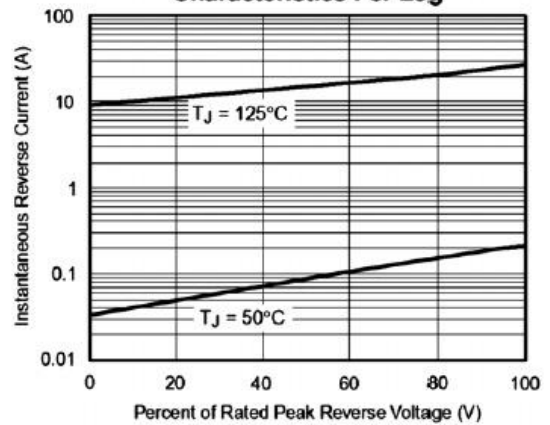


Fig. 5 - Typical Junction Capacitance Per Leg

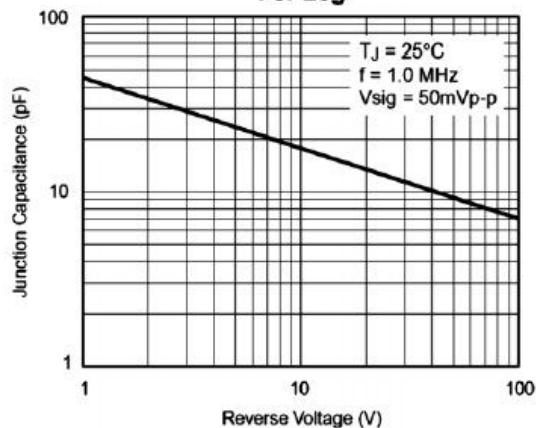


Fig. 6 - Typical Transient Thermal Impedance

