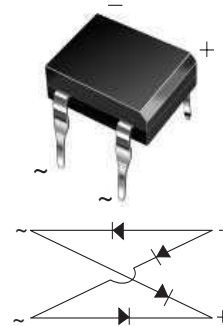


Miniature Glass Passivated Single-Phase Bridge Rectifiers

Major Ratings and Characteristics

$I_{F(AV)}$	1 A
V_{RRM}	50 V to 1000 V
I_{FSM}	50 A
I_R	5 μ A
V_F	1.1 V
T_j max.	150 °C

Case Style DFM



Features

- UL Recognition, file number E54214
- Ideal for printed circuit boards
- Applicable for automotive insertion
- High surge current capability
- Meets MSL level 1, per J-STD-020C

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for SMPS, Lighting Ballaster, Adapter, Battery Charger, Home Appliances, Office Equipment, and Telecommunication applications

Mechanical Data

Case: DFM

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Polarity: As marked on body

Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	DF 005M	DF 01M	DF 02M	DF 04M	DF 06M	DF 08M	DF 10M	Unit
Device Marking Code		DF005	DF01	DF02	DF04	DF06	DF08	DF10	
Maximum repetitive 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
Max. average forward output rectified current at $T_A = 40$ °C	$I_{F(AV)}$	1.0							A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	50							A
Rating for fusing ($t < 8.3$ ms)	I^2t	10							A ² sec
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	DF	DF	DF	DF	DF	DF	DF	Unit
			005M	01M	02M	04M	06M	08M	10M	
Maximum instantaneous forward voltage drop per leg	at 1.0 A	V_F	1.1							V
Maximum reverse current at rated DC blocking voltage per leg	$T_A = 25\text{ °C}$ $T_A = 125\text{ °C}$	I_R	5.0 500							μA
Typical junction capacitance per leg	at 4.0 V, 1 MHz	C_J	25							pF

Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	DF	DF	DF	DF	DF	DF	DF	Unit
		005M	01M	02M	04M	06M	08M	10M	
Typical thermal resistance per leg ⁽¹⁾	$R_{\theta JA}$	40							$^{\circ}\text{C/W}$
	$R_{\theta JL}$	15							

Notes:

(1) 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 Characteristics Curves

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

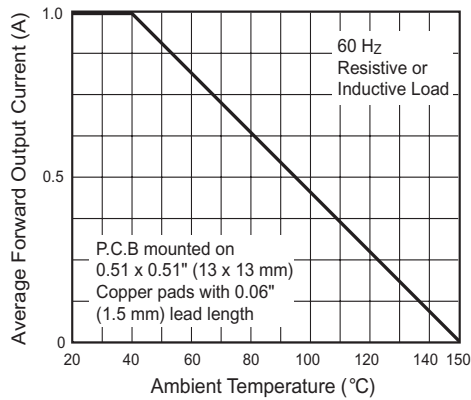


Figure 1. Derating Curve Output Rectified Current

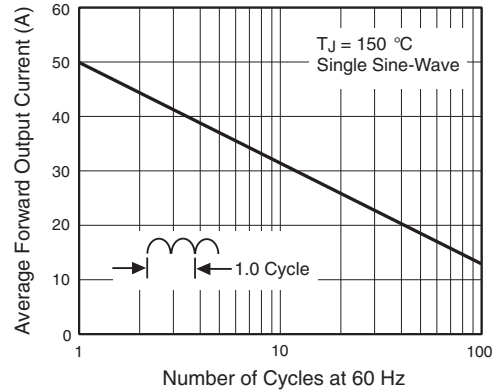


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

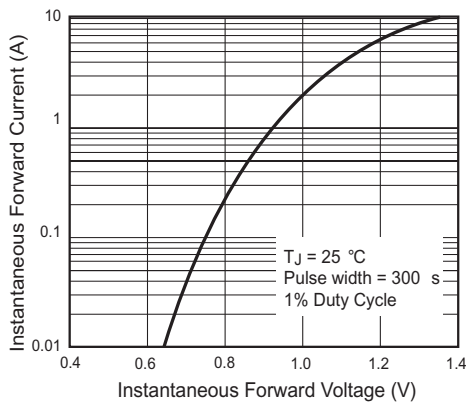


Figure 3. Typical Forward Characteristics Per Leg

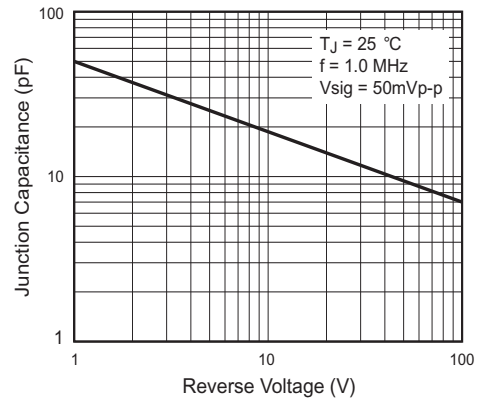


Figure 5. Typical Junction Capacitance Per Leg

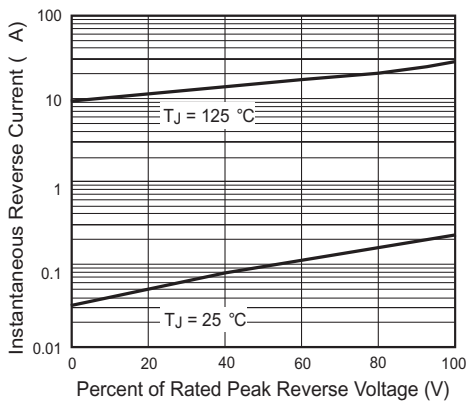


Figure 4. Typical Reverse Leakage Characteristics Per Leg

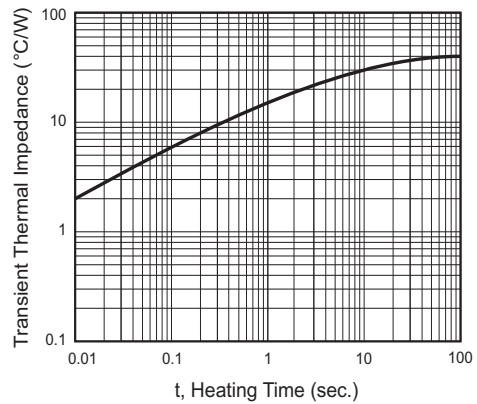


Figure 6. Typical Transient Thermal Impedance

Package outline dimensions in inches (millimeters)

