

# Single-Phase Bridge Rectifiers



## DF005M thru DF10M

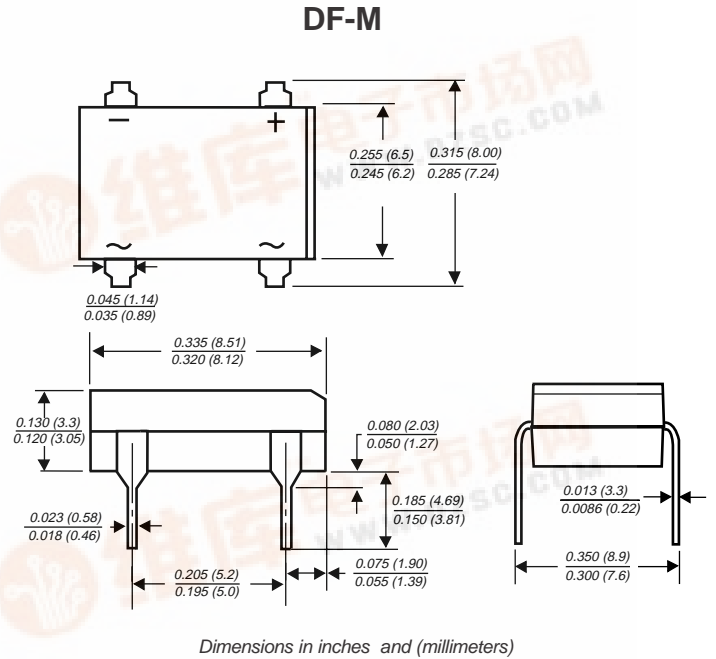
Reverse Voltage: 50 to 1000V  
Forward Current: 1.0A

### Features

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

### Mechanical Data

- Case: Molded plastic body over passivated junctions
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Mounting Position: Any
- Weight: 0.014 oz., 0.4 g



### Maximum Ratings & Thermal Characteristics 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 <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Max. average forward output rectified current at T <sub>A</sub> =40°C	I <sub>F(AV)</sub>	1.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50							A
Rating for fusing (t < 8.3ms)	I <sup>2</sup> t	10							A <sup>2</sup> sec
Typical thermal resistance per leg (NOTE 1)	R <sub>θJA</sub> R <sub>θJL</sub>	40 15							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

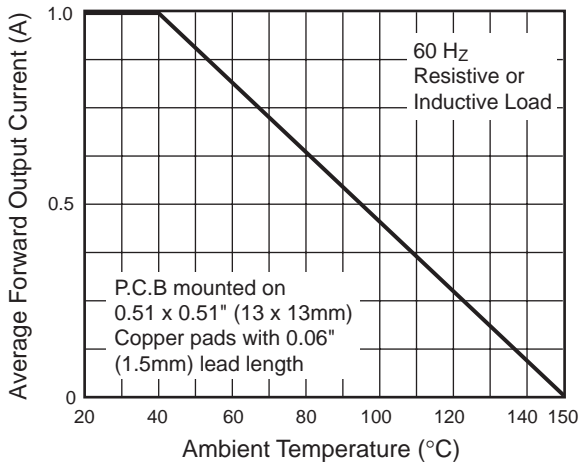
Parameter	Symbol	DF 005M	DF 01M	DF 02M	DF 04M	DF 06M	DF 08M	DF 10M	Unit
Maximum instantaneous forward voltage drop per leg at 1.0A	V <sub>F</sub>	1.1							V
Maximum reverse current at rated DC blocking voltage per leg	I <sub>R</sub>	5.0 500							μA
Typical junction capacitance per leg at 4.0V, 1MHz	C <sub>J</sub>	25							pF

Note: (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 13mm) copper pads

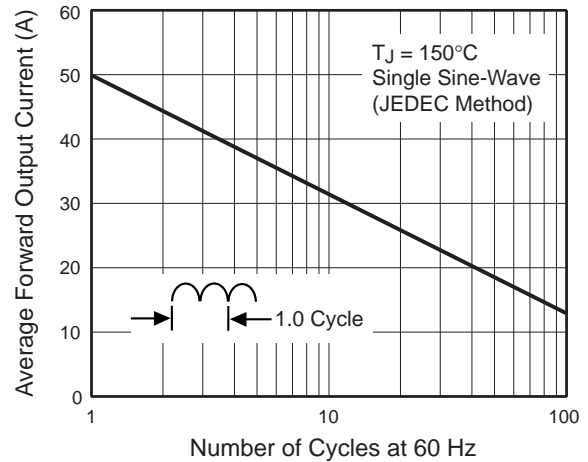


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

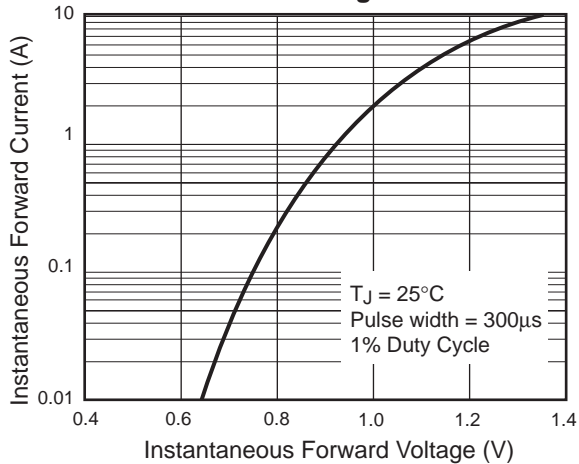
**Fig. 1 - Derating Curve Output Rectified Current**



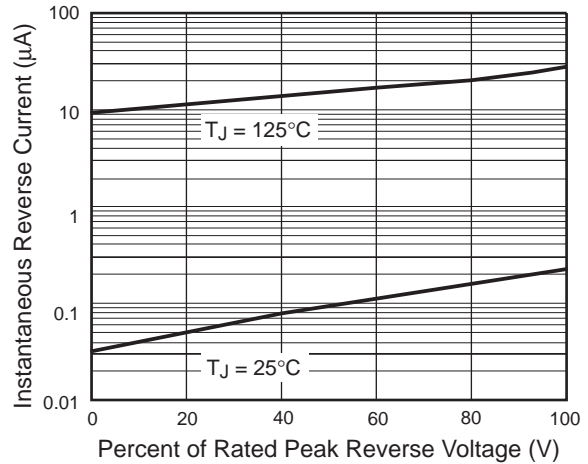
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



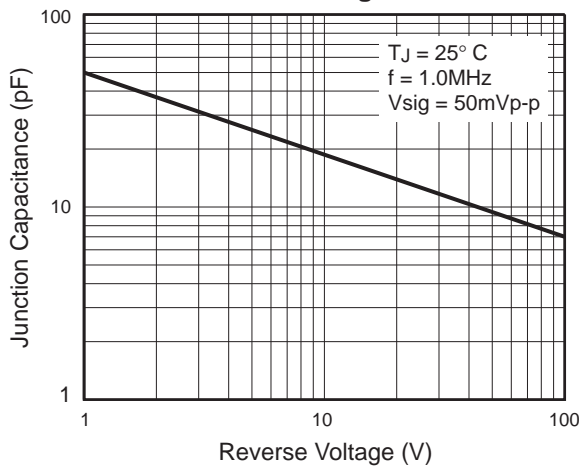
**Fig. 3 - Typical Forward Characteristics Per Leg**



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



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



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

