



# DF005 THRU DF10

## GLASS PASSIVATED BRIDGE RECTIFIERS

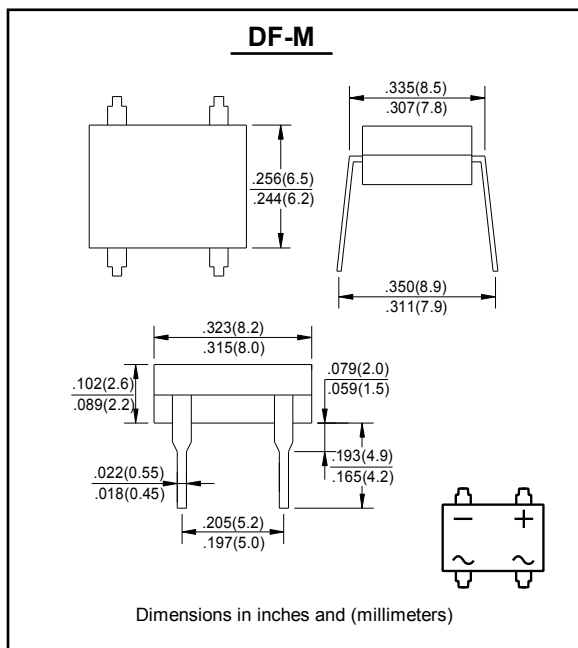
Reverse Voltage - 50 to 1000 Volts    Forward Current - 1.0 Ampere

### 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 AND ELECTRICAL CHARACTERISTICS

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

CHARACTERISTICS	SYMBOL	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 Bridge Input 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 Output Current at $T_A = -40^\circ\text{C}$	$I_o$	1.0							A	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$					50				A
Maximum DC Forward Voltage Drop per Bridge Element at 1.0A DC	$V_F$					1.1				V
Maximum Reverse Current at rated DC Blocking Voltage per element	$I_R$					10.0				$\mu\text{A}$
						500				
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$					10				$\text{A}^2\text{Sec}$
Typical Junction Capacitance ( Note1)	$C_J$					25				pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$					40				$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$					-55 to + 150			$^\circ\text{C}$	

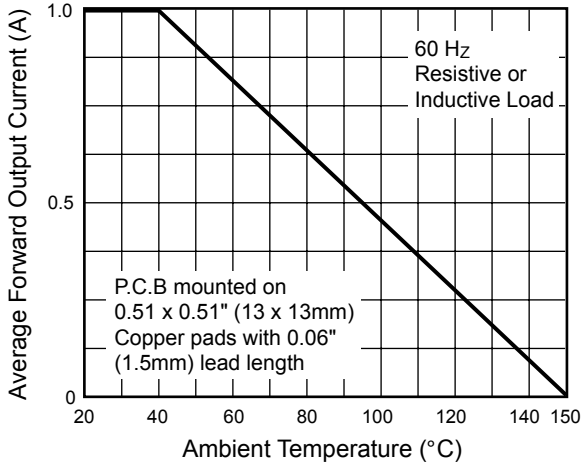
NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts  
2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.



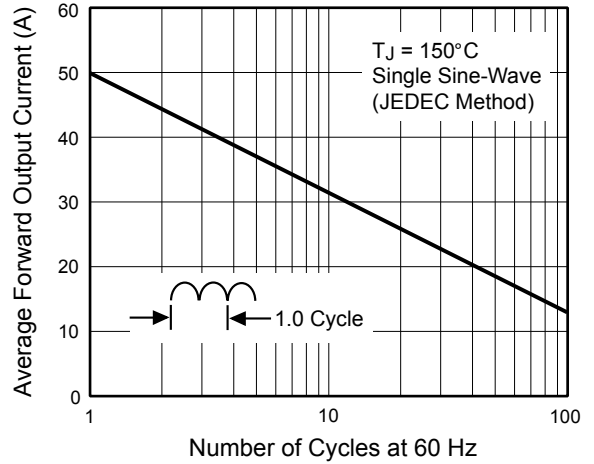
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## RATINGS AND CHARACTERISTIC CURVES

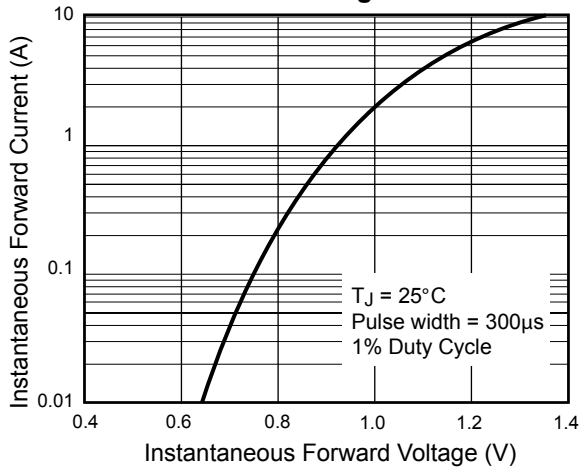
**Fig. 1 - Derating Curve Output Rectified Current**



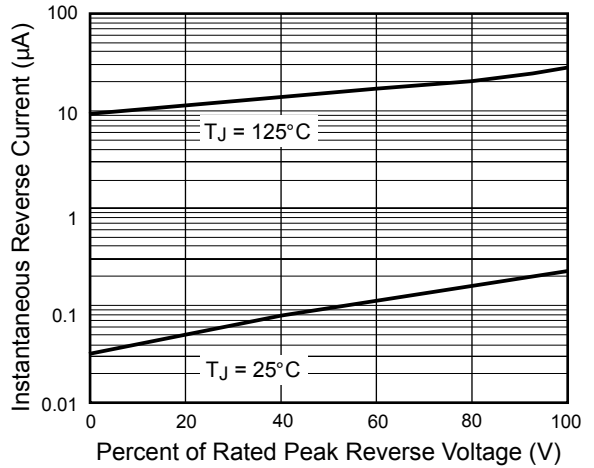
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



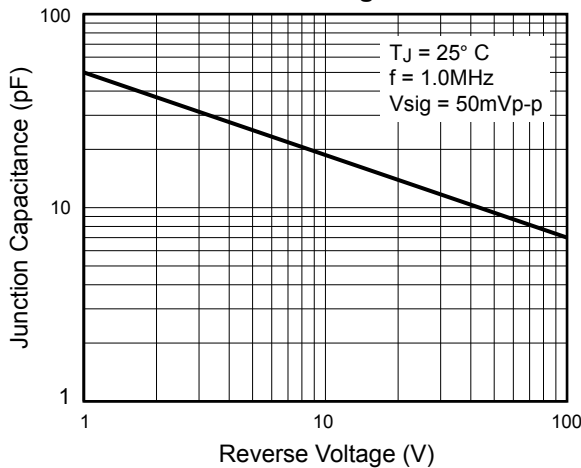
**Fig. 3 - Typical Forward Characteristics Per Leg**



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



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



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

