

# **DF005M - DF10M**

### 1.0A GLASS PASSIVATED BRIDGE RECTIFIERS

#### **Features**

- Glass Passivated Die Construction
- Diffused Junction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Printed Circuit Board Applications
- Plastic Material UL Flammability Classification 94V-0
- UL Listed Under Recognized Component Index, File Number E94661

## **Mechanical Data**

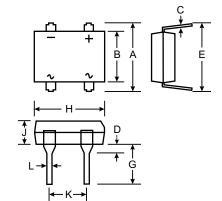
Case: Molded Plastic

Terminals: Solder Plated Leads,

Solderable per MIL-STD-202, Method 208

Polarity: As Marked on CaseApprox. Weight: 0.38 gramsMounting Position: Any

Marking: Type Number



DF-M							
Dim	Min	Max					
Α	7.40	7.90					
В	6.20	6.50					
С	0.22	0.30					
D	1.27	2.03					
E	7.60	8.90					
G	3.81	4.69					
Н	8.13	8.51					
J	2.40	2.60					
K	5.00	5.20					
L	0.46	0.58					
All Dimensions in mm							

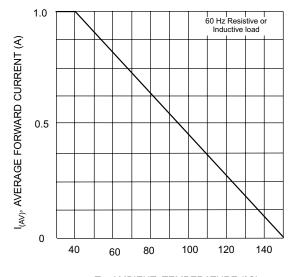
## Maximum Ratings and Electrical Characteristics @ TA = 25°C unless otherwise specified

Single phase, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

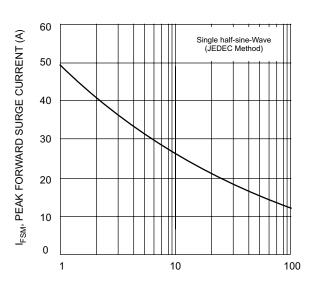
Characteristic	Symbol	DF 005M	DF 01M	DF 02M	DF 04M	DF 06M	DF 08M	DF 10M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RMM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>RMS</sub>	35	70	140	280	420	580	700	V
Average Rectified Output Current @ T <sub>A</sub> = 40°C		1.0							Α
Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method)		50						А	
Forward Voltage (per element) @ I <sub>F</sub> = 1.0 A		1.1							٧
Peak Reverse Current @ $T_A$ = 25°C at Rated DC Blocking Voltage (per element) @ $T_A$ = 125°C		10 500						μА	
I <sup>2</sup> t Rating for Fusing (t<8.3ms)		10.4							A <sup>2</sup> s
Typical Junction Capacitance per element (Note 1)		25							pF
Typical Thermal Resistance, Junction to Ambient (Note 2)		40						°C/W	
Operating and Storage Temperature Range		-65 to +150							°C

Notes: 1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.

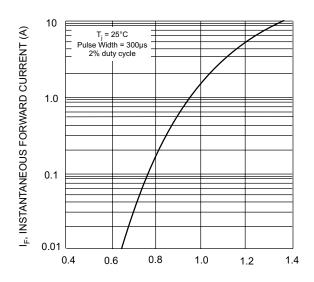
2. Thermal Resistance, junction to ambient, measured on PC board with 5.02mm (0.03mm thick) land areas.



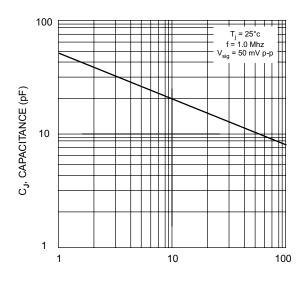
T<sub>A</sub>, AMBIENT TEMPERATURE (°C) Fig. 1 Output Current Derating Curve



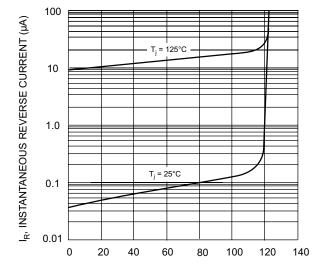
NUMBER OF CYCLES AT 60 Hz Fig. 3 Max Non-Repetitive Peak Forward Surge Current



V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typ Forward Characteristics (per element)



 $\label{eq:VR} {\rm V_R,\,REVERSE\,\,VOLTAGE\,\,(V)}$  Fig. 4 Typ Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 5 Typ Reverse Characteristics (per element)