DF005M–DF10M

1.0A STANDARD RECOVERY BRIDGE RECTIFIER

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V)	I_R Max (μA)
50/100/200/ 400/600/800/ 1000	1.0	1.1	10

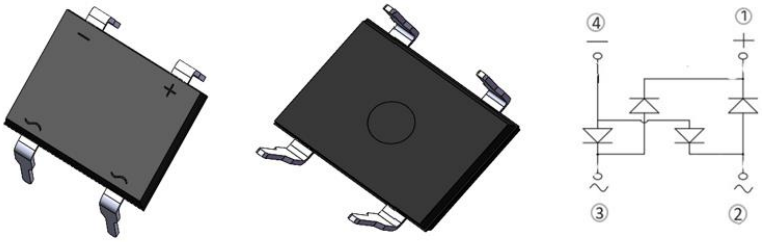
Features

- Glass Passivated Die Construction
- Low-Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Printed Circuit Board Applications
- UL Listed under Recognized Component Index, File Number E364304
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

Mechanical Data

- Package: DF-M
- Package Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Finish – Bright Tin. Solder Plated Leads, Solderable per MIL-STD-202, Method 208 e3
- Polarity: As Marked on Case
- Weight: 0.38 grams (Approximate)

DF-M

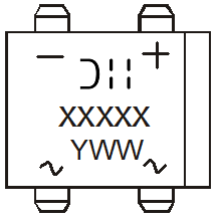


Ordering Information (Note 3)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
DF005M	DF-M	50	Tube
DF01M	DF-M	50	Tube
DF02M	DF-M	50	Tube
DF04M	DF-M	50	Tube
DF06M	DF-M	50	Tube
DF08M	DF-M	50	Tube
DF10M	DF-M	50	Tube

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Marking Information



XXXXX = Product Type Marking Code, ex: DF005M
= Manufacturer's Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 5 = 2025)
WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	DF005M	DF01M	DF02M	DF04M	DF06M	DF08M	DF10M	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @T_A = +40°C	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	10.4							A^2s
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Test Conditions		Symbol	Min	Typ	Max	Unit
Breakdown Voltage	I_R = 10μA, T_A = +25°C		V_B	50/100/200/400 /600/800/1000	—	—	V
Forward Voltage	I_F = 1.0A, T_A = +25°C		V_F	—	—	1.1	V
Leakage Current	V_R at Rated	T_A = +25°C T_A = +125°C	I_R	— —	— —	10 500	μA
Typical Total Capacitance per Element (Note 4)			C_T	25			pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 5)	$R_{\theta JA}$	40	°C/W

Notes: 4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Thermal resistance, junction to ambient, measured on PC board with 5.0mm^2 (0.03mm thick) land areas.

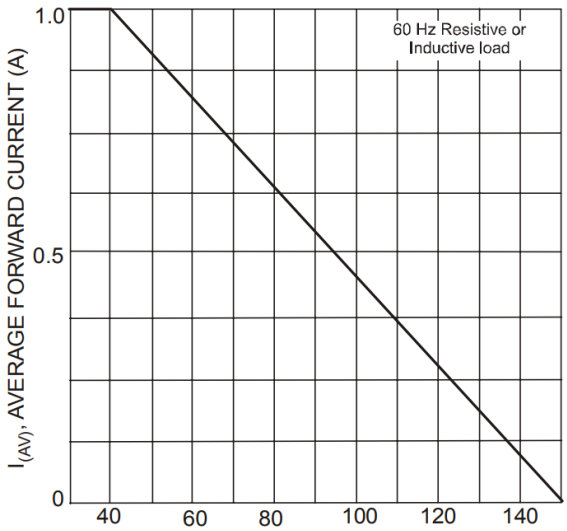


Fig. 1 Output Current Derating Curve

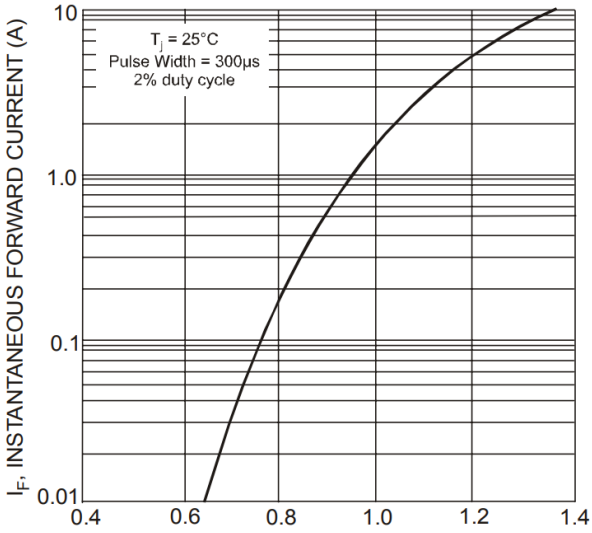


Fig. 2 Typical Forward Characteristics (per element)

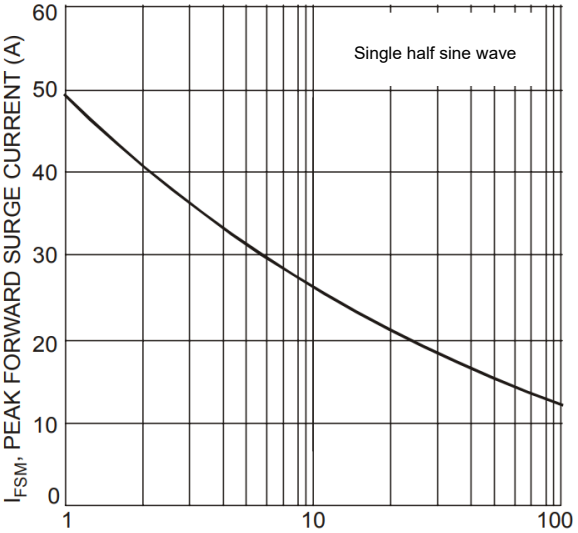


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

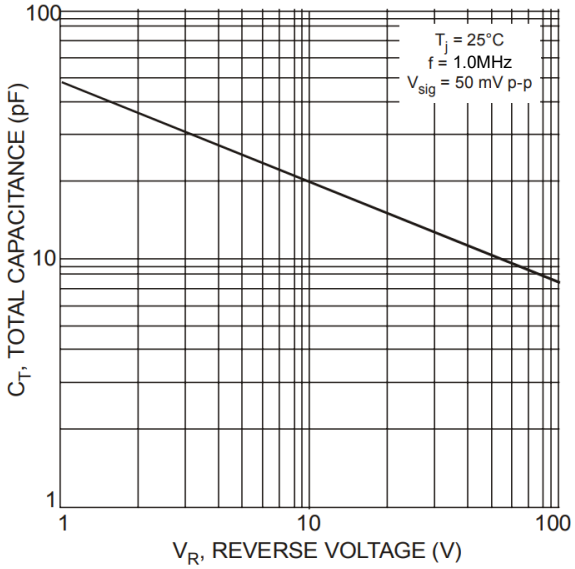


Fig. 4 Typical Total Capacitance (per element)

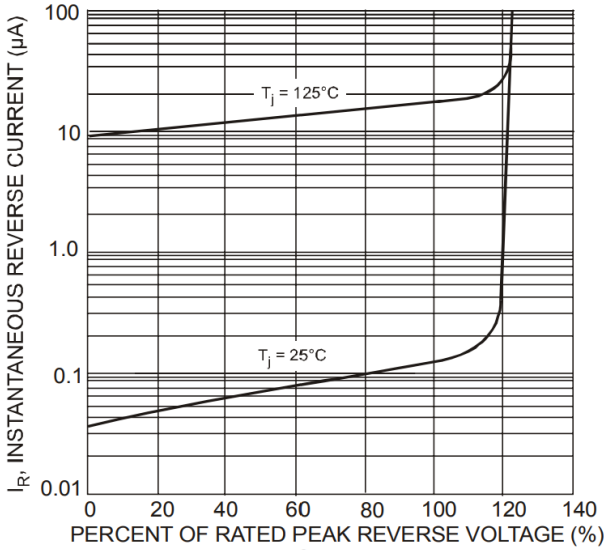
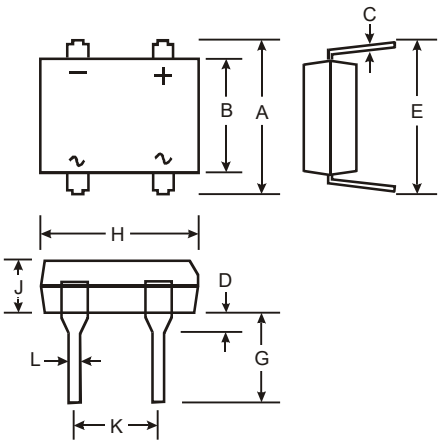


Fig. 5 Typ Reverse Characteristics (per element)

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

DF-M



DF-M		
Dim	**Min**	**Max**
A	7.40	7.90
B	6.20	6.50
C	0.22	0.30
D	1.27	2.03
E	7.60	8.90
G	3.81	4.69
H	8.13	8.51
J	2.40	3.40
K	5.00	5.20
L	0.46	0.58
All Dimensions in mm		

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