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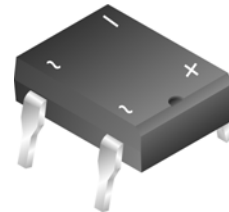


May 2015

# DF005M - DF10M Bridge Rectifiers

## Features

- Surge Overload Rating: 50 Amperes Peak
- Glass Passivated Junction.
- Low Leakage.
- UL Certified, UL #E258596.



DIP

## Ordering Information

Part Number	Top Mark	Package	Packing Method
DF005M	DF005M	MDIP 4L	Rail
DF01M	DF01M	MDIP 4L	Rail
DF02M	DF02M	MDIP 4L	Rail
DF04M	DF04M	MDIP 4L	Rail
DF06M	DF06M	MDIP 4L	Rail
DF08M	DF08M	MDIP 4L	Rail
DF10M	DF10M	MDIP 4L	Rail

## Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value							Unit
		DF005M	DF01M	DF02M	DF04M	DF06M	DF08M	DF10M	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$V_{RMS}$	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
$V_{DC}$	DC Reverse Voltage at Rated $I_R$	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current at $T_A = 40^\circ\text{C}$	1.5							A
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine Wave	50							A
$T_{STG}$	Storage Temperature Range	-55 to +150							$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150							$^\circ\text{C}$

## Thermal Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$P_D$	Power Dissipation	3.1	W
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient <sup>(1)</sup> , per Leg	40	$^\circ\text{C}/\text{W}$

### Note:

1. Device mounted on PCB with 0.5 inch  $\times$  0.5 inch (13 mm  $\times$  13 mm).

## Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_F$	Forward Voltage, per Element	$I_F = 1.0\text{ A}$			1.1	V
$I_R$	Reverse Current, per Element at Rated $V_R$	$T_A = 25^\circ\text{C}$			5.0	$\mu\text{A}$
		$T_A = 125^\circ\text{C}$			500	
$I^2t$	Rating for Fusing ( $t < 8.35\text{ ms}$ )				10	$\text{A}^2\text{s}$
$C_J$	Typical Capacitance, per Leg	$V_R = 4.0\text{ V}$ , $f = 1.0\text{ MHz}$		25		pF

## Typical Performance Characteristics



Figure 1. Non-Repetitive Surge Current

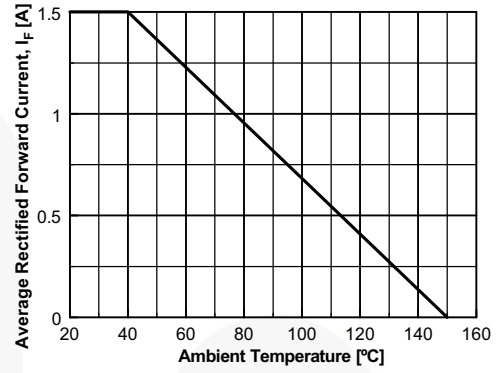


Figure 2. Forward Current Derating Curve

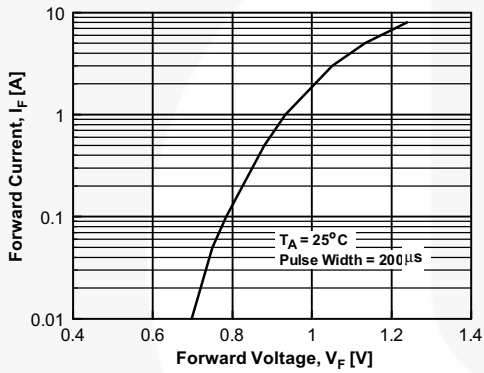


Figure 3. Forward Voltage Characteristics

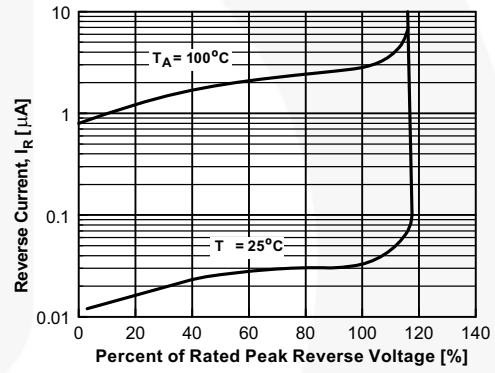
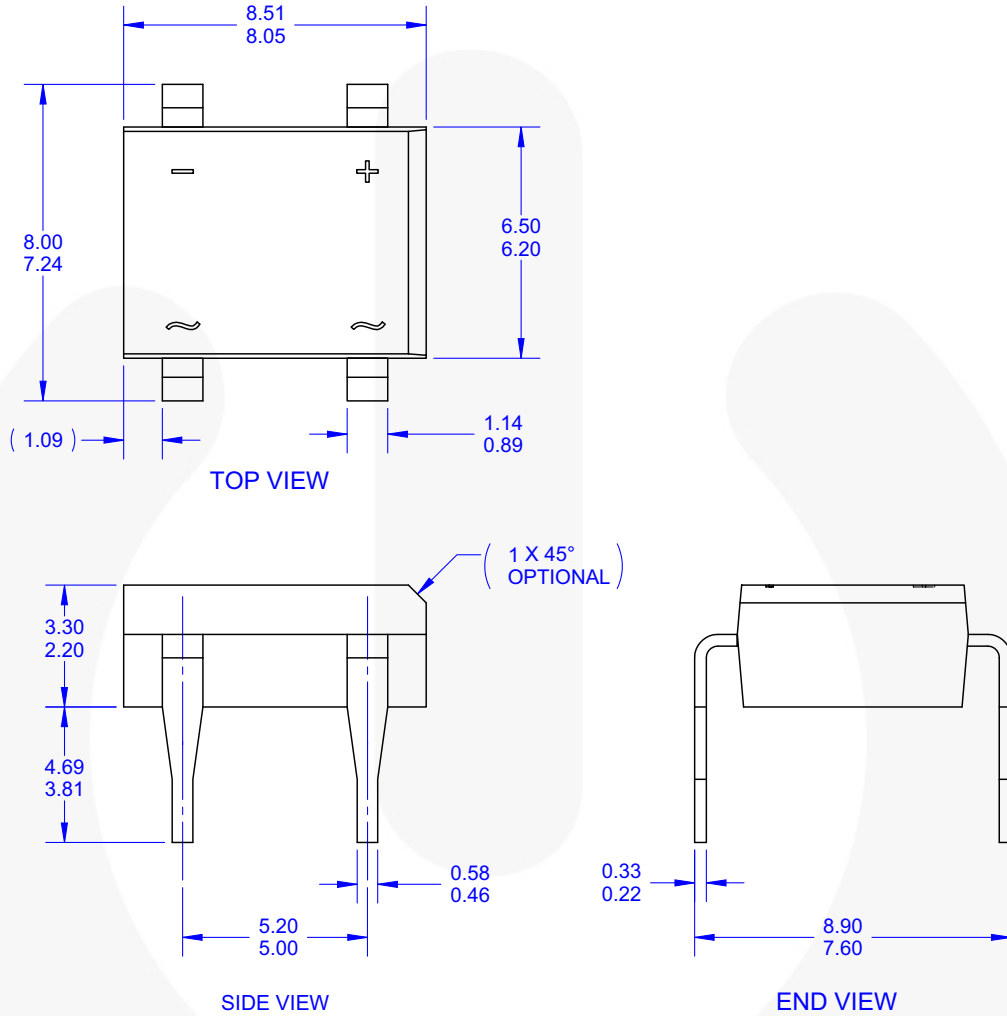


Figure 4. Reverse Current vs. Reverse Voltage

Physical Dimensions



NOTES:






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Figure 5. 4-Lead, DIP, 6.5 MM WIDE



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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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