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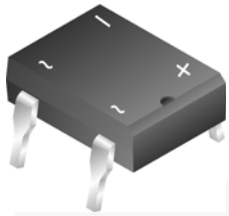
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

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°C unless otherwise noted.

Symbol	Parameter	Value							Unit
		DF 005M	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°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							°C
T_J	Operating Junction Temperature	-55 to +150							°C

Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

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

Note:

1. Device mounted on PCB with 0.5 inch × 0.5 inch (13 mm × 13 mm).

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

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

Typical Performance Characteristics

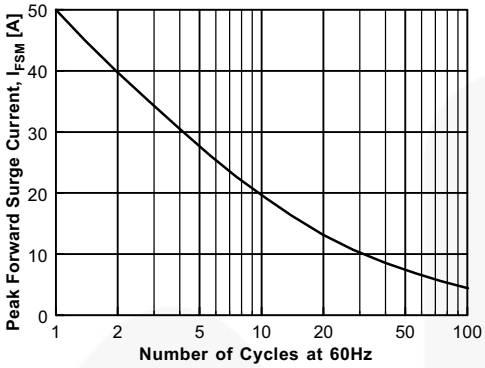


Figure 1. Non-Repetitive Surge Current

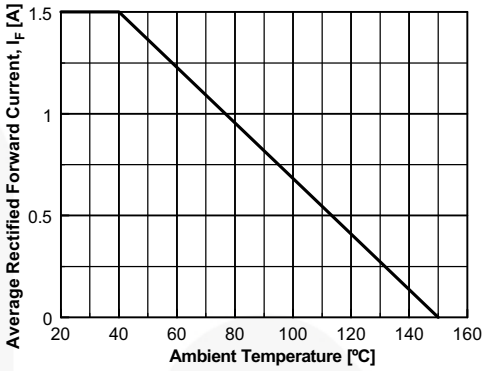


Figure 2. Forward Current Derating Curve

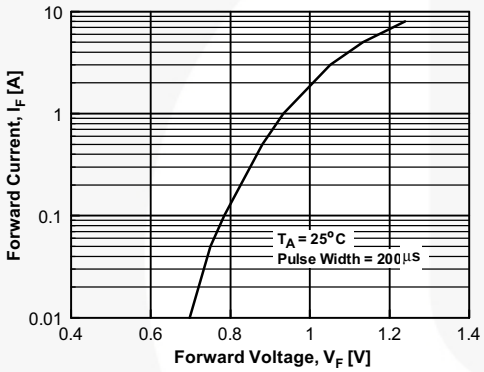


Figure 3. Forward Voltage Characteristics

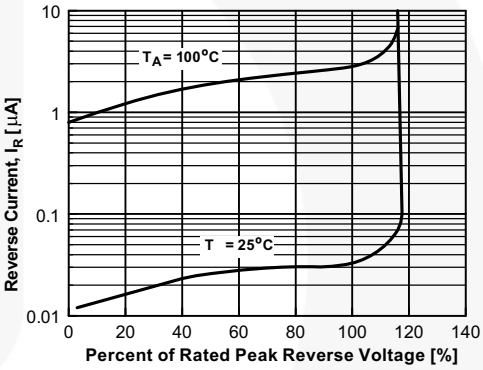
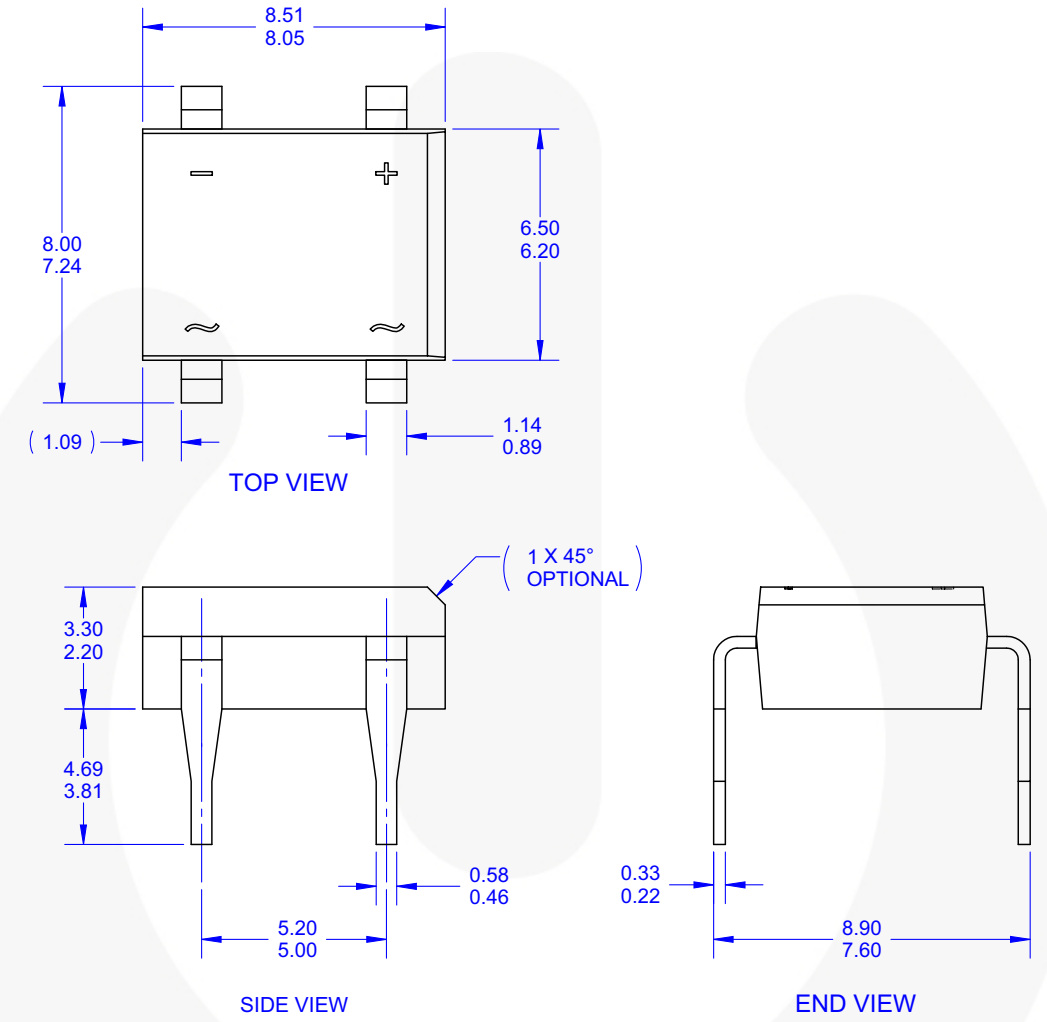


Figure 4. Reverse Current vs. Reverse Voltage

Physical Dimensions



NOTES:

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B. ALL DIMENSIONS ARE IN MILLIMETERS.
C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
G. DRAWING FILE NAME: MKT-N04DREV1

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

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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