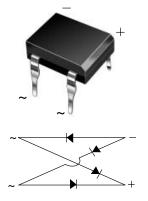
**New Product** 

DF005MA thru DF10MA

Vishay General Semiconductor

## **Miniature Glass Passivated Single-Phase Bridge Rectifiers**



SHA

Case Style DFM

PRIMARY CHARACTERISTICS							
I <sub>F(AV)</sub> 1 A							
V <sub>RRM</sub>	50 V to 1000 V						
I <sub>FSM</sub>	30 A						
I <sub>R</sub>	5 μΑ						
V <sub>F</sub>	1.1 V						
T <sub>J</sub> max.	150 °C						

### FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- Applicable for automative insertion
- High surge current capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

#### **TYPICAL APPLICATIONS**

General purpose use in ac-to-dc bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

#### **MECHANICAL DATA**

Case: DFM

Epoxy meets UL 94V-0 flammability rating **Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102 E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

Polarity: As marked on body

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	DF005MA	DF01MA	DF02MA	DF04MA	DF06MA	DF08MA	DF10MA	UNIT
Device marking code		DFA005	DFA01	DFA02	DFA04	DFA06	DFA08	DFA10	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at $T_A = 40 \ ^\circ C$	I <sub>F(AV)</sub>	1.0							A
Peak forward surge current single sine-wave superimposed on rated load	I <sub>FSM</sub>	30							A
Rating for fusing (t < 8.3 ms)	l <sup>2</sup> t	4.5							A <sup>2</sup> s
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150							°C



RoHS

COMPLIANT

# DF005MA thru DF10MA

**New Product** 



Vishay General Semiconductor

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										_
PARAMETER	TEST CONDITIONS	SYMBOL	DF005MA	DF01MA	DF02MA	DF04MA	DF06MA	DF08MA	DF10MA	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V <sub>F</sub>	1.1					V		
Maximum reverse current at rated DC blocking voltage per diode	T <sub>A</sub> = 25 °C T <sub>A</sub> = 125 °C	I <sub>R</sub>	5.0 500					μA		
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	25					pF		

<b>THERMAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL DF005MA DF01MA DF02MA DF04MA DF06MA DF08MA DF10MA UNIT							UNIT
Typical thermal resistance <sup>(1)</sup>	$R_{ ext{ heta}JA}$	A 40						°C/W
Typical thermal resistance	$R_{\theta JL}$	IL 15					0/11	

#### Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13 x 13 mm) copper pads

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
DF06MA-E3/45	0.403	45	50	Tube				

#### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

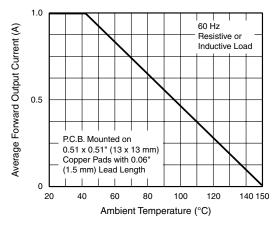
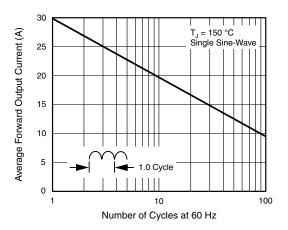
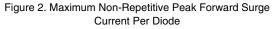


Figure 1. Derating Curve Output Rectified Current







### DF005MA thru DF10MA

### Vishay General Semiconductor

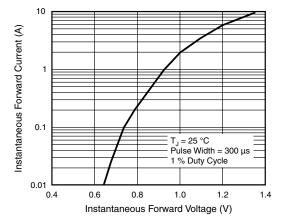


Figure 3. Typical Forward Characteristics Per Diode

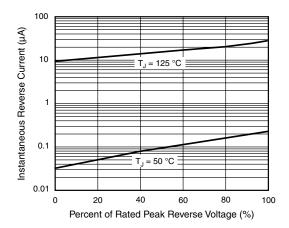


Figure 4. Typical Reverse Leakage Characteristics Per Diode

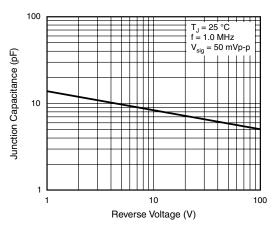


Figure 5. Typical Junction Capacitance Per Diode

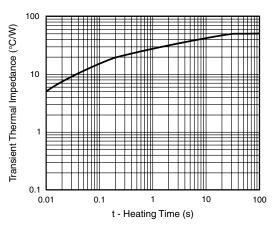
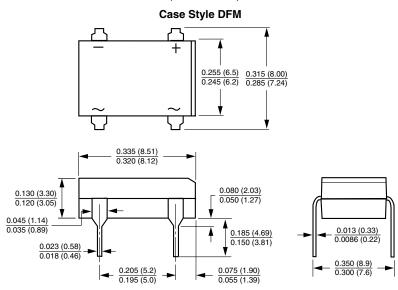


Figure 6. Typical Transient Thermal Impedance Per Diode

#### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)



For technical questions within your region, please contact one of the following: PDD-Americas@vishay.com, PDD-Asia@vishay.com, PDD-Europe@vishay.com



Vishay

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Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.