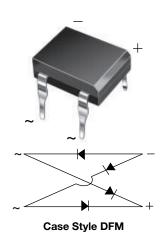


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Miniature Glass Passivated Single-Phase Bridge Rectifiers



LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS						
I _{F(AV)}	1 A					
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V					
I _{FSM}	30 A					
I _R	5 μΑ					
V_F at $I_F = 1.0 A$	1.1 V					
T _J max.	150 °C					
Package	DFM					
Circuit configuration	Quad					

FEATURES

• UL recognition, file number E54214

• Ideal for printed circuit boards

RoHS

• Applicable for automated insertion

- High surge current capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA

Case: DFM

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked on body

MAXIMUM RATINGS (T _A = 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_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at T _A = 40 °C	I _{F(AV)}	1.0					Α		
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	30					Α		
Rating for fusing (t < 8.3 ms)	l ² t	4.5						A ² s	
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150					°C		



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ELECTRICAL CHARACTERISTICS (T _A = 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 _F	1.1				V			
Maximum reverse current at rated DC blocking	T _A = 25 °C		5.0							
at rated DC blocking $T_A = 125 ^{\circ}\text{C}$		500						μΑ		
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	25				pF			

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	DF005MA DF01MA DF02MA DF04MA DF06MA DF08MA DF10MA						UNIT	
Typical thermal resistance (1)	$R_{\theta JA}$				40				°C/W
Typical thermal resistance (**)	15						C/VV		

Note

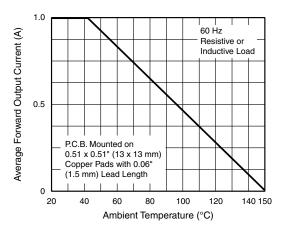
⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.5" x 0.5" (13 mm x 13 mm) copper pads

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

100

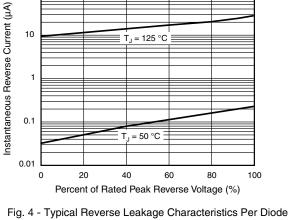
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RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)



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Fig. 1 - Derating Curve Output Rectified Current



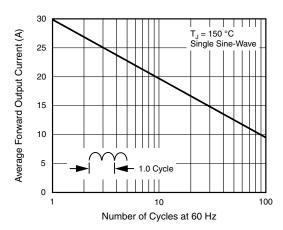


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

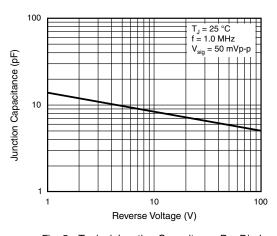


Fig. 5 - Typical Junction Capacitance Per Diode

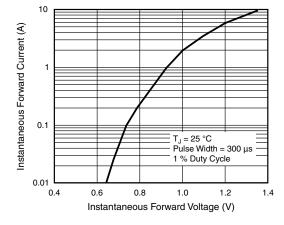


Fig. 3 - Typical Forward Characteristics Per Diode

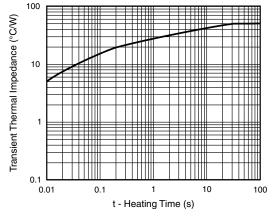
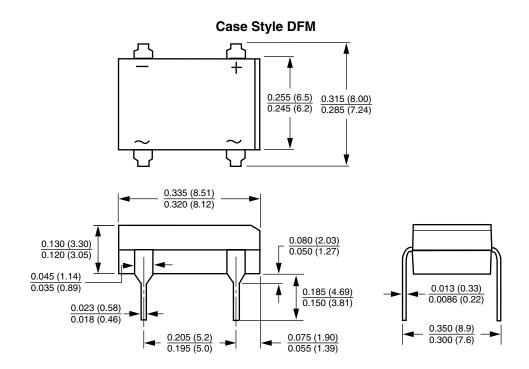


Fig. 6 - Typical Transient Thermal Impedance Per Diode

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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