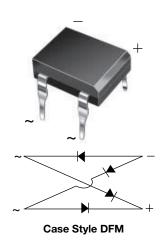


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Vishay General Semiconductor

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}	50 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 <u>www.vishay.com/doc?99912</u>

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	DF005M	DF01M	DF02M	DF04M	DF06M	DF08M	DF10M	UNIT
Device marking code		DF005	DF01	DF02	DF04	DF06	DF08	DF10	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	٧
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	٧
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at $T_A = 40\ ^{\circ}C$	I _{F(AV)}	1.0						Α	
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	50						Α	
Rating for fusing (t < 8.3 ms)	l ² t	l ² t 10						A ² s	
Operating junction and storage temperature range	T _J , T _{STG}	Γ _J , T _{STG} -55 to +150							°C



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	DF005M	DF01M	DF02M	DF04M	DF06M	DF08M	DF10M	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V _F	1.1					V		
Maximum reverse current at	T _A = 25 °C		5.0							
rated DC blocking voltage per diode	T _A = 125 °C	IR	500						μA	
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	25				рF			

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	DF005M	DF01M	DF02M	DF04M	DF06M	DF08M	DF10M	UNIT
Typical thermal resistance (1)	$R_{\theta JA}$	40							°C/W
Typical thermal resistance (9)	$R_{ heta JL}$		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	REFERRED P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY						
DF06M-E3/45	0.416	45	50	Tube			



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

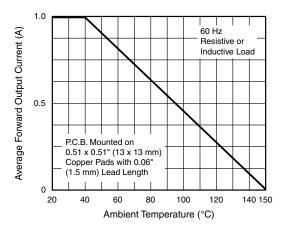


Fig. 1 - Derating Curve Output Rectified Current

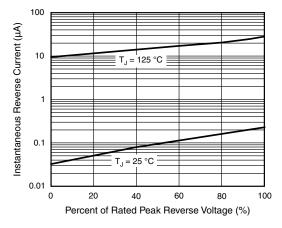


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

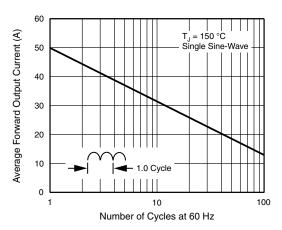


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

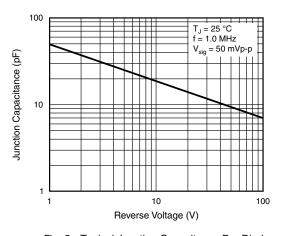


Fig. 5 - Typical Junction Capacitance Per Diode

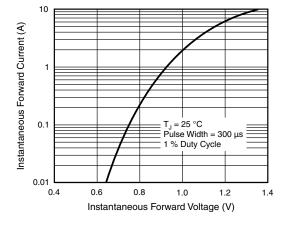


Fig. 3 - Typical Forward Characteristics Per Diode

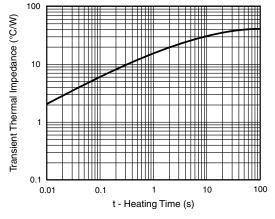
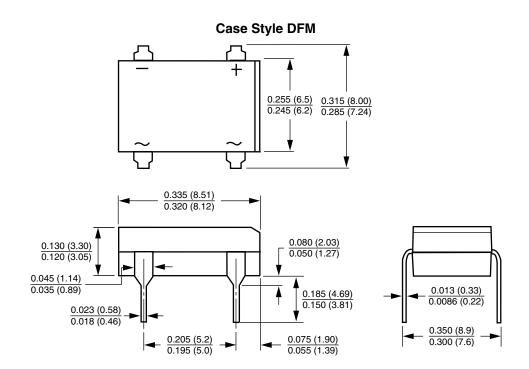


Fig. 6 - Typical Transient Thermal Impedance

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

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