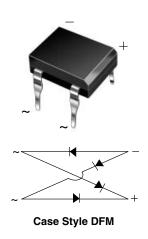


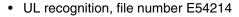
Vishay General Semiconductor

Miniature Glass Passivated Single-Phase Bridge Rectifiers



PRIMARY CHARACTERISTICS							
I _{F(AV)} 1 A							
V_{RRM}	50 V to 1000 V						
I _{FSM}	50 A						
I _R	5 μΑ						
V _F	1.1 V						
T _J max.	150 °C						

FEATURES





· Ideal for printed circuit boards



Applicable for automative insertion

RoHS

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 _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	V
Maximum RMS voltage	V _{RMS} 35 70 140 280 420 560 700				700	٧			
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	٧
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}	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}	- 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				٧
Maximum reverse current at rated DC blocking voltage per diode	T _A = 25 °C T _A = 125 °C	I _R				5.0 500				μΑ
Typical junction capacitance per diode	4.0 V, 1 MHz	СЈ				25				pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	DF005M	DF01M	DF02M	DF04M	DF06M	DF08M	DF10M	UNIT
Typical thermal resistance (1)	$R_{ hetaJA} \ R_{ hetaJL}$	40 15				°C/W			

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)	WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE						
DF06M-E3/45	0.416	45	50	Tube				

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

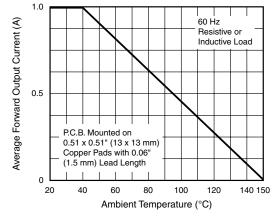


Figure 1. Derating Curve Output Rectified Current

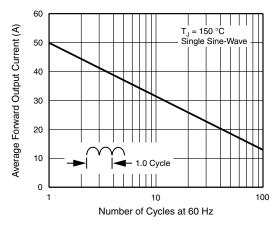


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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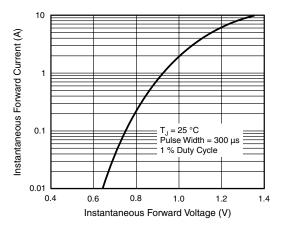


Figure 3. Typical Forward Characteristics Per Diode

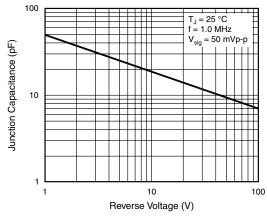


Figure 5. Typical Junction Capacitance Per Diode

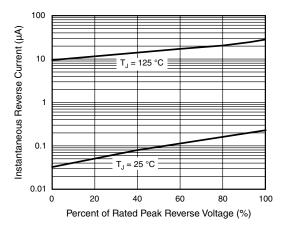


Figure 4. Typical Reverse Leakage Characteristics Per Diode

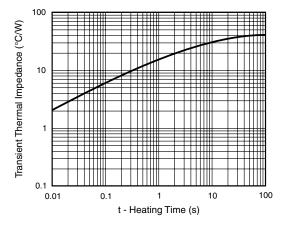
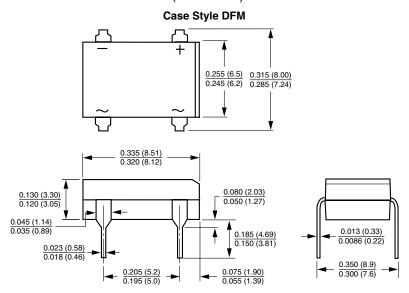


Figure 6. Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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