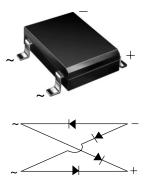
Vishay General Semiconductor

Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers



Case Style DFS

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

- UL recognition, file number E54214
- · Ideal for automated placement
- High surge current capability



ROHS COMPLIANT

- Meets MSL level 1, per J-STD-020, LF maximum peak of 250 °C
- 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: DFS

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	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	UNIT
Device marking code		DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	
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 $T_A = 40 \ ^\circ C^{(1)}$	I _{F(AV)}	I _{F(AV)} 1.0							A
Peak forward surge current single half sine-wave superimposed on rated load	I _{FSM} 50							A	
Rating for fusing (t < 8.3 ms)	l ² t 10						A ² s		
Operating junction and storage temperature range	T _J , T _{STG}	T _J , T _{STG} - 55 to + 150						°C	

Note:

(1) Units mounted on P.C.B. with 0.51 x 0.51" (13 x 13 mm) copper pads

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ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V _F				1.1				v
Maximum DC reverse current at rated DC blocking voltage per diode	T _A = 25 °C T _A = 125 °C	I _R	5.0 500						μA	
Typical junction capacitance per diode ⁽¹⁾		CJ				25				pF

Note:

(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 V

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL DF005S DF01S DF02S DF04S DF06S DF08S DF10S UN							UNIT
Typical thermal resistance ⁽¹⁾	$R_{ heta JA} \ R_{ heta JL}$	40 15						°C/W

Note:

(1) Units mounted on P.C.B. with 0.51 x 0.51" (13 x 13 mm) copper pads

ORDERING INFORMATION (Example)									
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
DF06S-E3/45	0.399	45	50	Tube					
DF06S-E3/77	0.399	77	1500	13" diameter paper tape and reel					

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

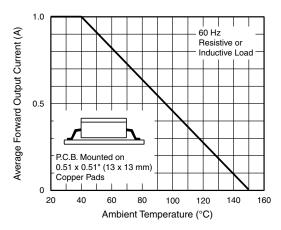
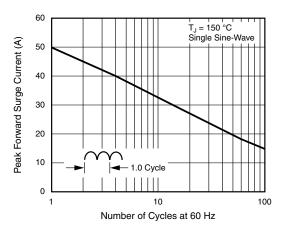
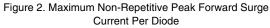


Figure 1. Derating Curve Output Rectified Current







DF005S thru DF10S

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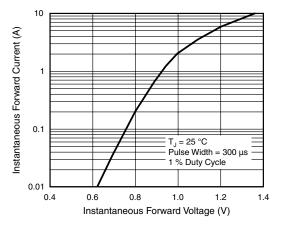


Figure 3. Typical Forward Characteristics Per Diode

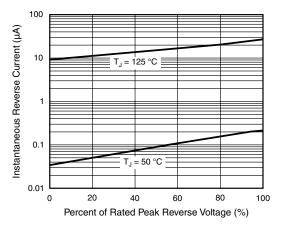


Figure 4. Typical Reverse Leakage Characteristics Per Diode

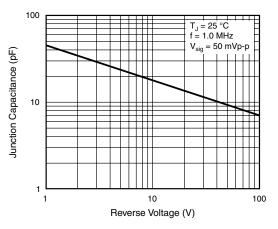


Figure 5. Typical Junction Capacitance Per Diode

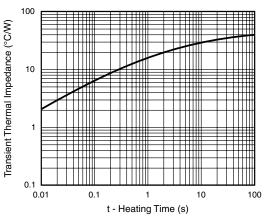
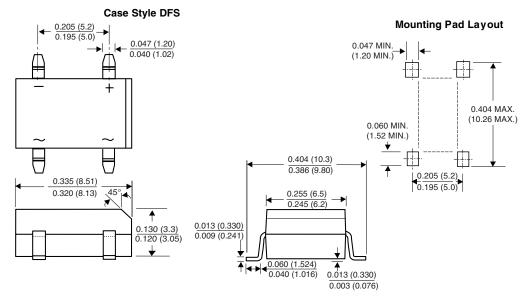


Figure 6. Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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