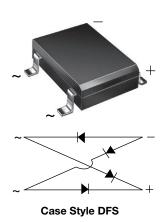


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Miniature Glass Passivated Single-Phase Surface-Mount Bridge Rectifiers



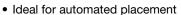
LINKS TO ADDITIONAL RESOURCES



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	DFS						
Circuit configuration	Quad						

FEATURES

• UL recognition, file number E54214



ROHS

· High surge current capability

- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- 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: DFS

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 JESD22-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	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 $T_A = 40\ ^{\circ}\text{C}^{\ (1)}$	I _{F(AV)}	1.0					Α		
Peak forward surge current single half sine-wave superimposed on rated load	I _{FSM}	50					Α		
Rating for fusing (t < 8.3 ms)	l ² t	10					A ² s		
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150					°C		

Note

⁽¹⁾ Units mounted on PCB with 0.51" x 0.51" (13 mm x 13 mm) copper pads



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	SYMBOL DF005S DF01S DF02S DF04S DF06S DF08S DF10S						DF10S	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V _F	1.1					V		
Maximum DC reverse current at	T _A = 25 °C	I_	5.0							μA
rated DC blocking voltage per diode	T _A = 125 °C	I _R	500							μΑ
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)	$R_{\theta JA}$	40							°C/W
Typical thermal resistance (9)	$R_{\theta JL}$	15							C/VV

Note

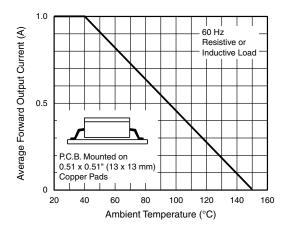
 $^{^{(1)}\,}$ Units mounted on PCB with 0.51" x 0.51" (13 mm x 13 mm) copper pads

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				

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

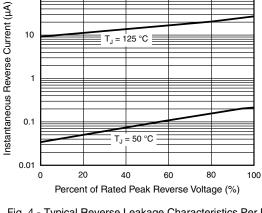


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

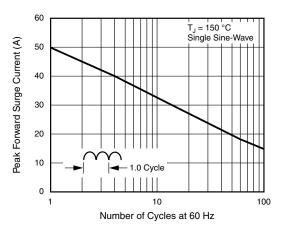


Fig. 2 - Maximum Non-Repetitive Peak Forward SurgeCurrent Per Diode

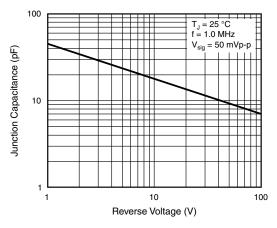


Fig. 5 - Typical Junction Capacitance Per Diode

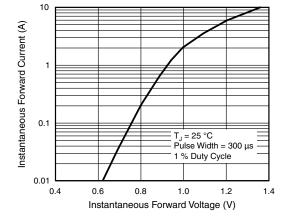


Fig. 3 - Typical Forward Characteristics Per Diode

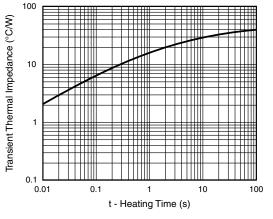


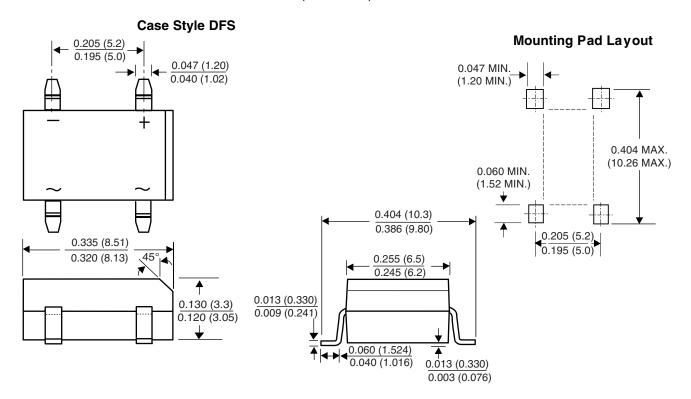
Fig. 6 - Typical Transient Thermal Impedance



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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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