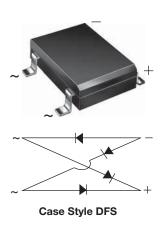


DF005SA, DF01SA, DF02SA, DF04SA, DF06SA, DF08SA, DF10SA

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Vishay General Semiconductor

Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers



PRIMARY CHARACTERISTICS							
Package	DFS						
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						
Diode variations	Quad						

FEATURES





- · Ideal for automated placement
- · Middle surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

ROHS

 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	DF005SA	DF01SA	DF02SA	DF04SA	DF06SA	DF08SA	DF10SA	UNIT
Device marking code		DFA005S	DFA01S	DFA02S	DFA04S	DFA06S	DFA08S	DFA10S	
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}	м 30							Α
Rating for fusing (t < 8.3 ms)	l ² t	l ² t 4.5							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 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	DF005SA	DF01SA	DF02SA	DF04SA	DF06SA	DF08SA	DF10SA	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V _F				1.1				٧
Maximum DC reverse current at rated DC	T _A = 25 °C	1	5.0							
blocking voltage per diode	T _A = 125 °C	IR	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	SYMBOL DF005SA DF01SA DF02SA DF04SA DF06SA DF08SA DF10SA UI						UNIT
Typical thermal resistance (1)	$R_{\theta JA}$	40						°C/W
Typical thermal resistance W	$R_{\theta JL}$	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					
DF06SA-E3/45	0.386	45	50	Tube					
DF06SA-E3/77	0.386	77	1500	13" diameter paper tape and reel					

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

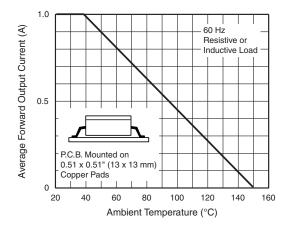


Fig. 1 - Derating Curve Output Rectified Current

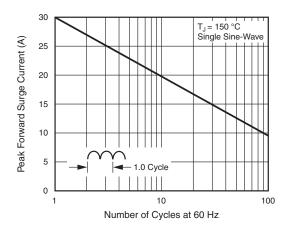


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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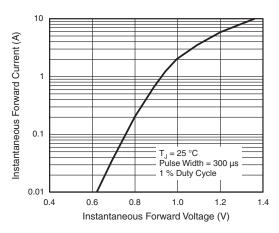


Fig. 3 - Typical Forward Characteristics Per Diode

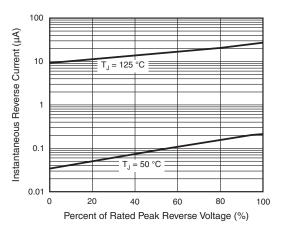


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

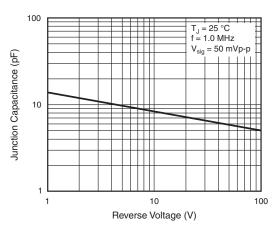


Fig. 5 - Typical Junction Capacitance Per Diode

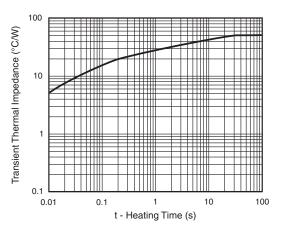
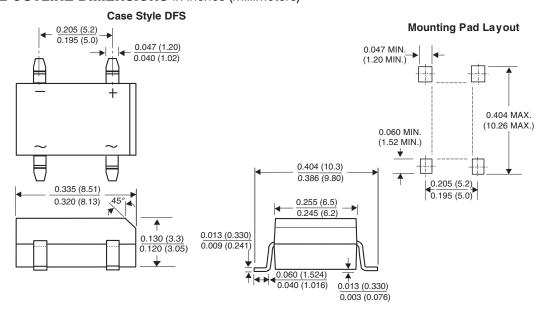


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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