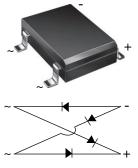
DFL15005S, DFL1501S, DFL1502S, DFL1504S, DFL1506S, DFL1508S, DFL1510S



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Low Profile Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers



Case Style DFS Low Profile

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS							
I _{F(AV)}	1.5 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 = 1.5 A	1.1 V						
T _J max.	150 °C						
Package	DFS low profile						
Circuit configuration	Quad						

FEATURES

- Low profile: typical height of 2.5 mm
- UL recognition, file number E54214
- Ideal for automated placement
- 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 <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: DFS low profile 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	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	UNIT
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 $T_A = 40$ °C	I _{F(AV)} ⁽¹⁾) 1.5						А	
Peak forward surge current single half sine-wave superimposed on rated load	I _{FSM}	50					А		
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 ($T_A = 25 \text{ °C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	UNIT
Max. instantaneous forward voltage drop per diode	1.5 A	V _F	1.1					V		
Maximum DC reverse current at rated DC blocking voltage per	T _A = 25 °C	1-	5.0							μA
diode	T _A = 125 °C	I _R	500							
Typical junction capacitance per diode		C _J ⁽¹⁾) 16				pF			

Note

 $^{(1)}\,$ Measured at 1.0 MHz and applied reverse voltage of 4.0 V $\,$

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)									
PARAMETER	SYMBOL	YMBOL DFL </th <th>UNIT</th>				UNIT			
Typical thermal resistance	R _{0JA} ⁽¹⁾	40							°C/W
Typical mermai resistance	R _{0JL} ⁽¹⁾	15							0/10

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				
DFL1506S-E3/45	0.341	45	50	Tube				
DFL1506S-E3/77	0.341	77	1500	13" diameter paper tape and reel				

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

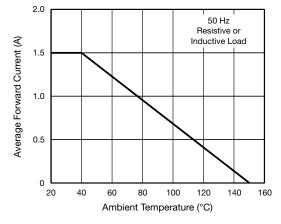


Fig. 1 - Forward Current Derating Curve Per Diode

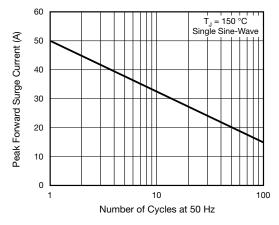


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

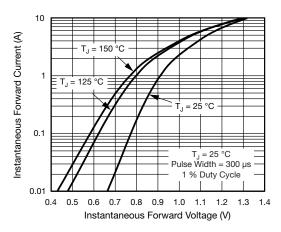


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

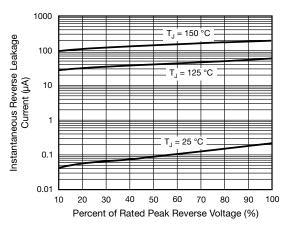


Fig. 4 - Typical Reverse Characteristics Per Diode

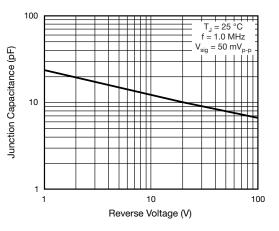


Fig. 5 - Typical Junction Capacitance Per Diode

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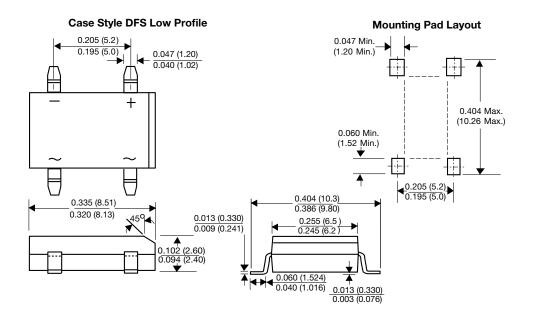
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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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