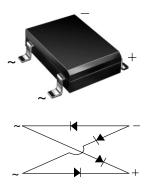


New Product DFL15005S thru DFL1514S

Vishay General Semiconductor

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



Case Style Low Profile DFS

PRIMARY CHARACTERISTICS							
I <sub>F(AV)</sub>	1.5 A						
V <sub>RRM</sub>	50 V to 1400 V						
I <sub>FSM</sub>	50 A						
I <sub>R</sub>	5 μΑ						
V <sub>F</sub>	1.1 V						
T <sub>J</sub> max.	150 °C						

## 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 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: Low profile 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 <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	SYMBOL	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	DFL 1514S	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	1400	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	980	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	1400	V
Maximum average forward output rectified current at $T_A = 40 \ ^\circ C \ ^{(1)}$	I <sub>F(AV)</sub>	1.5								A
Peak forward surge current single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50							A	
Rating for fusing (t < 8.3 ms)	l <sup>2</sup> t	10							A <sup>2</sup> s	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150							°C	

#### Note:

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



COMPLIANT

# DFL15005S thru DFL1514S



Vishay General Semiconductor

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)											
PARAMETER	TEST CONDITIONS	SYMBOL	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	DFL 1514S	UNIT
Max. instantaneous forward voltage drop per diode	1.5 A	V <sub>F</sub>	1.1						v		
Maximum DC reverse current at rated DC blocking voltage per diode	T <sub>A</sub> = 25 °C T <sub>A</sub> = 125 °C	I <sub>R</sub>	5.0 500						μA		
Typical junction capacitance per diode <sup>(1)</sup>		CJ	16						pF		

### Note:

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

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted)									
PARAMETER	SYMBOL	SYMBOL DFL DFL<						UNIT	
Typical thermal resistance <sup>(1)</sup>	$R_{ heta JA} \ R_{ heta JL}$	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						
DFL1506S-E3/45	0.341	45	50	Tube						
DFL1506S-E3/77	0.341	77	1500	13" diameter paper tape and reel						

## **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

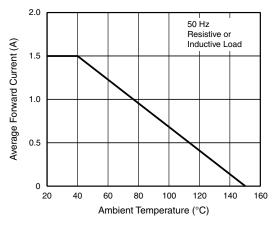
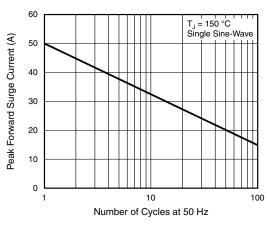
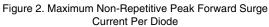


Figure 1. Forward Current Derating Curve Per Diode







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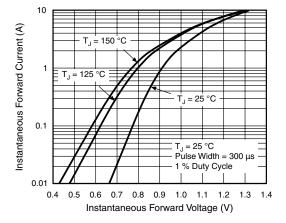


Figure 3. Typical Forward Voltage Characteristics Per Diode

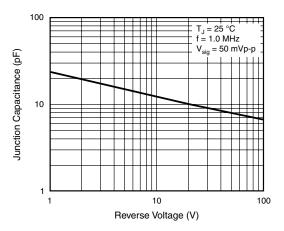


Figure 5. Typical Junction Capacitance Per Diode

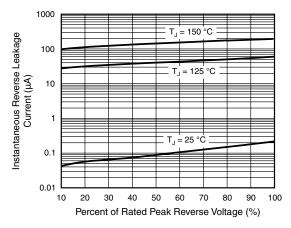
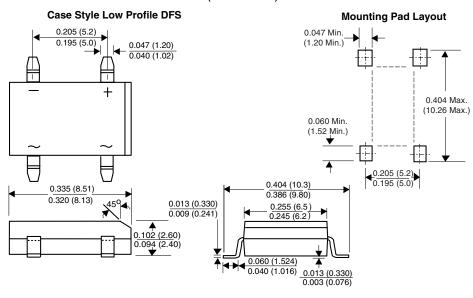


Figure 4. Typical Reverse Characteristics Per Diode







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