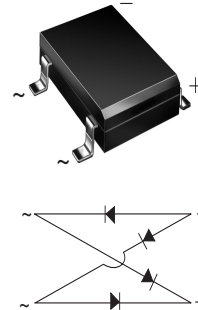


## Low Profile Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers

### Major Ratings and Characteristics

$I_{F(AV)}$	1.5 A
$V_{RRM}$	50 V to 1400 V
$I_{FSM}$	50 A
$I_R$	5 $\mu$ A
$V_F$	1.1 V
$T_j$ max.	150 °C

Case Style Low Profile DFS



### 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-020C

### 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 (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

**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	DFL 1514S	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1400	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	980	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	1400	V
Maximum average forward output rectified current at $T_A = 40$ °C <sup>(2)</sup>	$I_{F(AV)}$	1.5								A
Peak forward surge current single half sine-wave superimposed on rated load	$I_{FSM}$	50								A
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	10								A <sup>2</sup> sec
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150								°C

### Electrical Characteristics

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

Parameter	Test condition	Symbol	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	DFL 1514S	Unit
Max. instantaneous forward voltage drop per leg	at 1.5 A	$V_F$	1.1								V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	$I_R$	5.0 500								$\mu\text{A}$
Typical junction capacitance per leg <sup>(1)</sup>		$C_J$	16								pF

### Thermal Characteristics

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	DFL 1514S	Unit
Typical thermal resistance per leg <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	40 15								$^\circ\text{C/W}$

Notes:

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (2) Units mounted on P.C.B. with 0.51 x 0.51" (13 x 13 mm) copper pads

### Ratings and Characteristics Curves

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

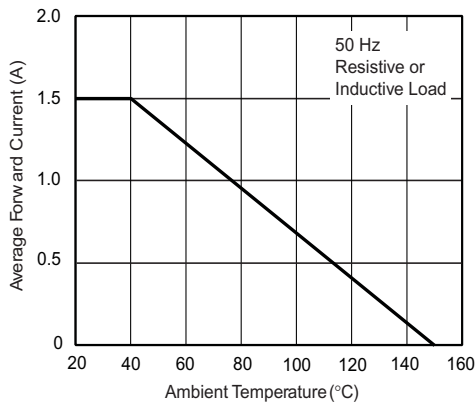


Figure 1. Forward Current Derating Curve Per Leg

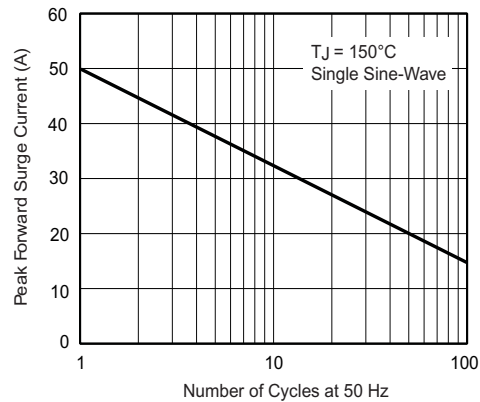


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

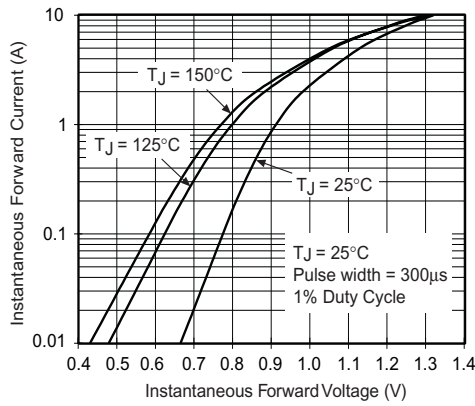


Figure 3. Typical Forward Voltage Characteristics Per Leg

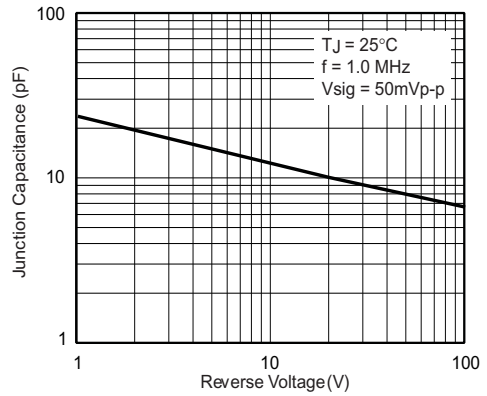


Figure 5. Typical Junction Capacitance Per Leg

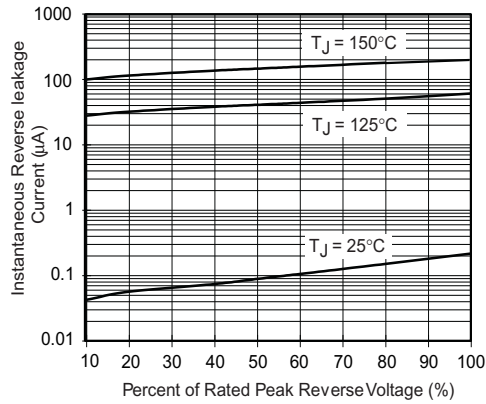


Figure 4. Typical Reverse Characteristics Per Leg

## Package outline dimensions in inches (millimeters)

