

DF15005S Thru DF1510S

Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers Reverse Voltage 50 to 1000V Forward Current 1.5 A

Features

- Ideal for printed circuit boards
- Applicable for automotive insertion
- High surge current capability
- Solder Dip 260°C, 40 seconds
- UL certificate E241476



Package: DFS

Mechanical Data

- Case: DFS
- Epoxy meets UL-94V-0 Flammability rating
- Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D
- Polarity: As marked on body



Schematic Diagram

Applications

General purpose use in AC-to-DC bridge full wave rectifications for SMPS, lighting ballasters, adapters, battery chargers, home appliances, office equipment and telecommunication applications.

Maximum Ratings & Electrical Characteristics

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

Parameter	Symbols	DF 15005S	DF 1501S	DF 1502S	DF 1504S	DF 1506S	DF 1508S	DF 1510S	Units
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 $T_A=40^\circ\text{C}$ (2)	$I_{F(AV)}$	1.5							A
Peak Forward Surge Current (single half sine-wave superimposed on rated load, JEDEC Method $T_J=150^\circ\text{C}$)	I_{FSM}	50.0							A
Rating for Fusig (t<8.3ms)	I_{ft}	10							A ² sec
Maximum Instantaneous Forward Voltage Drop per Leg @ 0.75A	V_F	1.1							V
Maximum DC Reverse Current $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage per Leg $T_A=125^\circ\text{C}$	I_R	5.0 500							μA
Typical Junction Capacitance per Leg (1)	C_j	25							pF
Typical Thermal Resistance per Leg (2)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							$^\circ\text{C/W}$
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-55 to +150							$^\circ\text{C}$

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

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

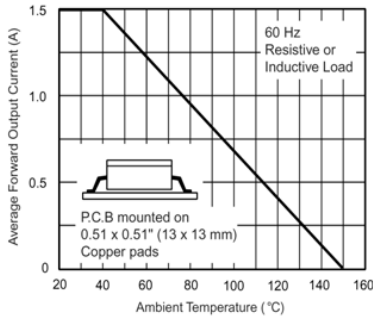


Figure 1. Derating Curve Output Rectified Current

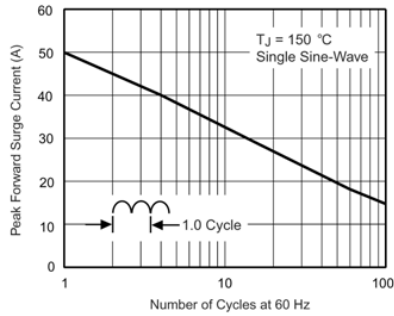


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

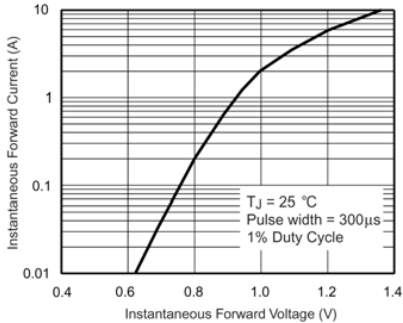


Figure 3. Typical Forward Characteristics Per Leg

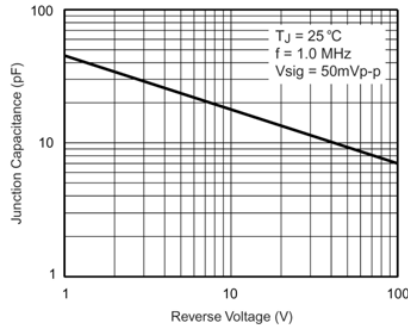


Figure 5. Typical Junction Capacitance Per Leg

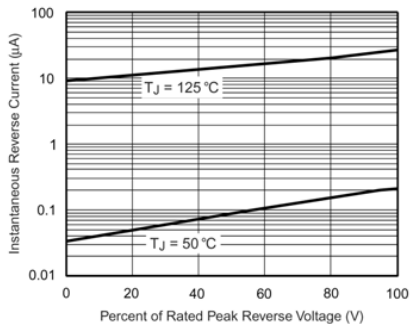


Figure 4. Typical Reverse Leakage Characteristics Per Leg

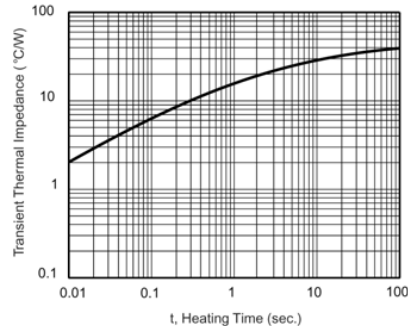


Figure 6. Typical Transient Thermal Impedance



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Package Outline Dimensions

DFS

Dimensions in inches and (millimeters)

