

PRV: 50 - 1000 Volts

Io: 1.0 Amperes

#### **Features**

- · High current capability
- · High surge current capability
- · High reliability
- · Low reverse current
- · Low forward voltage drop
- · Fast switching for high efficiency
- · RoHS compliant package

### **Mechanical Data**

• Epoxy: UL94V-O rate flame retardant

• Terminals: Leads solderable per MIL-STD-202,

method 208 guaranteed

· Mounting position: Any

• Weight: 0.02 ounce, 0.4 gram

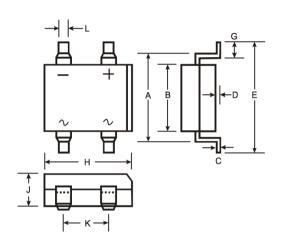
Package type: DFS

## **Packing & Order Information**

1,500/Reel

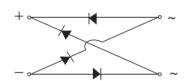






DF-S						
Dim	Min	Max				
Α	7.40	7.90				
В	6.20	6.50				
С	0.22	0.30				
D	0.076	0.33				
E	_	10.40				
G	1.02	1.53				
Н	8.13	8.51				
J	2.40	2.60				
K	5.00	5.20				
L	1.00	1.20				
All Dimensions in mm						

#### **Graphic symbol**



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specifie. Single phase, half wave, 60 Hz, resistive or inductive load

For capacitive load, derate current by 20%

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Rating	Symbol	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	Unit
Maximum Recurrent Peak	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Reverse Voltage									
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward									
Output Rectified Current at	I <sub>F(AV)</sub>				1.0				A
Ta = 40 °C									
Maximum Instantaneous									
Forward Voltage per element	V <sub>F</sub>				1.1				V
at IF = 1.0 A									



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Single phase, half wave, 60 Hz, resistive or inductive load									
For capacitive load, derate current by 20%									
Rating	Symbol	DF005S	DF01S	DF02S	DF04S	DF06S	DF08S	DF10S	Unit
Maximum Peak Forward Surge									
Current Single half sine wave	I <sub>FSM</sub> 50								
Superimposed on rated load							A		
(JEDEC Method)									
Current Squared Time at t	I <sup>2</sup> t 10				$A^2S$				
< 8.3 ms	Pt	2t 10					A-S		
Maximum DC Reverse Current							μА		
$Ta = 25^{\circ}C$	$I_R$	10							
at Rated DC Blocking Voltage	т	500						μA	
Ta = 100°C	$I_{R(H)}$								
Typical Junction capacitance	C	25						pF	
(Note 1)	C <sub>J</sub>								
Typical Thermal Resistance	D	40						00 111	
(Note 2)	R <sub>θJA</sub>						°C/W		
Junction and storage									
te mpe ra ture	T <sub>J</sub> ,T <sub>STG</sub>	T <sub>STG</sub> -55 to +150						°C	
range									

### NOTE:

<sup>(1)</sup> Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

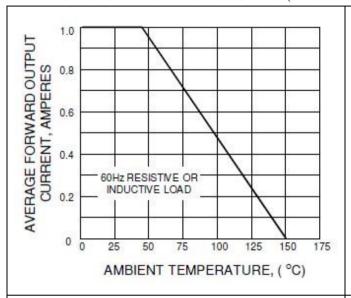
<sup>(2)</sup> Thermal Resistance from Junction to Ambient on P.C.B. with 0.5" x 0.5" (13mm x 13mm) Copper Pads.



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■RATING AND CHARACTERISTIC CURVES (DF005S - DF10S)



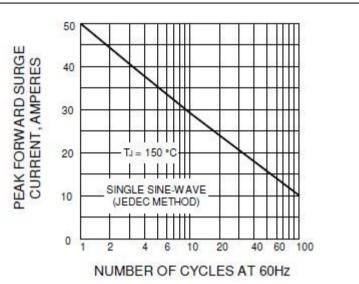


FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

10 Pulse Width = 300 μs 2% Duty Cycle 2% Du

FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER BRIDGE ELEMENT

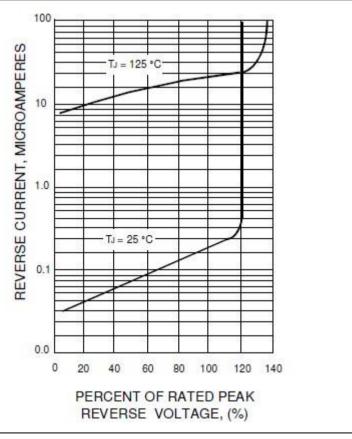


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



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