

# DF005S - DF10S

## 1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

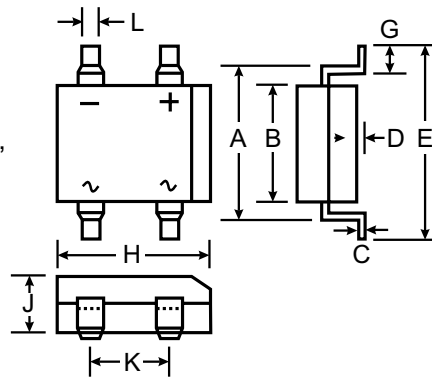
Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

### Features

- Glass Passivated Die Construction
- Diffused Junction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Surface Mount Application
- Plastic Material - UL Flammability Classification 94V-0
- UL Listed Under Recognized Component Index, File Number E94661

### Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Leads, Solderable per MIL-STD-202, Method 208
- Polarity: As marked on Case
- Approx. Weight: 0.38 grams
- Mounting Position: Any
- Marking: Type Number

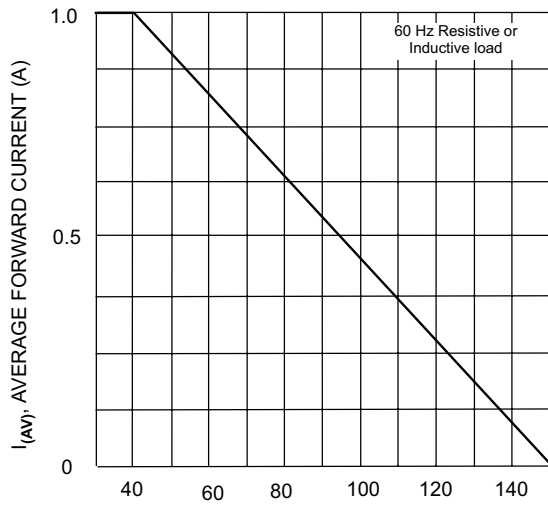


DF-S		
Dim	Min	Max
A	7.40	7.90
B	6.20	6.50
C	0.22	0.30
D	0.076	0.33
E	—	10.40
G	1.02	1.53
H	8.13	8.51
J	2.40	2.60
K	5.00	5.20
L	1.00	1.20
All Dimensions in mm		

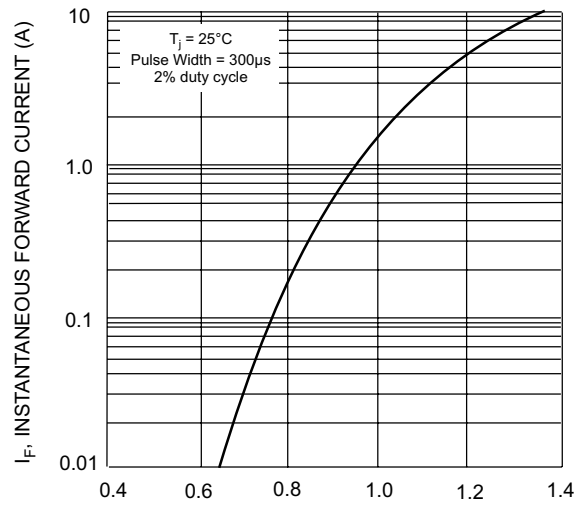
### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

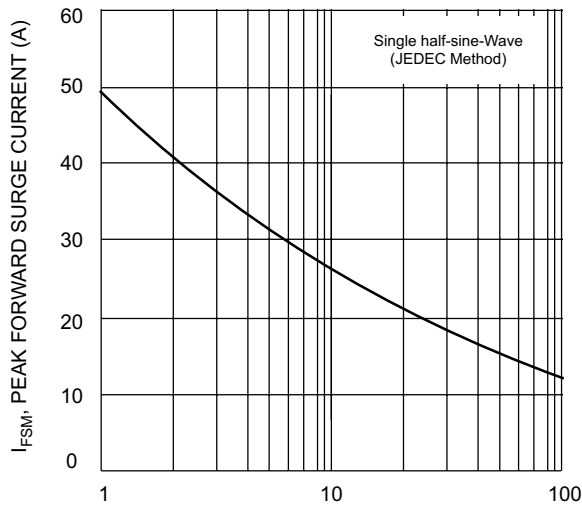
Characteristic	Symbol	DF 005S	DF 01S	DF 02S	DF 04S	DF 06S	DF 08S	DF 10S	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RMM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Average Forward Rectified Current @ T <sub>A</sub> = 40°C	I <sub>O</sub>	1.0							A
Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	50							A
Forward Voltage (per element) @ I <sub>F</sub> = 1.0A	V <sub>FM</sub>	1.1							V
Peak Reverse Current at Rated DC Blocking Voltage (per element) @ T <sub>A</sub> = 25°C @ T <sub>A</sub> = 125°C	I <sub>RM</sub>	10 500							μA
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	10.4							A <sup>2</sup> s
Typical Junction Capacitance (per element) (Note 1)	C <sub>j</sub>	25							pF
Typical Thermal Resistance, Junction to Ambient (Note 2)	R <sub>θJA</sub>	40							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C



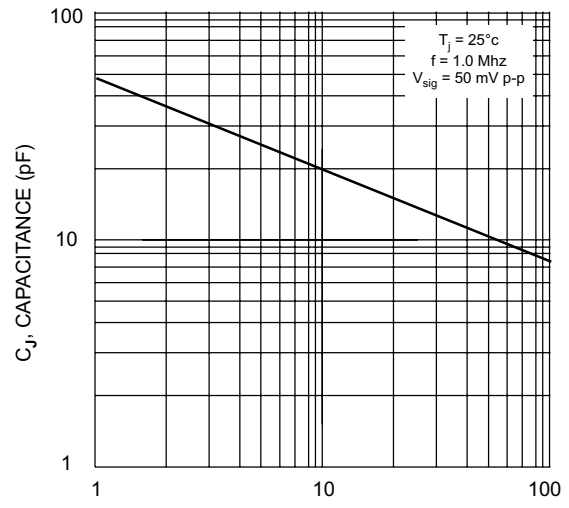
$T_A$ , AMBIENT TEMPERATURE ( $^{\circ}\text{C}$ )  
Fig. 1 Output Current Derating Curve



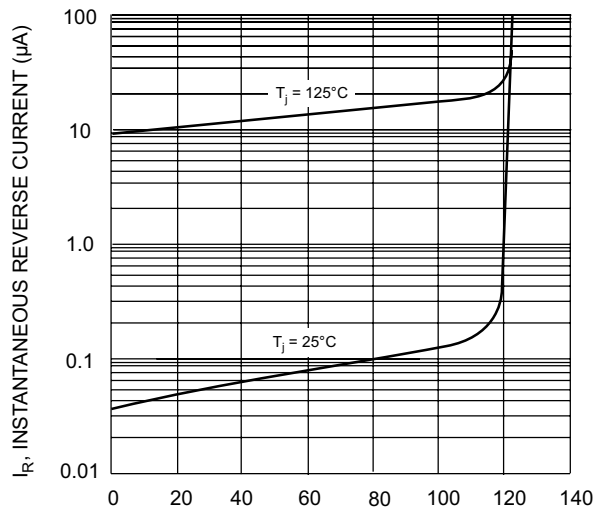
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typ Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Forward Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typ Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typ Reverse Characteristics (per element)