



# DF005S THRU DF10S

## GLASS PASSIVATED BRIDGE RECTIFIERS

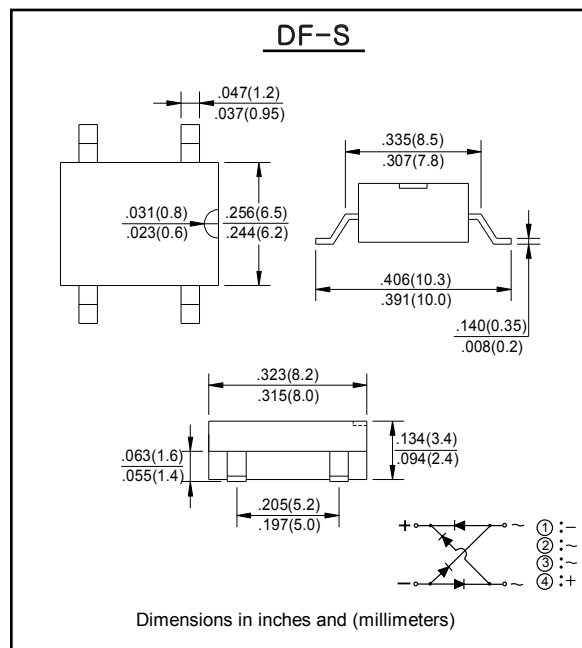
Reverse Voltage - 50 to 1000 Volts      Forward Current - 1.0 Ampere

### FEATURES

- Plastic package used has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- High surge overload rating of 50 Amperes peak
- High temperature soldering guaranteed:  
260°C/10 seconds, at 5 lbs. (2.3kg) tension

### MECHANICAL DATA

- Case: Molded plastic body over passivated junctions
- Terminals: Plated leads solderable per MIL-STD-750 Method 2026
- Mounting Position: Any
- Weight: 0.014 oz., 0.4 g



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| CHARACTERISTICS                                                                                   |             | SYMBOL                           | DF005S       | DF01S | DF02S | DF04S | DF06S | DF08S | DF10S | UNITS              |
|---------------------------------------------------------------------------------------------------|-------------|----------------------------------|--------------|-------|-------|-------|-------|-------|-------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                            |             | V <sub>RRM</sub>                 | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | V                  |
| Maximum RMS Bridge Input 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 Current at TA = 40°C                                               |             | I <sub>O</sub>                   | 1.0          |       |       |       |       |       |       | A                  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) |             | I <sub>FSM</sub>                 | 50           |       |       |       |       |       |       | A                  |
| Maximum DC Forward Voltage Drop per Bridge Element at 1.0A DC                                     |             | V <sub>F</sub>                   | 1.1          |       |       |       |       |       |       | V                  |
| Maximum Reverse Current at rated                                                                  | @TA = 25°C  | I <sub>R</sub>                   | 10.0         |       |       |       |       |       |       | μA                 |
| DC Blocking Voltage per element                                                                   | @TA = 125°C |                                  | 500          |       |       |       |       |       |       |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)                                                      |             | I <sup>2</sup> t                 | 10           |       |       |       |       |       |       | A <sup>2</sup> Sec |
| Typical Junction Capacitance ( Note1)                                                             |             | C <sub>J</sub>                   | 25           |       |       |       |       |       |       | pF                 |
| Typical Thermal Resistance (Note 2)                                                               |             | RθJA                             | 40           |       |       |       |       |       |       | °C/W               |
| Operating and Storage Temperature Range                                                           |             | T <sub>J</sub> ,T <sub>STG</sub> | -55 to + 150 |       |       |       |       |       |       | °C                 |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

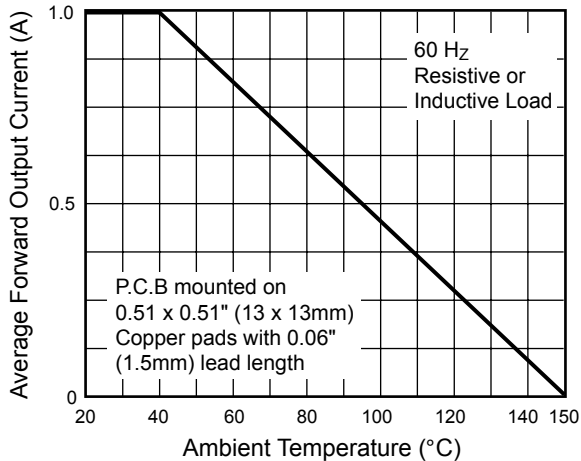
2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.



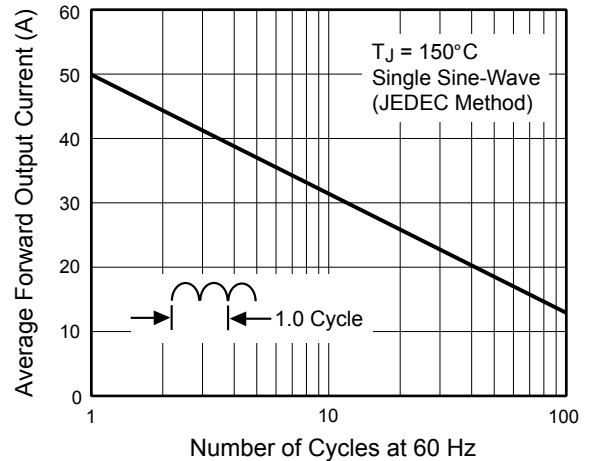
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## RATINGS AND CHARACTERISTIC CURVES

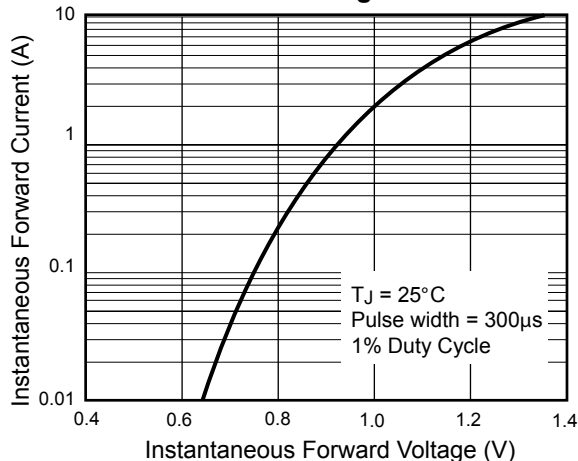
**Fig. 1 - Derating Curve Output Rectified Current**



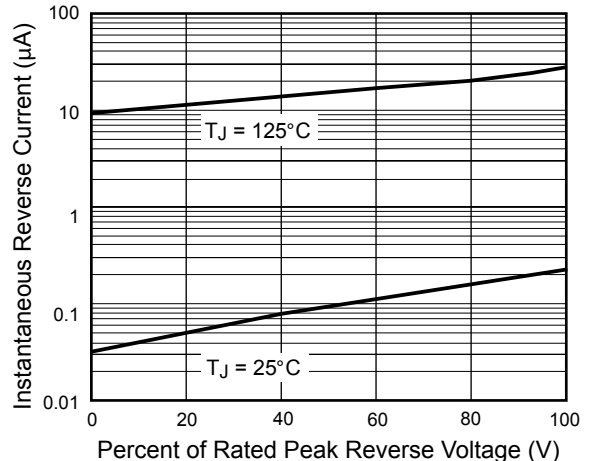
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



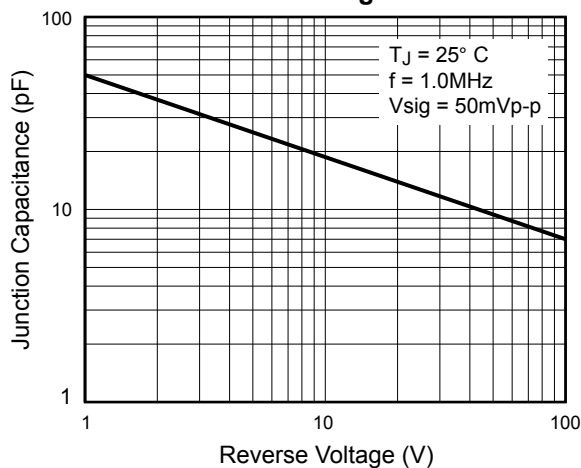
**Fig. 3 - Typical Forward Characteristics Per Leg**



**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**



**Fig. 5 - Typical Junction Capacitance Per Leg**



**Fig. 6 - Typical Transient Thermal Impedance**

