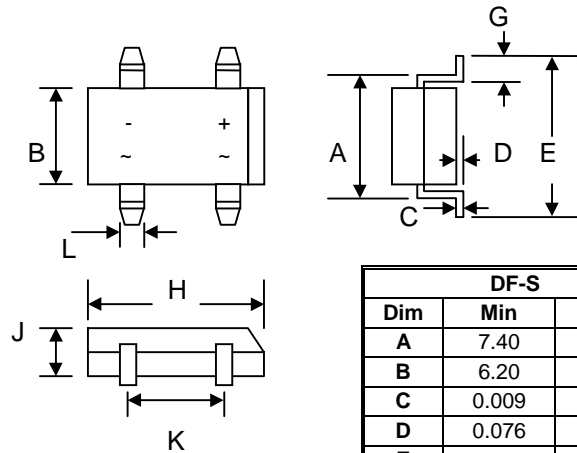


## 1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



| DF-S                 |       |       |
|----------------------|-------|-------|
| Dim                  | Min   | Max   |
| A                    | 7.40  | 7.90  |
| B                    | 6.20  | 6.50  |
| C                    | 0.009 | 0.25  |
| D                    | 0.076 | 0.33  |
| E                    | —     | 10.40 |
| G                    | 1.02  | 1.53  |
| H                    | 8.13  | 8.51  |
| J*                   | 3.20  | 3.40  |
| K                    | 5.0   | 5.20  |
| L                    | 1.00  | 1.20  |
| All Dimensions in mm |       |       |

### Mechanical Data

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

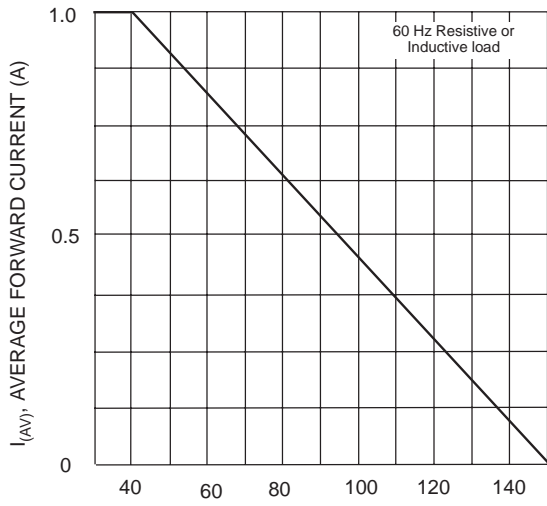
\*Low profile models (J = 2.20~2.50mm) are available.  
Please consult factory.

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

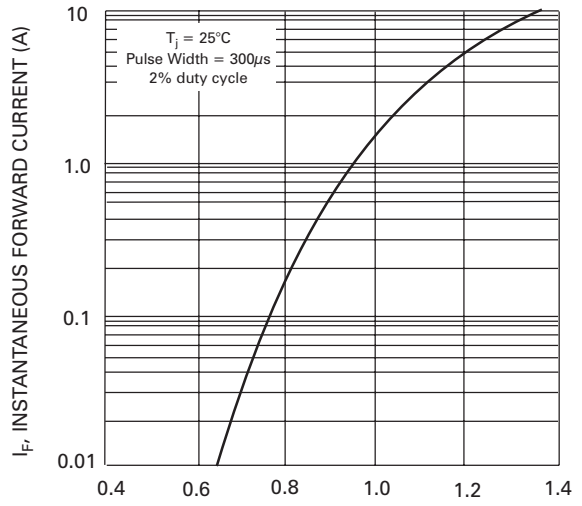
Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | DF 005S     | DF 01S | DF 02S | DF 04S | DF 06S | DF 08S | DF 10S | Unit |
|---|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  |             |        |        |        |        |        |        |      |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |        |        |        |        |        |        |      |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35          | 70     | 140    | 280    | 420    | 560    | 700    | V    |
| Average Rectified Output Current @T <sub>A</sub> = 40°C   | I <sub>O</sub>                    | 1.0         |        |        |        |        |        |        | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 30          |        |        |        |        |        |        | A    |
| Forward Voltage per element @I <sub>F</sub> = 1.0A  | V <sub>FM</sub>                   | 1.1         |        |        |        |        |        |        | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                | I <sub>RM</sub>                   | 10<br>500   |        |        |        |        |        |        | μA   |
| Typical Junction Capacitance per element (Note 1)   | C <sub>j</sub>                    | 25          |        |        |        |        |        |        | pF   |
| Typical Thermal Resistance (Note 2)   | R <sub>θJA</sub>                  | 110         |        |        |        |        |        |        | K/W  |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub> | -65 to +150 |        |        |        |        |        |        | °C   |

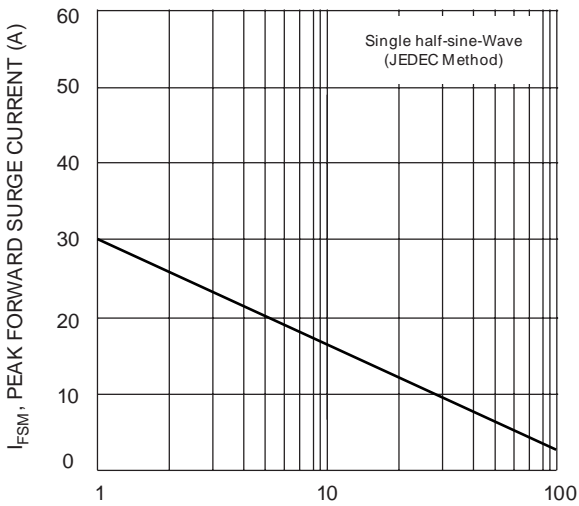
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance junction to ambient mounted on PC board with 5.0mm<sup>2</sup> (0.03mm thick) land areas.



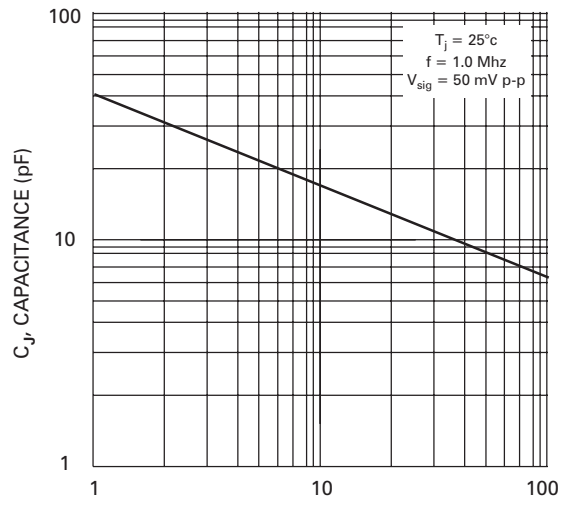
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Output Current Derating Curve



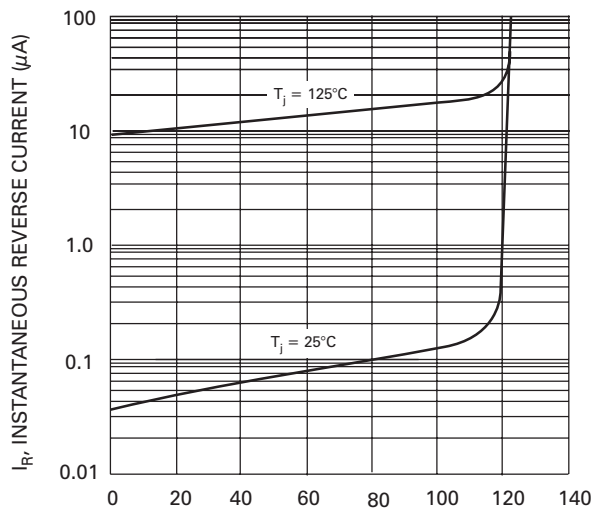
$V_{FR}$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typ Forward Characteristics (per element)



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)

## ORDERING INFORMATION

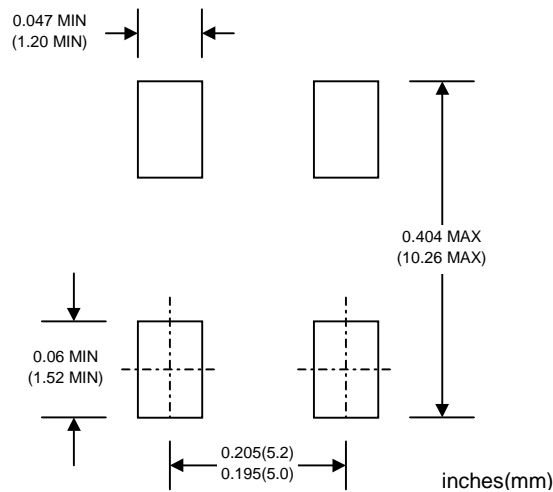
| Product No. ♦    | Package Type   | Shipping Quantity |
|------------------|----------------|-------------------|
| <b>DF005S-T3</b> | DIL Bridge SMD | 1500/Tape & Reel  |
| DF005S           | DIL Bridge SMD | 50 Units/Tube     |
| <b>DF01S-T3</b>  | DIL Bridge SMD | 1500/Tape & Reel  |
| DF01S            | DIL Bridge SMD | 50 Units/Tube     |
| <b>DF02S-T3</b>  | DIL Bridge SMD | 1500/Tape & Reel  |
| DF02S            | DIL Bridge SMD | 50 Units/Tube     |
| <b>DF04S-T3</b>  | DIL Bridge SMD | 1500/Tape & Reel  |
| DF04S            | DIL Bridge SMD | 50 Units/Tube     |
| <b>DF06S-T3</b>  | DIL Bridge SMD | 1500/Tape & Reel  |
| DF06S            | DIL Bridge SMD | 50 Units/Tube     |
| <b>DF08S-T3</b>  | DIL Bridge SMD | 1500/Tape & Reel  |
| DF08S            | DIL Bridge SMD | 50 Units/Tube     |
| <b>DF10S-T3</b>  | DIL Bridge SMD | 1500/Tape & Reel  |
| DF10S            | DIL Bridge SMD | 50 Units/Tube     |

Products listed in **bold** are WTE **Preferred** devices.

♦T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

### Won-Top Electronics Co., Ltd.

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

Phone: 886-7-822-5408 or 886-7-822-5410

Fax: 886-7-822-5417

Email: sales@wontop.com

Internet: <http://www.wontop.com>

*We power your everyday.*