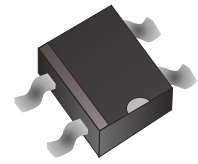


## DF005S-G Thru. DF10S-G

Reverse Voltage: 50 to 1000V

Forward Current: 1.0A

RoHS Device

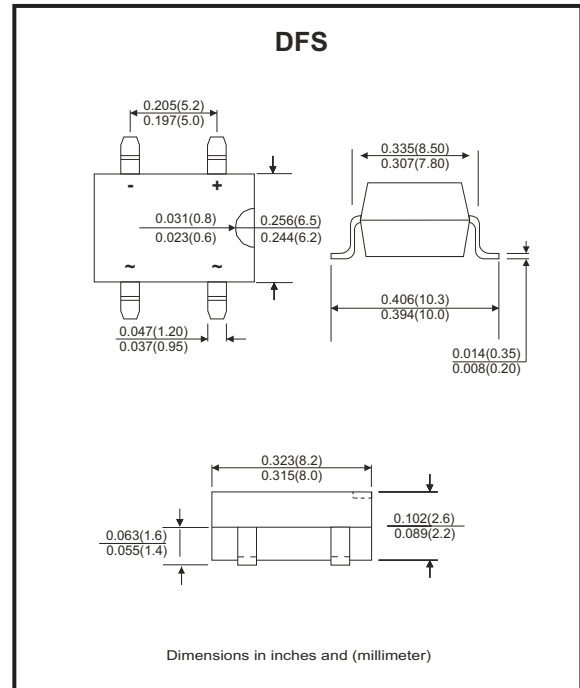


### Features

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop,high current capability
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Lead tin Pb/Sn copper
- The plastic material has UL flammability classification 94V-0

### Mechanical Data

- Polarit:As marked on Body
- Weight: 0.34 grams
- Mounting position:Any



### Maximum ratings and electrical characteristics

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

| Parameter  | Symbol          | DF005S-G   | DF01S-G | DF02S-G | DF04S-G | DF06S-G | DF08S-G | DF10S-G | Unit          |
|--|-----------------|------------|---------|---------|---------|---------|---------|---------|---------------|
| Maximum Reverse Peak Repetitive 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 Rectified Current @ $T_A=40^{\circ}C$                                    | $I_{(AV)}$      | 1.0        |         |         |         |         |         |         | A             |
| Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Super Imposed On Rated Load             | $I_{FSM}$       | 30         |         |         |         |         |         |         | A             |
| $I^2 t$ Rating for Fusing ( $t < 8.3ms$ )  | $I^2 t$         | 10.4       |         |         |         |         |         |         | $A^2 s$       |
| Maximum Forward Voltage at 1.0A DC   | $V_F$           | 1.1        |         |         |         |         |         |         | V             |
| Maximum Reverse Current @ $T_J=25^{\circ}C$<br>At Rated DC Blocking Voltage @ $T_J=125^{\circ}C$ | $I_R$           | 10<br>500  |         |         |         |         |         |         | $\mu A$       |
| Typical Junction Capacitance (Note 1)  | $C_J$           | 25         |         |         |         |         |         |         | pF            |
| Typical Thermal Resistance (Note 2)  | $R_{\theta JA}$ | 40         |         |         |         |         |         |         | $^{\circ}C/W$ |
| Operating Temperature Range  | $T_J$           | -55 ~ +150 |         |         |         |         |         |         | $^{\circ}C$   |
| Storage Temperature Range  | $T_{STG}$       | -55 ~ +150 |         |         |         |         |         |         | $^{\circ}C$   |

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V.
2. Unit mounted on P.C.B with 0.51"×0.51" (13×13mm) copper pads.

## Rating and Characteristics Curves (DF005S-G Thru. DF10S-G)

Fig.1 - Forward Current Derating Curve

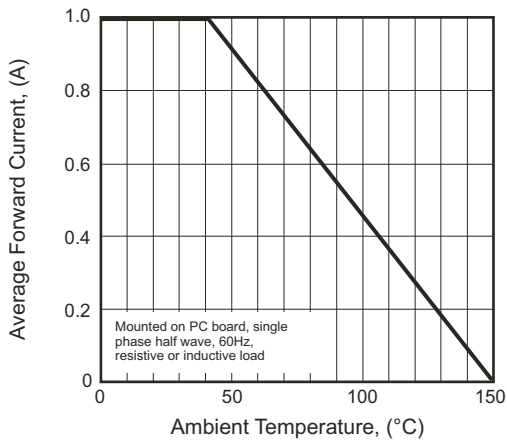


Fig.2 - Maximum Non-repetitive Surge Current

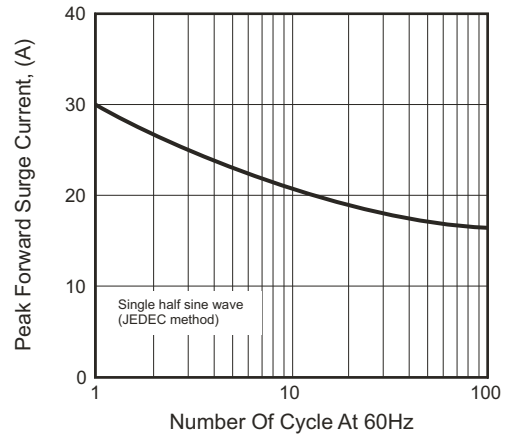


Fig.3 - Typical Junction Capacitance

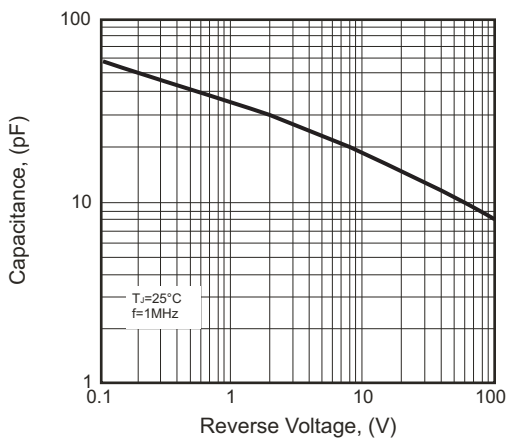


Fig.4 - Typical Forward Characteristics

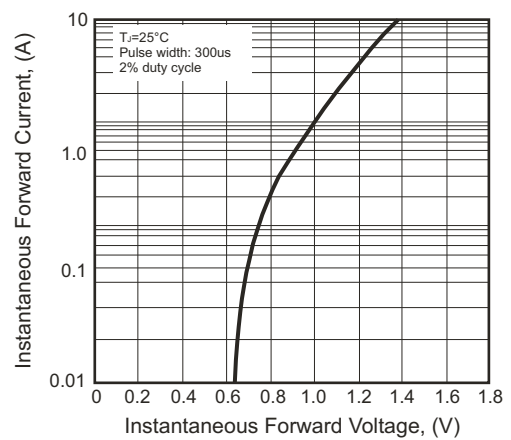
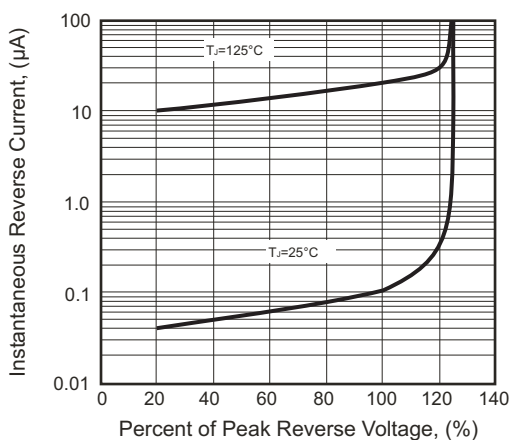
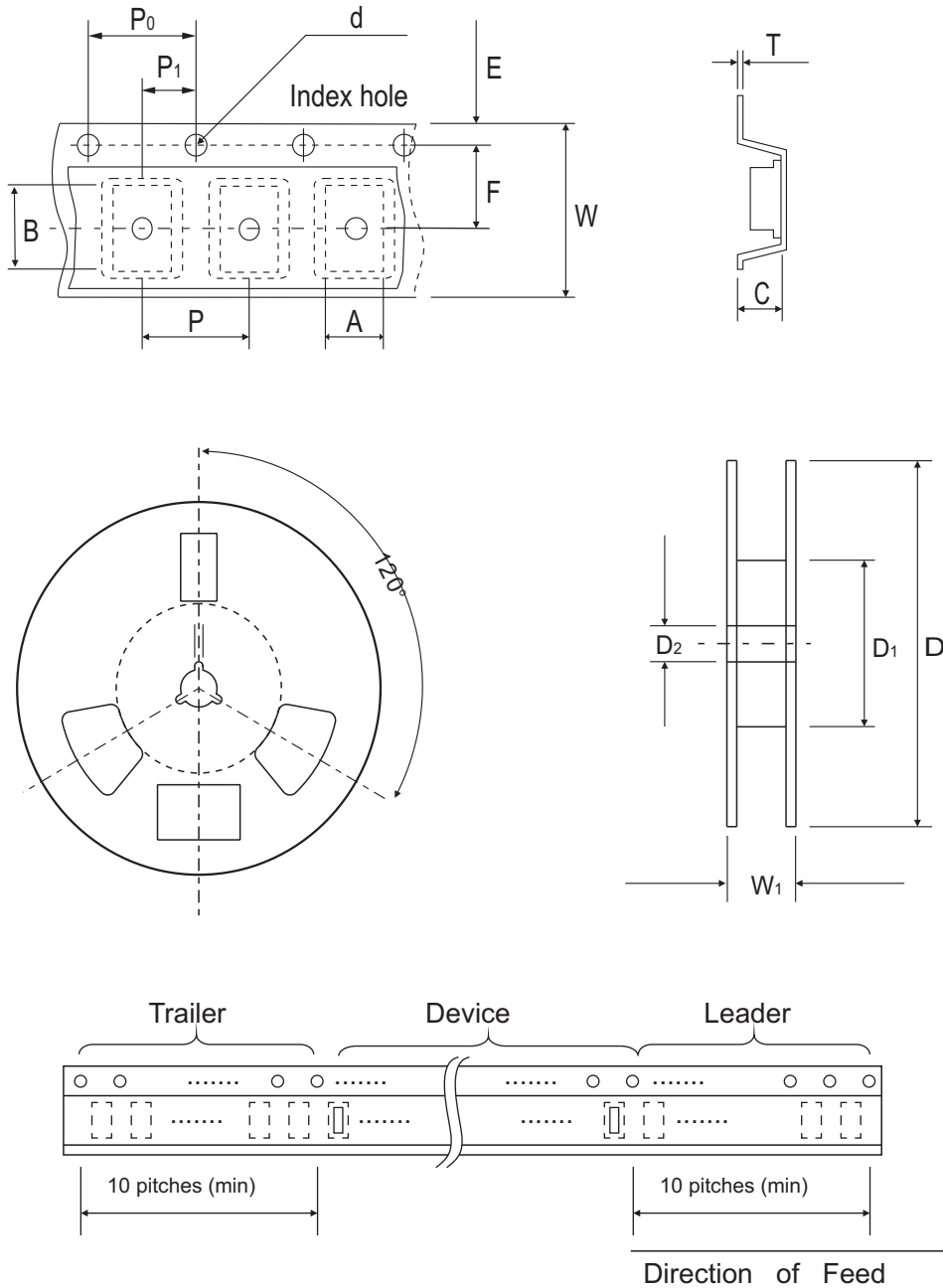


Fig.5 - Typical Reverse Characteristics



## Reel Taping Specification

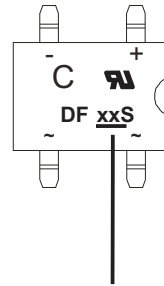


| DFS | SYMBOL | A             | B             | C             | d             | D   | D <sub>1</sub> | D <sub>2</sub> |
|-----|--------|---------------|---------------|---------------|---------------|-----|----------------|----------------|
|     | (mm)   | 8.64 ± 0.10   | 10.41 ± 0.10  | 3.81 ± 0.10   | 1.55 ± 0.05   | 330 | 50.0 MIN.      | 13.00 ± 0.20   |
|     | (inch) | 0.340 ± 0.004 | 0.409 ± 0.004 | 0.150 ± 0.004 | 0.061 ± 0.002 | 13  | 1.969 MIN.     | 0.512 ± 0.008  |

| DFS | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T     | W             | W <sub>1</sub> |
|-----|--------|---------------|---------------|---------------|----------------|----------------|-------|---------------|----------------|
|     | (mm)   | 1.75 ± 0.10   | 7.50 ± 0.05   | 12.00 ± 0.10  | 4.00 ± 0.10    | 2.00 ± 0.10    | 0.32  | 16.00 ± 0.30  | 16.00~18.40    |
|     | (inch) | 0.069 ± 0.004 | 0.295 ± 0.002 | 0.472 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.004  | 0.013 | 0.630 ± 0.012 | 0.630~0.724    |

## Marking Code

| Part Number | Marking code | Packaging |
|-------------|--------------|-----------|
| DF005SP-G   | DF005S       | Tube      |
| DF01SP-G    | DF01S        | Tube      |
| DF02SP-G    | DF02S        | Tube      |
| DF04SP-G    | DF04S        | Tube      |
| DF06SP-G    | DF06S        | Tube      |
| DF08SP-G    | DF08S        | Tube      |
| DF10SP-G    | DF10S        | Tube      |
| DF005ST-G   | DF005S       | Reel      |
| DF01ST-G    | DF01S        | Reel      |
| DF02ST-G    | DF02S        | Reel      |
| DF04ST-G    | DF04S        | Reel      |
| DF06ST-G    | DF06S        | Reel      |
| DF08ST-G    | DF08S        | Reel      |
| DF10ST-G    | DF10S        | Reel      |



**XX / XXX = Product type marking code**  
**C = Comchip Logo**

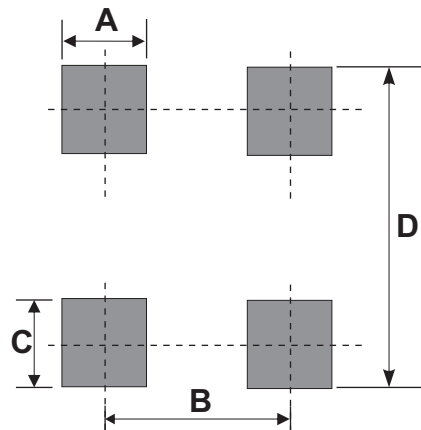
Note:

1) Suffix code after part number to specify packaging item .

| Packaging | Code |
|-----------|------|
| TUBE PACK | P    |
| REEL PACK | T    |

## Suggested PAD Layout

| SIZE | DFS       |           |
|------|-----------|-----------|
|      | (mm)      | (inch)    |
| A    | 1.20 Min  | 0.047 Min |
| B    | 5.21 REF  | 0.205 REF |
| C    | 1.52 Min  | 0.060 Min |
| D    | 10.26 Max | 0.404 Max |



## Standard Packaging

| Case Type | TUBE PACK    |             |
|-----------|--------------|-------------|
|           | TUBE ( pcs ) | BOX ( pcs ) |
| DFS       | 50           | 5,000       |

| Case Type | REEL PACK    |                  |
|-----------|--------------|------------------|
|           | REEL ( pcs ) | Reel Size (inch) |
| DFS       | 1,000        | 13               |