

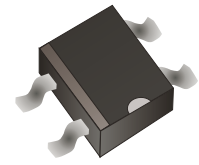
## DF005S-HF Thru. DF10S-HF

Reverse Voltage: 50 to 1000V

Forward Current: 1.0A

RoHS Device

Halogen Free

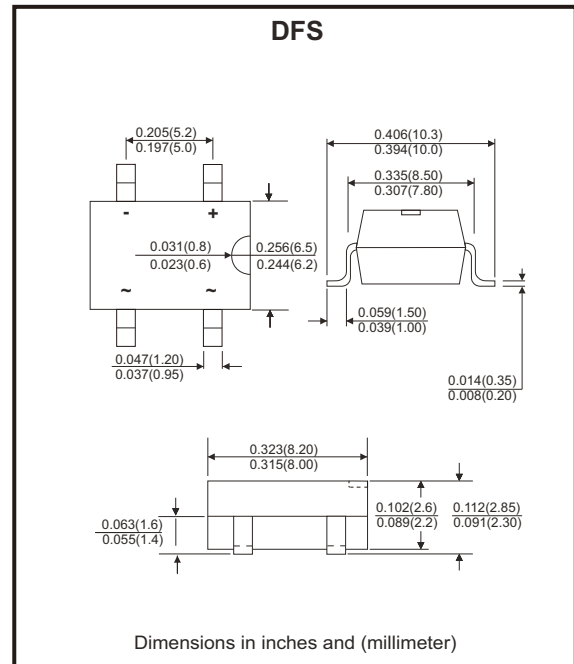


### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Low forward voltage drop.
- High current capability.
- The plastic material has UL flammability classification 94V-0
- UL recognized file # E349301

### Mechanical Data

- Polarity: As marked on Body.
- Weight: 0.38 grams (approx.).
- 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          | DF 005S-HF  | DF 01S-HF | DF 02S-HF | DF 04S-HF | DF 06S-HF | DF 08S-HF | DF 10S-HF | Unit         |
|---|-----------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|
| Maximum recurrent peak reverse 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 superimposed on rated load (JEDEC method) | $I_{FSM}$       | 30          |           |           |           |           |           |           | A            |
| Maximum forward voltage at 1.0A DC  | $V_F$           | 1.1         |           |           |           |           |           |           | V            |
| Maximum DC reverse current @ $T_J=25^\circ C$ at rate DC blocking voltage @ $T_J=125^\circ C$     | $I_R$           | 10<br>500   |           |           |           |           |           |           | $\mu A$      |
| $I^2 T$ rating for fusing ( $t < 8.3ms$ )   | $I^2 t$         | 3.735       |           |           |           |           |           |           | $A^2 s$      |
| Typical junction capacitance per element (Note 1)   | $C_J$           | 25          |           |           |           |           |           |           | pF           |
| Typical thermal resistance (Note 2)   | $R_{\theta JA}$ | 40          |           |           |           |           |           |           | $^\circ C/W$ |
| Operating temperature range   | $T_J$           | -55 to +150 |           |           |           |           |           |           | $^\circ C$   |
| Storage temperature range   | $T_{STG}$       | -55 to +150 |           |           |           |           |           |           | $^\circ C$   |

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient mounted on P.C.B with 0.5\*0.5"(13\*13mm) copper pads.

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

Fig.1 - Forward Current Derating Curve

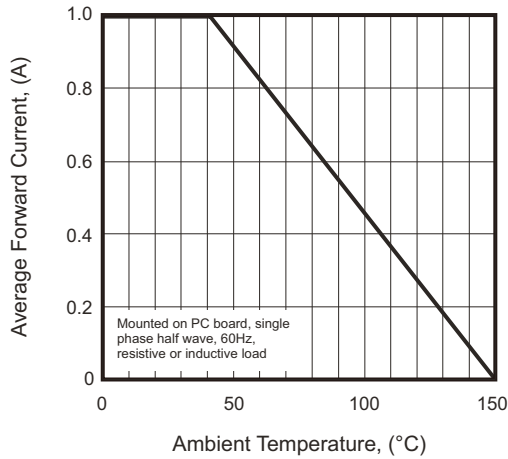


Fig.2 - Maximum Non-repetitive Surge Current

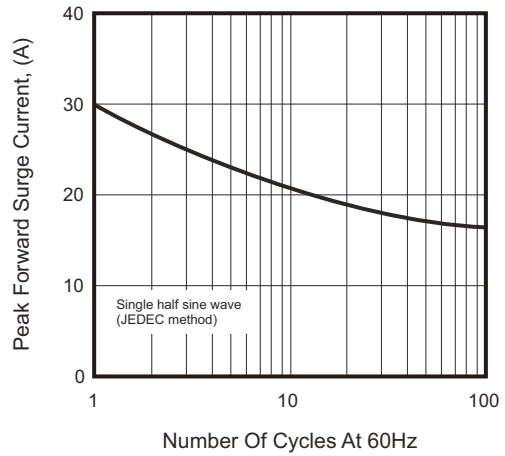


Fig.3 - Typical Junction Capacitance

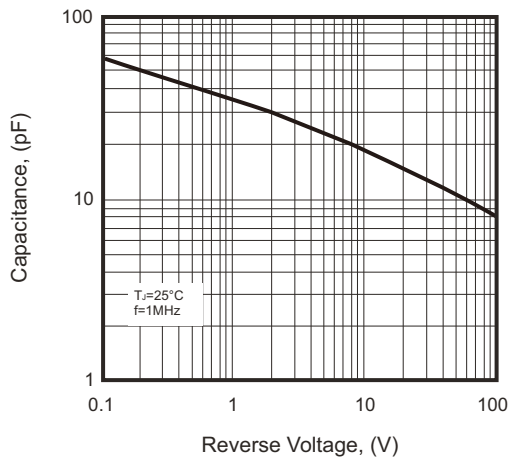


Fig.4 - Typical Forward Characteristics

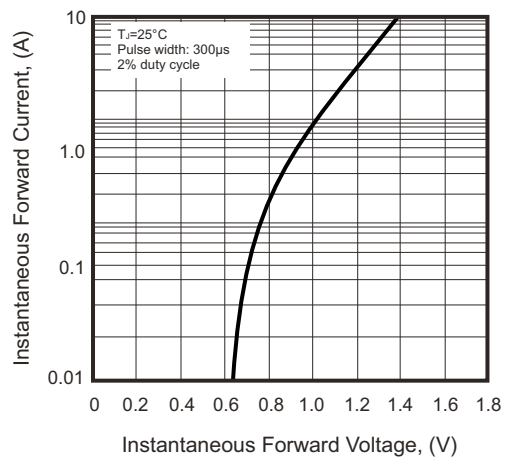
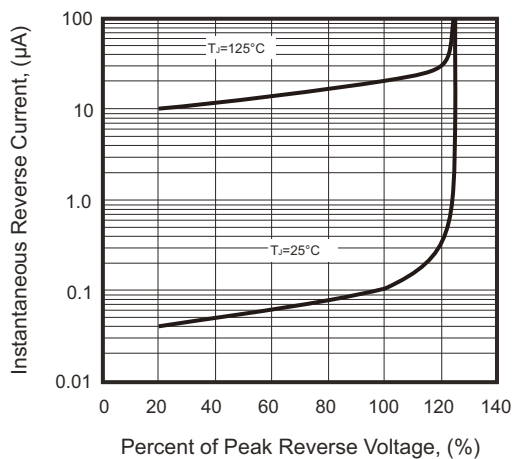
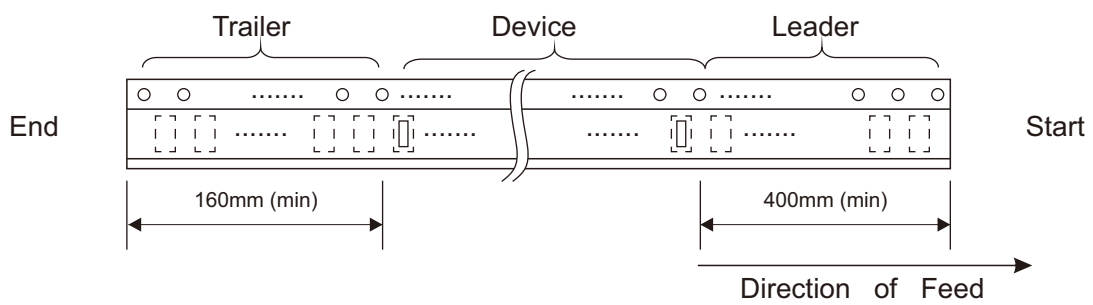
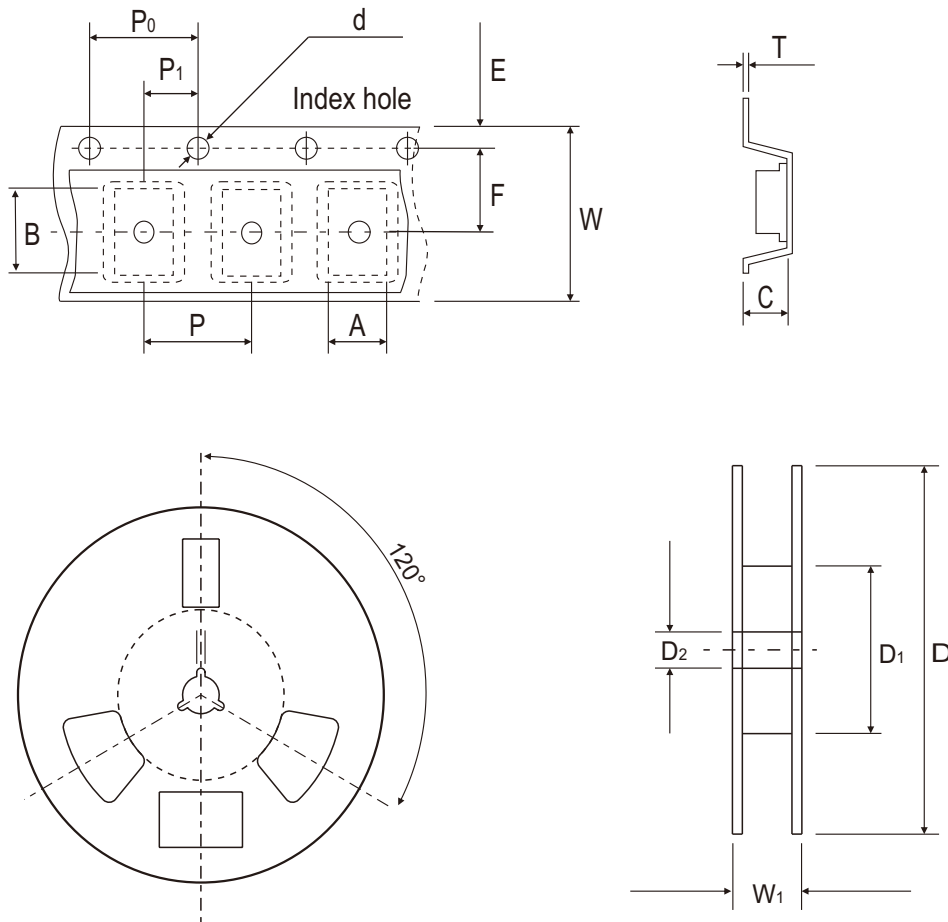


Fig.5 - Typical Reverse Characteristics



## 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    |