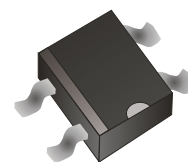


## DF15005S-G Thru. DF1510S-G

Reverse Voltage: 50 to 1000V

Forward Current: 1.5A

RoHS Device

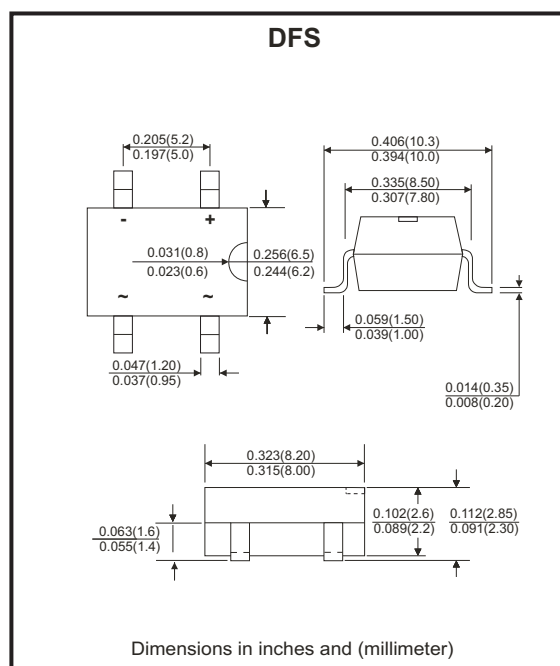


### Features

- 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.
- 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 15005S-G | DF 1501S-G | DF 1502S-G | DF 1504S-G | DF 1506S-G | DF 1508S-G | DF 1510S-G | 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 @ $T_A=40^{\circ}C$                                      | $I_{(AV)}$      | 1.5         |            |            |            |            |            |            | A             |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method) | $I_{FSM}$       | 50          |            |            |            |            |            |            | A             |
| Maximum Forward Voltage at 1.5A DC                                                                 | $V_F$           | 1.1         |            |            |            |            |            |            | V             |
| Maximum DC Reverse Current @ $T_J=25^{\circ}C$<br>At Rate DC Blocking Voltage @ $T_J=125^{\circ}C$ | $I_R$           | 5<br>500    |            |            |            |            |            |            | $\mu A$       |
| $I^2T$ Rating for Fusing ( $t<8.3ms$ )                                                             | $I^2t$          | 10.4        |            |            |            |            |            |            | $A^2s$        |
| 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.

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REV: G

## Rating and Characteristics Curves (DF15005S-G Thru. DF1510S-G)

Fig.1 - Forward Current Derrent Curve

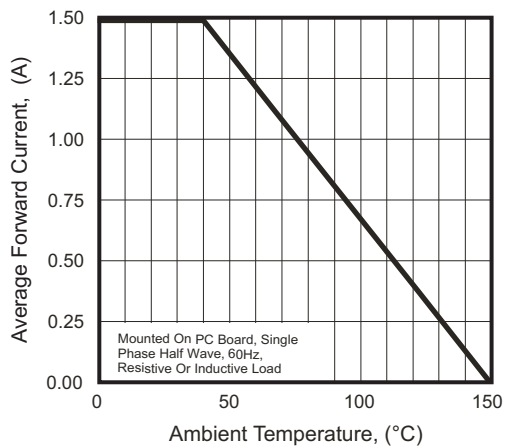


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

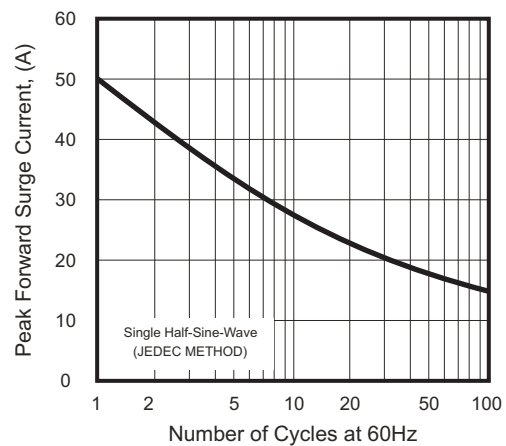


Fig.3 - Typical Junction Capacitance

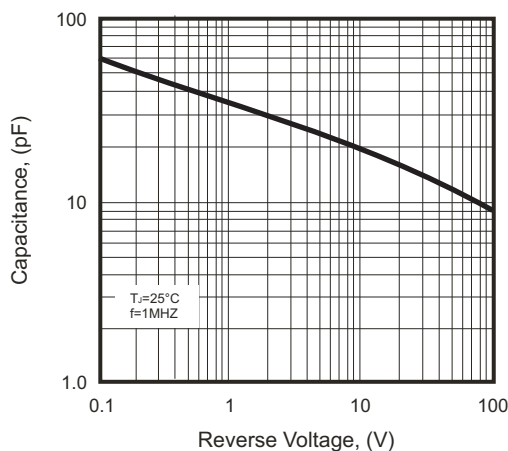


Fig.4 - Typical Forward Characteristics

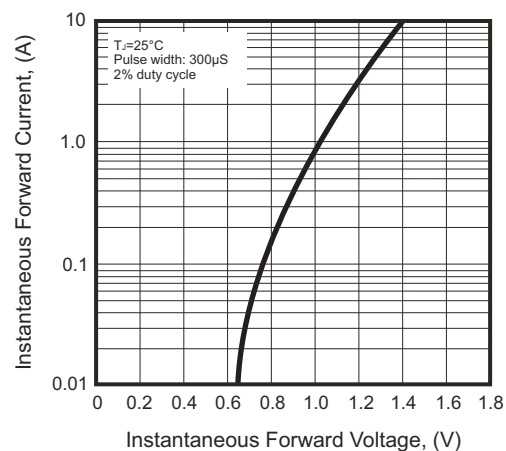
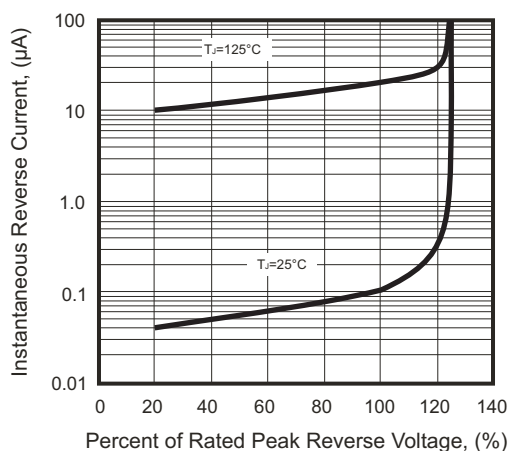


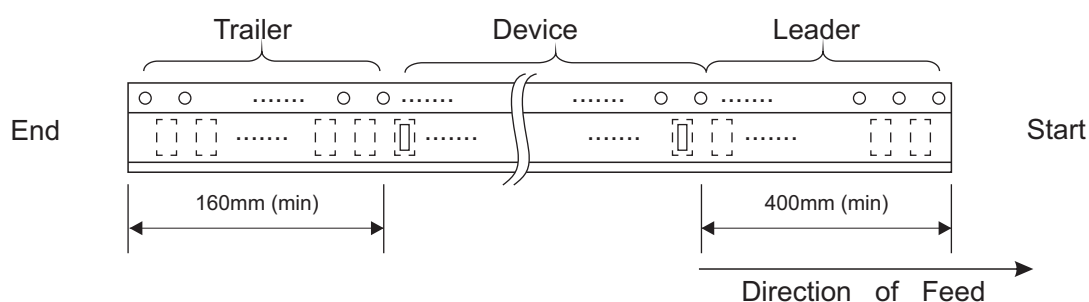
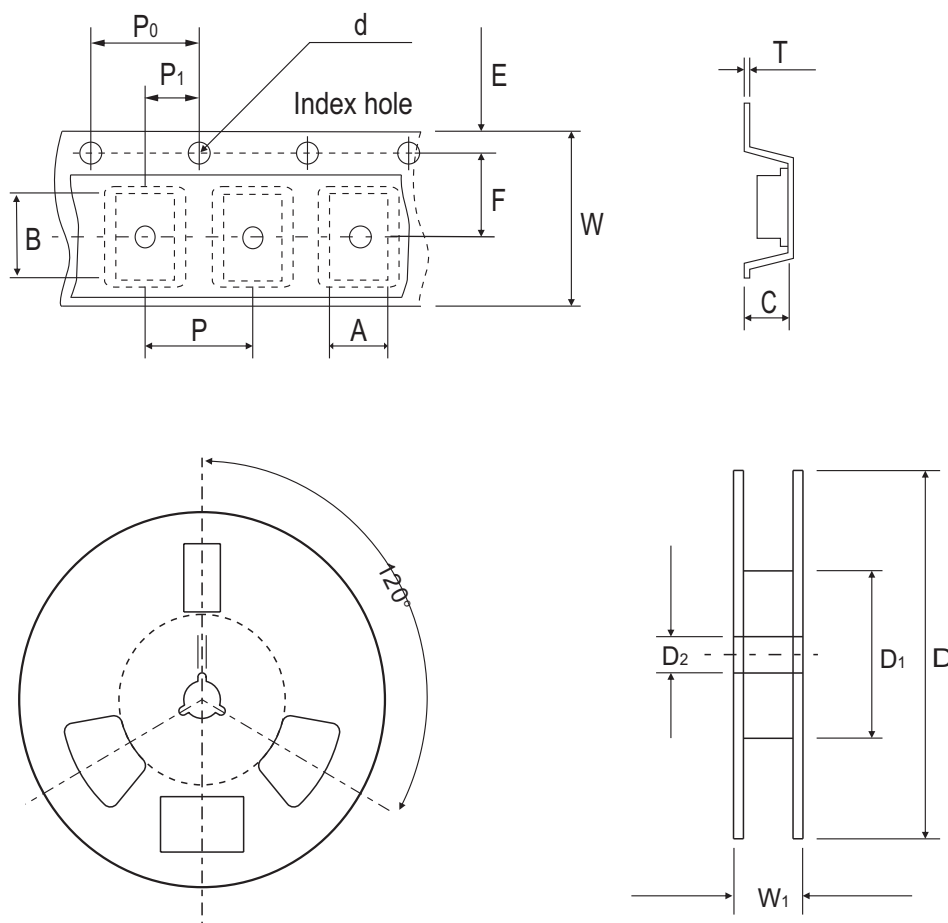
Fig.5 - Typical Reverse Characteristics



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## Reel Taping Specification



| DFS | SYMBOL | A                 | B                 | C                 | d                 | D   | D1         | D2                |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-----|------------|-------------------|
|     | (mm)   | $8.64 \pm 0.10$   | $10.41 \pm 0.10$  | $3.81 \pm 0.10$   | $1.55 \pm 0.05$   | 330 | 50.0 MIN.  | $13.00 \pm 0.20$  |
|     | (inch) | $0.340 \pm 0.004$ | $0.409 \pm 0.004$ | $0.150 \pm 0.004$ | $0.061 \pm 0.002$ | 13  | 1.969 MIN. | $0.512 \pm 0.008$ |

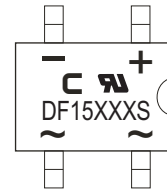
| DFS | SYMBOL | E                 | F                 | P                 | P0                | P1                | T     | W                 | W1          |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|-------------------|-------------|
|     | (mm)   | $1.75 \pm 0.10$   | $7.50 \pm 0.05$   | $12.00 \pm 0.10$  | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | 0.32  | $16.00 \pm 0.30$  | 16.00~18.40 |
|     | (inch) | $0.069 \pm 0.004$ | $0.295 \pm 0.002$ | $0.472 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | 0.013 | $0.630 \pm 0.012$ | 0.630~0.724 |

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REV: G

## Marking Code

| Part Number | Marking code | Packaging |
|-------------|--------------|-----------|
| DF15005SP-G | DF15005S     | Tube      |
| DF1501SP-G  | DF1501S      | Tube      |
| DF1502SP-G  | DF1502S      | Tube      |
| DF1504SP-G  | DF1504S      | Tube      |
| DF1506SP-G  | DF1506S      | Tube      |
| DF1508SP-G  | DF1508S      | Tube      |
| DF1510SP-G  | DF1510S      | Tube      |
| DF15005ST-G | DF15005S     | Reel      |
| DF1501ST-G  | DF1501S      | Reel      |
| DF1502ST-G  | DF1502S      | Reel      |
| DF1504ST-G  | DF1504S      | Reel      |
| DF1506ST-G  | DF1506S      | Reel      |
| DF1508ST-G  | DF1508S      | Reel      |
| DF1510ST-G  | DF1510S      | Reel      |



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

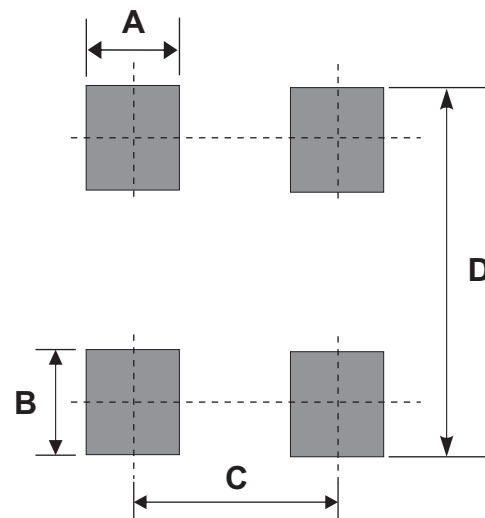
Note:

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    | 1.52 Min  | 0.060 Min |
| C    | 5.21 Ref  | 0.205 Ref |
| D    | 10.26 Max | 0.404 Max |



## Standard Packaging

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

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

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