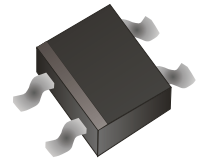


## DB101S-G Thru. DB107S-G

**Reverse Voltage: 50 to 1000V**

**Forward Current: 1.0A**

**RoHS Device**

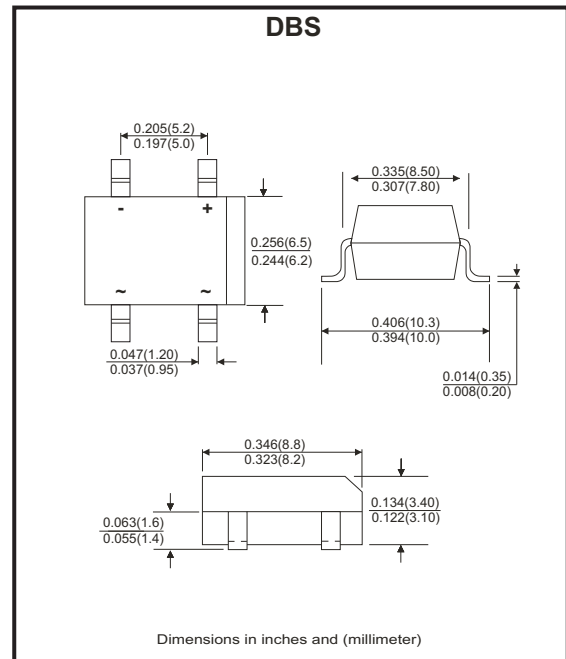


### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Low forward voltage drop.
- High current capability.
- 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          | DB 101S-G   | DB 102S-G | DB 103S-G | DB 104S-G | DB 105S-G | DB 106S-G | DB 107S-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 @ $T_A=40^{\circ}C$                                       | $I_{(AV)}$      | 1.0         |           |           |           |           |           |           | A             |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Super Imposed 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 At Rated DC Blocking Voltage @ $T_J=25^{\circ}C$<br>@ $T_J=125^{\circ}C$ | $I_R$           | 10.0<br>500 |           |           |           |           |           |           | $\mu A$       |
| $I^2T$ Rating for Fusing ( $t<8.3ms$ )                                                              | $I^2t$          | 3.735       |           |           |           |           |           |           | $A^2s$        |
| 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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## Rating and Characteristics Curves (DB101S-G Thru. DB107S-G)

Fig.1 - Forward Current Derating Curve

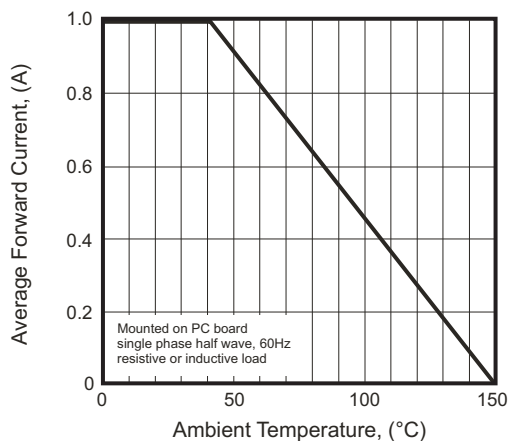


Fig.2 - Max. Non-repetitive Surge Current

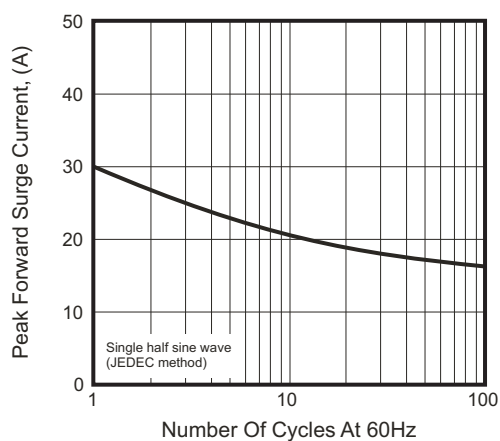


Fig.3 - Typical Junction Capacitance

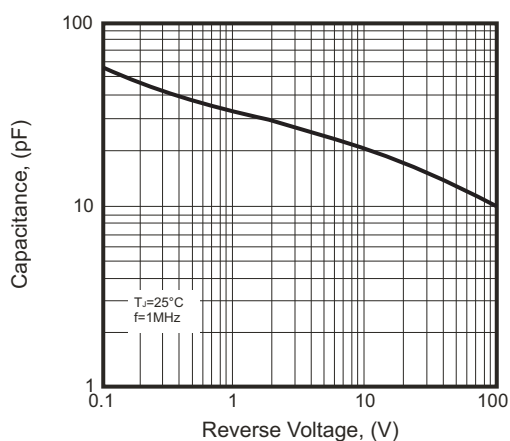


Fig.4 - Typical Forward Characteristics

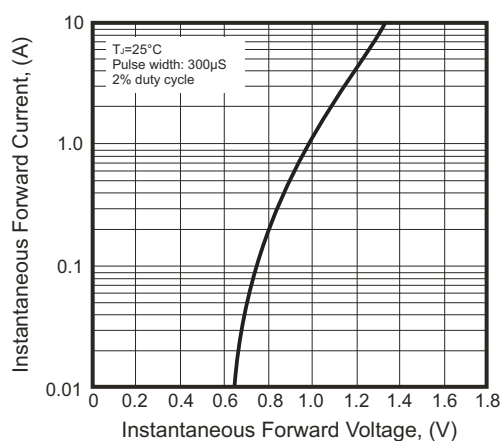
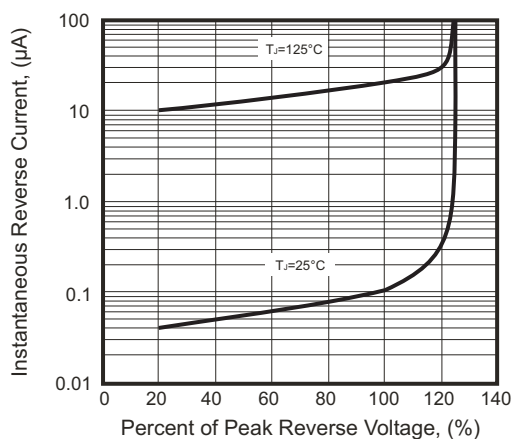
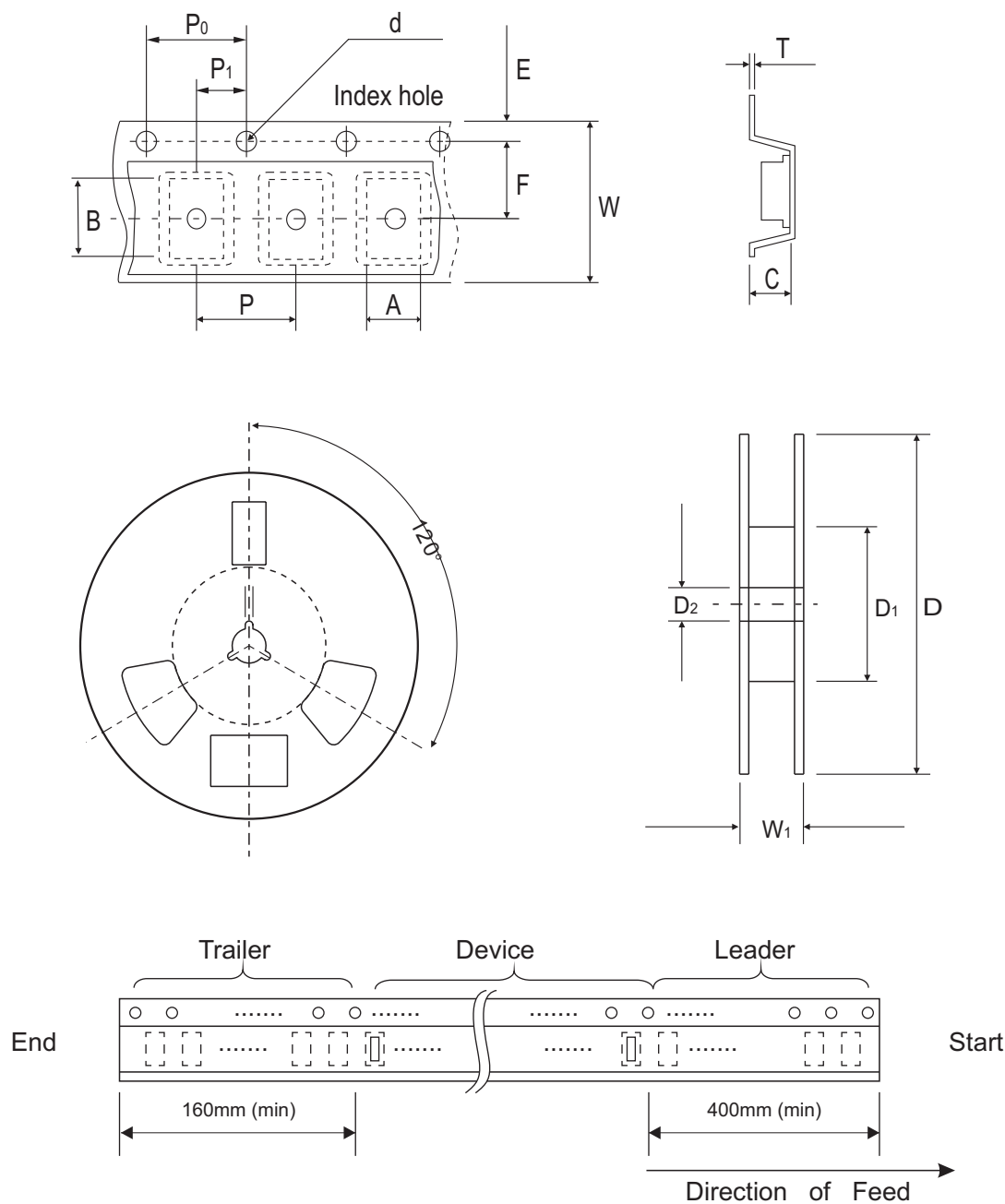


Fig.5 - Typical Reverse Characteristics



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Reel Taping Specification



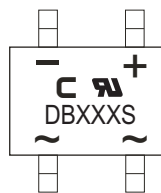
| DBS | SYMBOL | A             | B             | C             | d             | D   | D <sub>1</sub> | D <sub>2</sub> |
|-----|--------|---------------|---------------|---------------|---------------|-----|----------------|----------------|
|     | (mm)   | 8.64 ± 0.10   | 10.41 ± 0.10  | 3.81 ± 0.10   | 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  |

| DBS | 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    |

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## Marking Code

| Part Number | Marking code | Packaging |
|-------------|--------------|-----------|
| DB101SP-G   | DB101S       | Tube      |
| DB102SP-G   | DB102S       | Tube      |
| DB103SP-G   | DB103S       | Tube      |
| DB104SP-G   | DB104S       | Tube      |
| DB105SP-G   | DB105S       | Tube      |
| DB106SP-G   | DB106S       | Tube      |
| DB107SP-G   | DB107S       | Tube      |
| DB101ST-G   | DB101S       | Reel      |
| DB102ST-G   | DB102S       | Reel      |
| DB103ST-G   | DB103S       | Reel      |
| DB104ST-G   | DB104S       | Reel      |
| DB105ST-G   | DB105S       | Reel      |
| DB106ST-G   | DB106S       | Reel      |
| DB107ST-G   | DB107S       | Reel      |



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

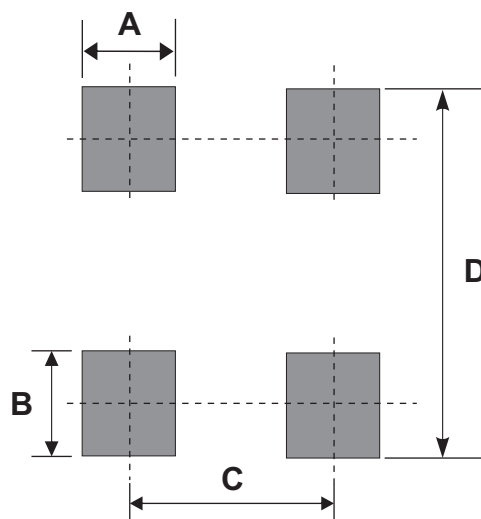
Note:

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

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

## Suggested PAD Layout

| SIZE | DBS       |           |
|------|-----------|-----------|
|      | (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 ) |
| DBS       | 50              | 5,000          |

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

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