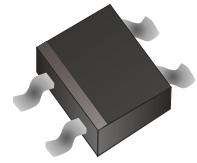


## DB101S-G Thru. DB107S-G

Reverse Voltage: 50 to 1000V

Forward Current: 1.0A

RoHS Device

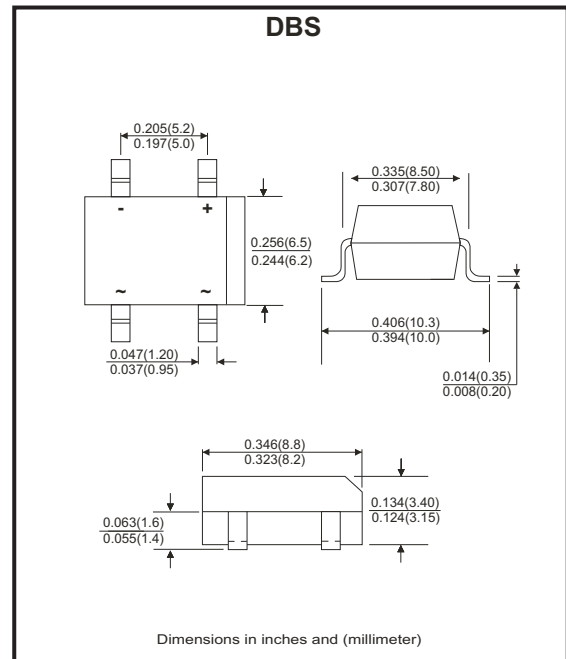


### Features

- 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 # E217139 

### 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 @ $T_A=40^\circ\text{C}$                                         | $I_{(AV)}$      | 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 @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$ | $I_R$           | 10.0<br>500 |           |           |           |           |           |           | $\mu\text{A}$        |
| $I^2T$ Rating for Fusing ( $t<8.3\text{ms}$ )                                                              | $I^2t$          | 10.4        |           |           |           |           |           |           | $\text{A}^2\text{s}$ |
| Typical Junction Capacitance Per Element (Note 1)                                                          | $C_J$           | 25          |           |           |           |           |           |           | pF                   |
| Typical Thermal Resistance (Note 2)                                                                        | $R_{\theta JA}$ | 40          |           |           |           |           |           |           | $^\circ\text{C/W}$   |
| Operating Temperature Range                                                                                | $T_J$           | -55 to +150 |           |           |           |           |           |           | $^\circ\text{C}$     |
| Storage Temperature Range                                                                                  | $T_{STG}$       | -55 to +150 |           |           |           |           |           |           | $^\circ\text{C}$     |

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

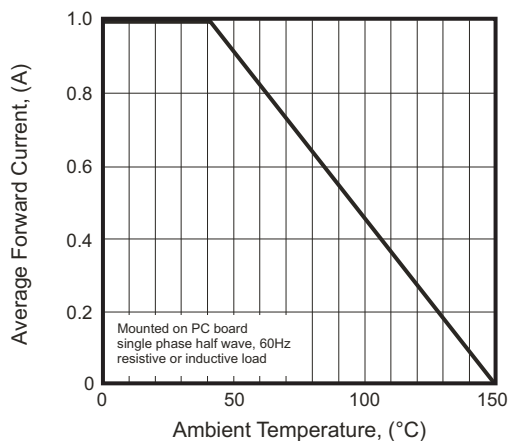


Fig.2 - Max. Non-repetitive Surge Current

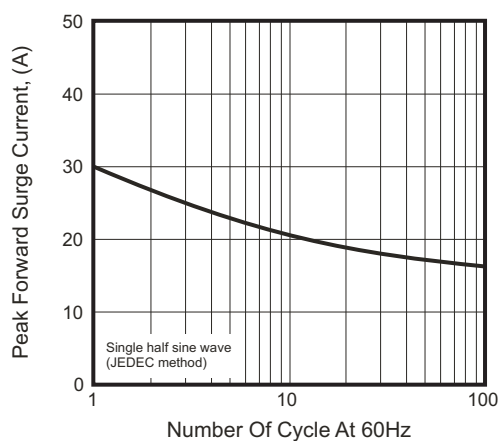


Fig.3 - Typical Junction Capacitance

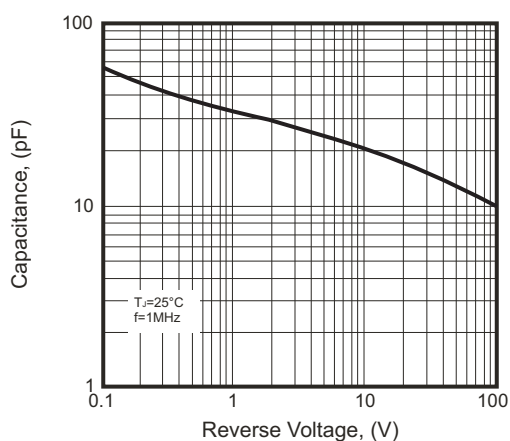


Fig.4 - Typical Forward Characteristics

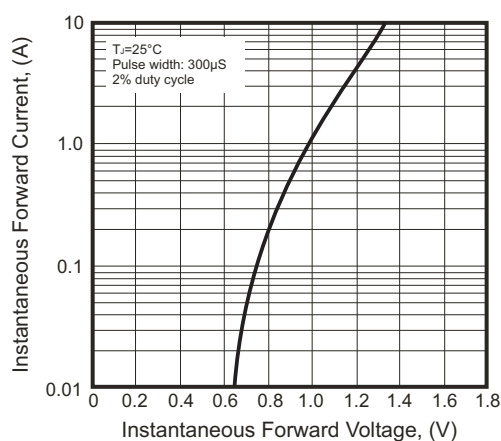
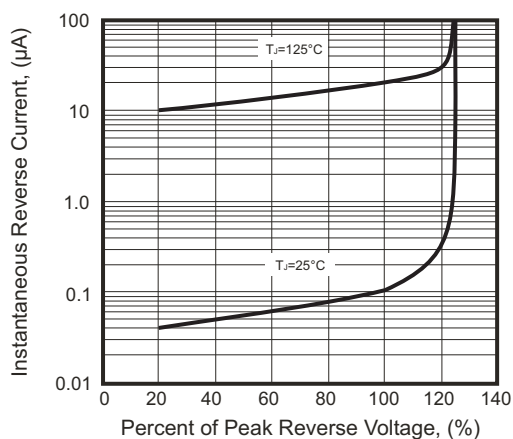


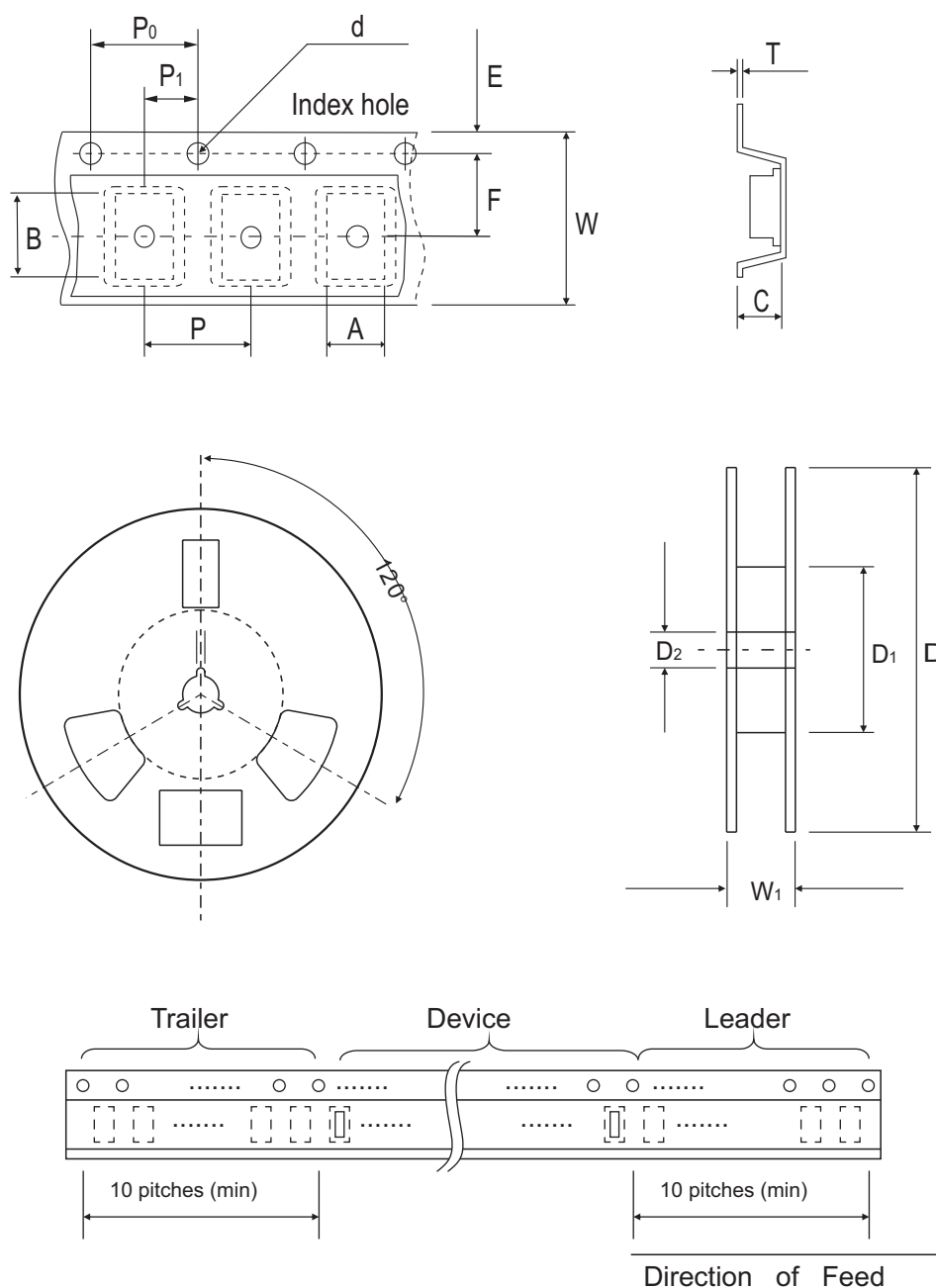
Fig.5 - Typical Reverse Characteristics



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REV: E

## Reel Taping Specification



| DBS | 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. | $0.512 \pm 0.008$ |

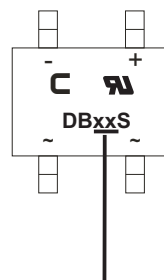
| DBS | SYMBOL | E                 | F                 | P                 | $P_0$             | $P_1$             | T     | W                 | $W_1$       |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|-------------------|-------------|
|     | (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: E

## 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      |



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

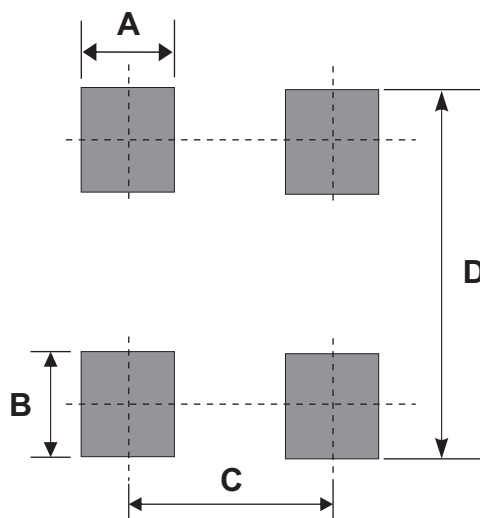
Note:

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

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

## Suggested PAD Layout

| SIZE | 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 ( pcs ) | Carton ( pcs ) |
| DBS       | 50           | 10,000         |

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

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