

# DB151S THRU DB157S



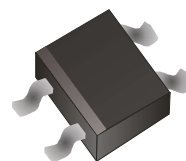
## Glass Passivated Bridge Rectifiers

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.5 Ampere

RoHS Device

Halogen Free

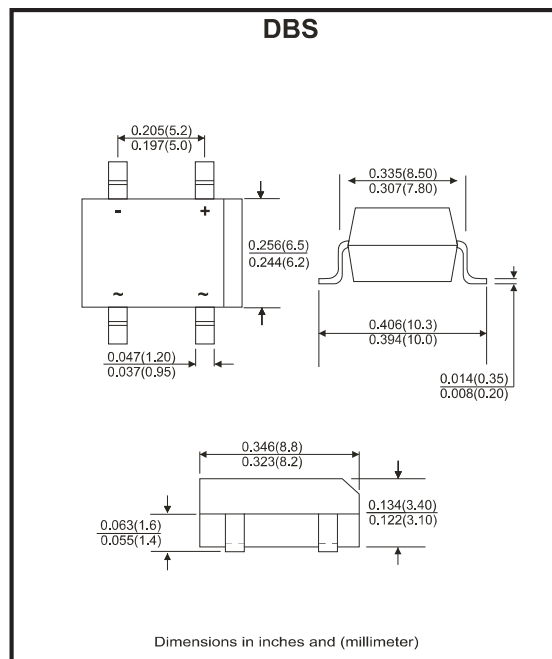


### Features

- Glass passivated chip
- Ideal for automatic placement
- High surge forward current capability
- Reliable low cost construction utilizing molded plastic technique
- Lead tin plated copper
- Meet UL flammability classification 94V-0

### Mechanical Data

- Polarity: Symbol marked on body
- 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 151S     | DB 152S | DB 153S | DB 154S | DB 155S | DB 156S | DB 157S | 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<br>@T <sub>A</sub> =100°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<br>At Rated DC Blocking Voltage                                         | $I_R$           | 10.0<br>500 |         |         |         |         |         |         | μA               |
| I <sup>2</sup> T Rating for Fusing (t<8.3ms)                                                       | $I^2t$          | 10.4        |         |         |         |         |         |         | A <sup>2</sup> s |
| Typical Junction Capacitance Per Element (Note 1)                                                  | $C_J$           | 25          |         |         |         |         |         |         | pF               |
| Typical Thermal Resistance (Note 2)                                                                | $R_{\theta JA}$ | 40          |         |         |         |         |         |         | °C/W             |
| Operating Temperature Range                                                                        | $T_J$           | -55 to +150 |         |         |         |         |         |         | °C               |
| Storage Temperature Range                                                                          | $T_{STG}$       | -55 to +150 |         |         |         |         |         |         | °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.

Company reserves the right to improve product design , functions and reliability without notice.

Rev:1.0

## Rating and Characteristics Curves

Fig.1 - Forward Current Derating Curve

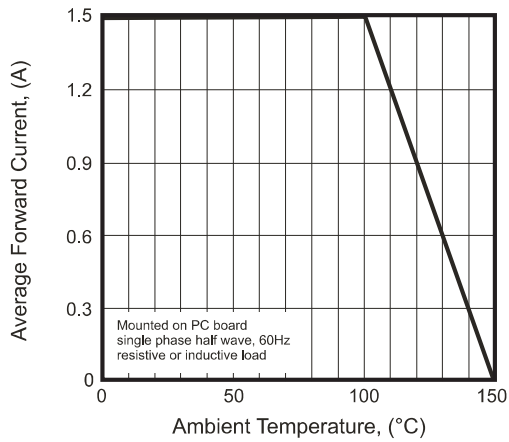


Fig.2 - Max. Non-repetitive Surge Current

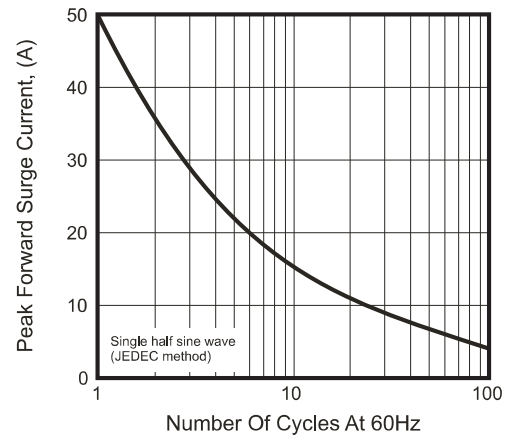


Fig.3 - Typical Junction Capacitance

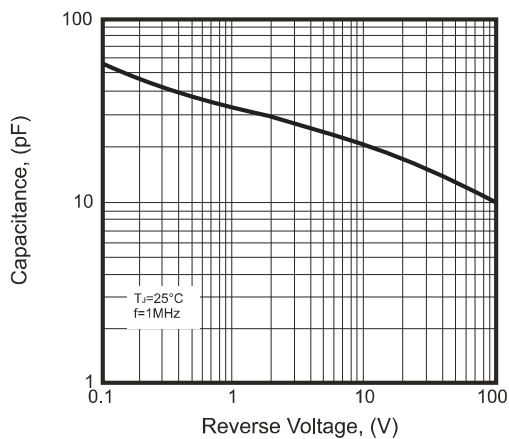


Fig.4 - Typical Forward Characteristics

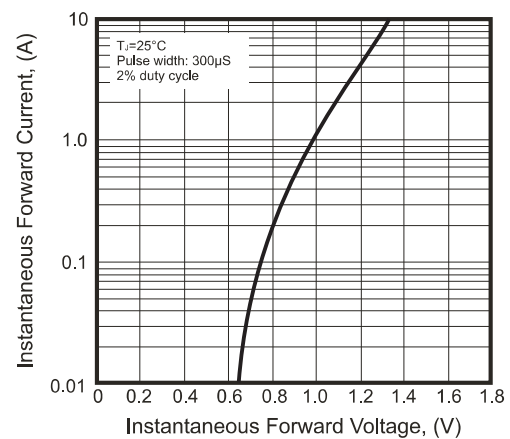
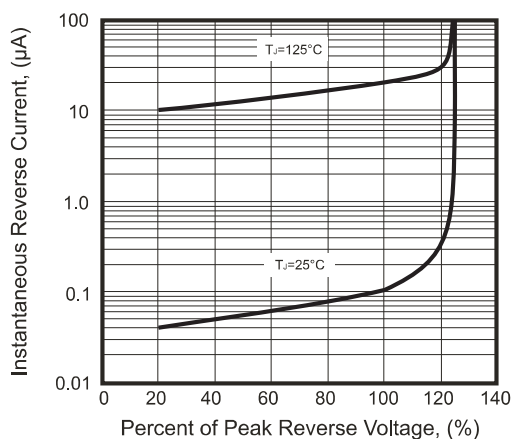
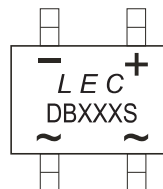


Fig.5 - Typical Reverse Characteristics



## Marking Code

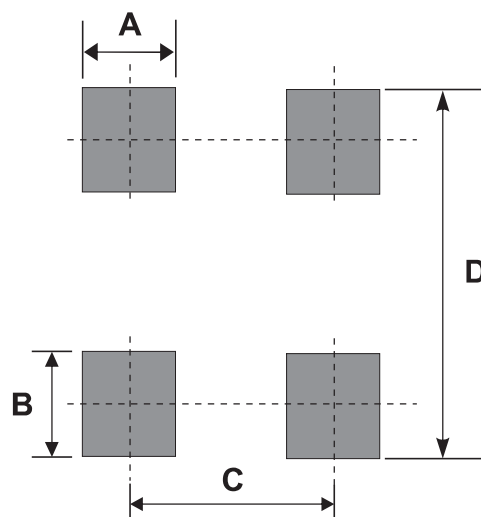
| Part Number | Marking code |
|-------------|--------------|
| DB151S      | DB151S       |
| DB152S      | DB152S       |
| DB153S      | DB153S       |
| DB154S      | DB154S       |
| DB155S      | DB155S       |
| DB156S      | DB156S       |
| DB157S      | DB157S       |



XXX = Product type marking code  
LEC = Longmacro Logo

## Suggested PAD Layout

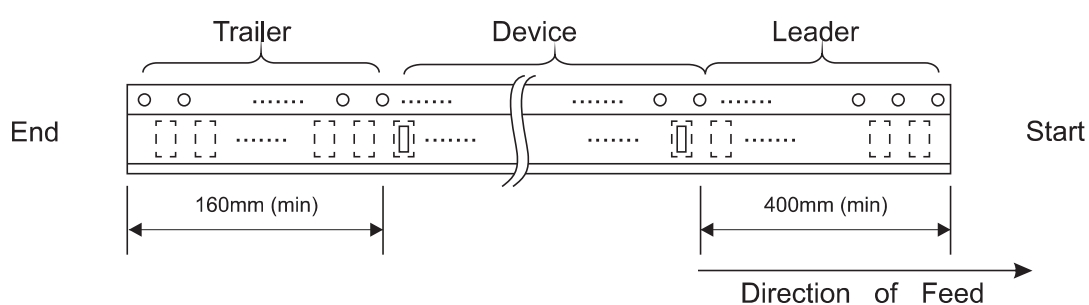
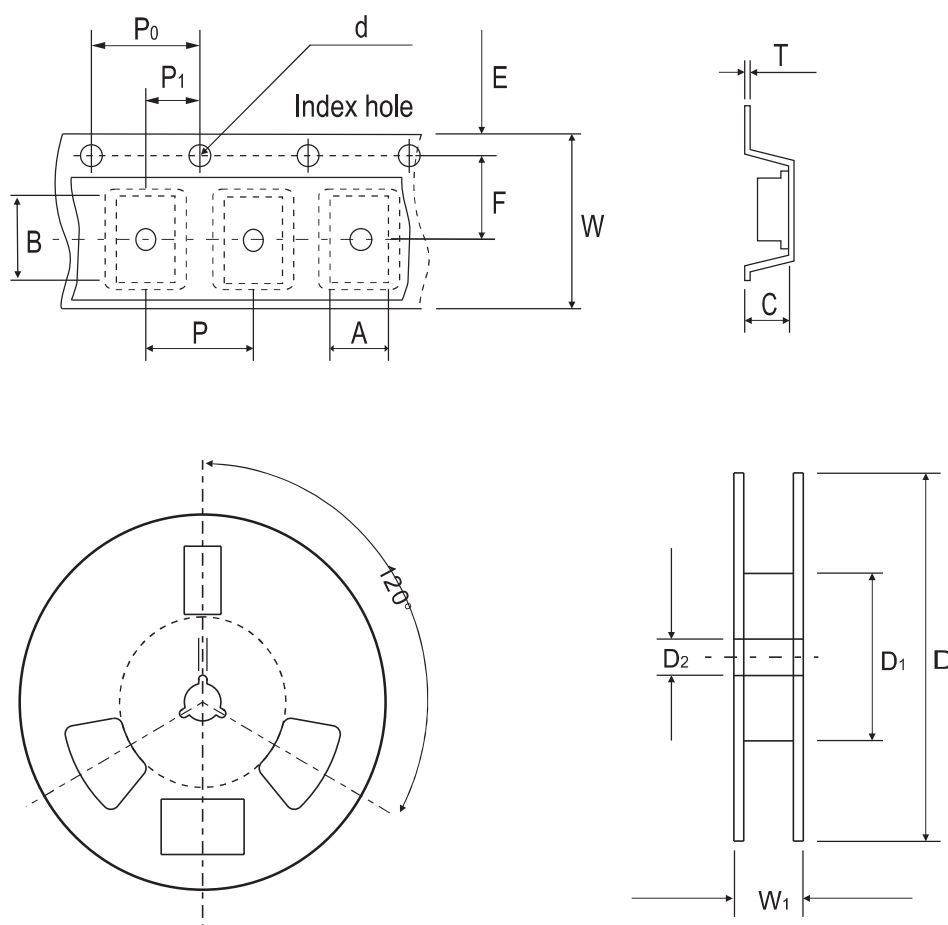
| SIZE | DBS       |           |
|------|-----------|-----------|
|      | (mm)      | (inch)    |
| A    | 1.20 Min  | 0.047 Min |
| B    | 1.52 Min  | 0.060 Min |
| C    | 5.21 Ref  | 0.205 Ref |
| D    | 10.26 Max | 0.404 Max |



## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| DBS       | 1,500           | 13                  |

## 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                 | 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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