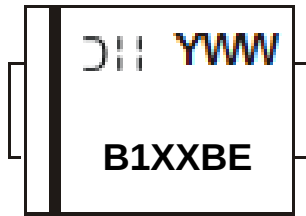


## Marking Information (continued)

SMB



B1XXBE = Product Type Marking Code, ex: B150BE

DII = Manufacturers' Marking

YWW = Date Code Marking

Y = Last Digit of Year (ex: 0 for 2020)

WW = Week Code (01 to 53)

## Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic                                                                                      | Symbol                                                  | B150AE<br>B150BE | B160AE<br>B160BE | Unit |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------|------------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage              | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>RM</sub> | 50               | 60               | V    |
| Average Rectified Output Current                                                                    | I <sub>O</sub>                                          | 1                |                  | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single Half Sine-Wave Superimposed on Rated Load | I <sub>FSM</sub>                                        | 30               |                  | A    |

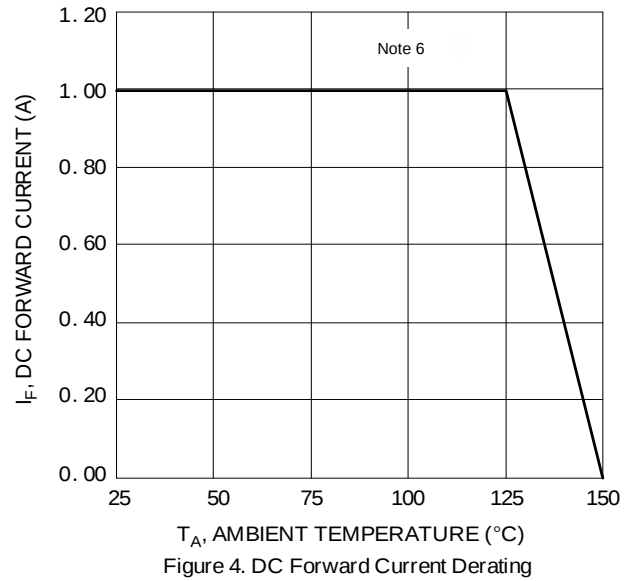
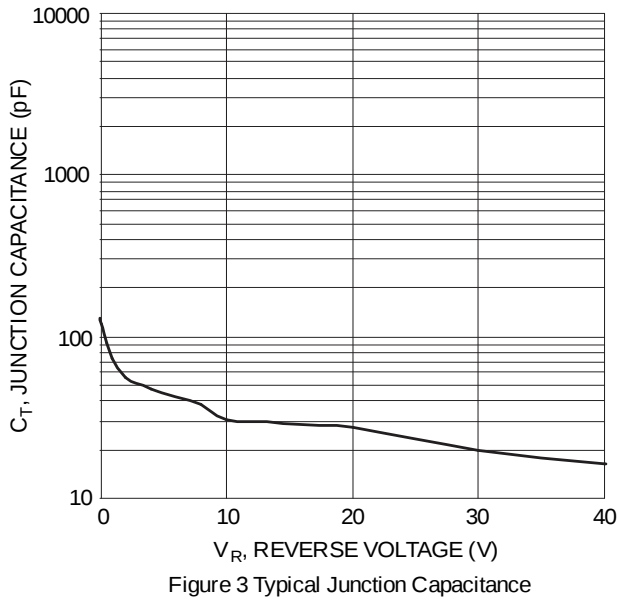
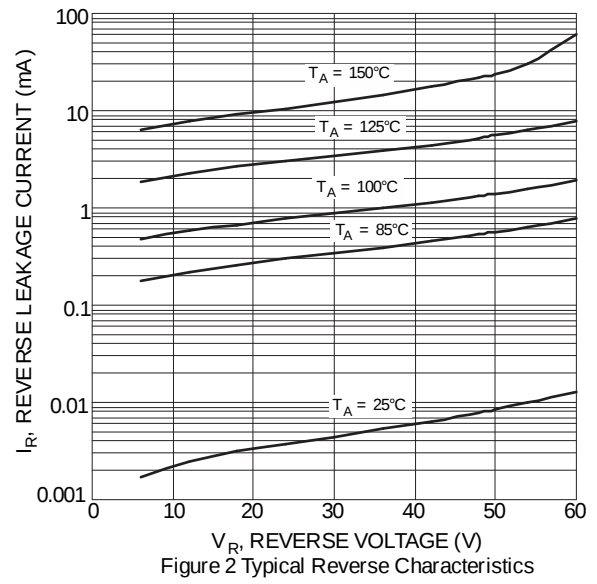
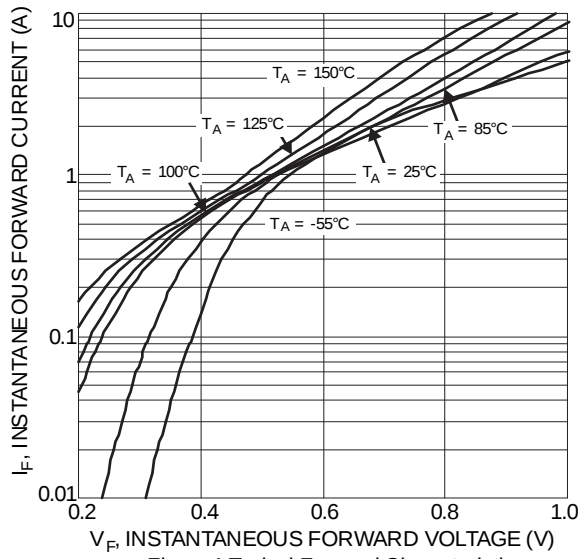
## Thermal Characteristics

| Characteristic                                          | Symbol                            | Value       | Unit |
|---------------------------------------------------------|-----------------------------------|-------------|------|
| Typical Thermal Resistance Junction to Ambient (Note 6) | SMA<br>SMB<br>R <sub>θJA</sub>    | 95<br>90    | °C/W |
| Typical Thermal Resistance Junction to Case (Note 6)    | SMA<br>SMB<br>R <sub>θJC</sub>    | 45<br>40    | °C/W |
| Operating and Storage Temperature Range                 | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C   |

## Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                            | Symbol         | Min | Typ | Max       | Unit | Test Condition                                                                                                                                |
|-------------------------------------------|----------------|-----|-----|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Forward Voltage Drop                      | V <sub>F</sub> | —   | —   | 0.65<br>— | V    | I <sub>F</sub> = 1A, T <sub>J</sub> = +25°C<br>I <sub>F</sub> = 1A, T <sub>J</sub> = +125°C                                                   |
| B150AE/B150BE<br>Leakage Current (Note 7) | I <sub>R</sub> | —   | —   | 0.1<br>—  | mA   | V <sub>R</sub> = 50V, T <sub>J</sub> = +25°C<br>V <sub>R</sub> = 60V, T <sub>J</sub> = +25°C<br>V <sub>R</sub> = 60V, T <sub>J</sub> = +125°C |
| B160AE/B160BE                             |                | —   | 8.0 | —         |      |                                                                                                                                               |
| Typical Capacitance                       | C <sub>T</sub> | —   | 45  | —         | pF   | V <sub>R</sub> = 4.0V, f = 1MHz                                                                                                               |

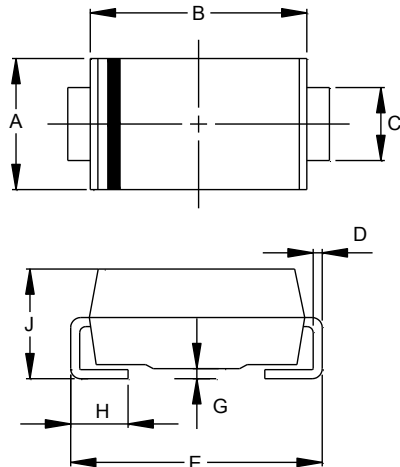
Notes: 6. Device mounted on FR-4 substrate, 0.4" × 0.5", 2oz, single-sided, PC boards with 0.2" × 0.25" copper pad.  
7. Short duration pulse test used to minimize self-heating effect.



## Package Outline Dimensions

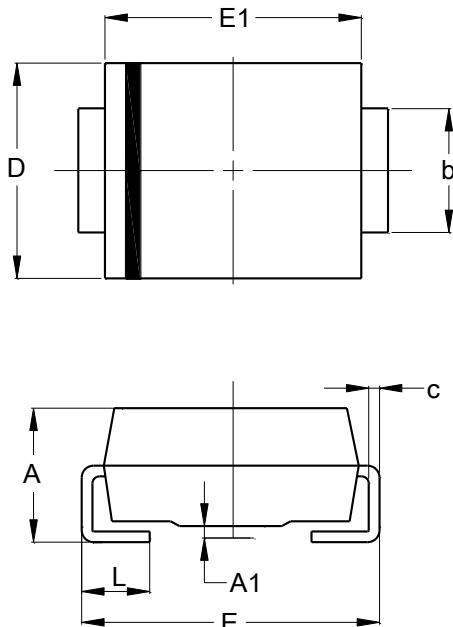
Please see <http://www.diodes.com/package-outlines.html> for the latest version.

### (1) Package Type: SMA



| SMA                  |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.29 | 2.92 |
| B                    | 4.00 | 4.60 |
| C                    | 1.27 | 1.63 |
| D                    | 0.15 | 0.31 |
| E                    | 4.80 | 5.59 |
| G                    | 0.05 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 1.96 | 2.40 |
| All Dimensions in mm |      |      |

### (2) Package Type: SMB

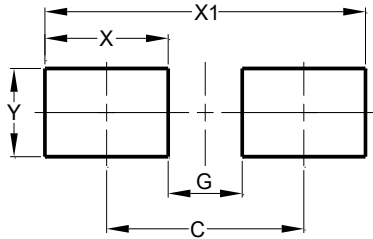


| SMB                  |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.00 | 2.50 |
| A1                   | 0.05 | 0.20 |
| b                    | 1.96 | 2.21 |
| c                    | 0.15 | 0.31 |
| D                    | 3.30 | 3.94 |
| E                    | 5.00 | 5.59 |
| E1                   | 4.06 | 4.57 |
| L                    | 0.76 | 1.52 |
| All Dimensions in mm |      |      |

# Suggested Pad Layout

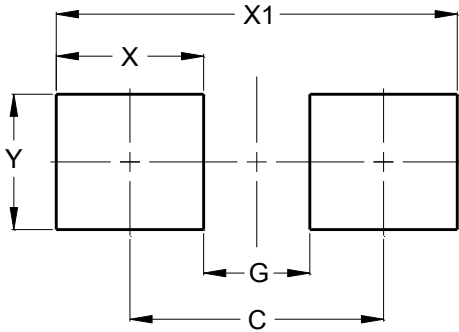
Please see <http://www.diodes.com/package-outlines.html> for the latest version.

## (1) Package Type: SMA



| Dimensions | Value (in mm) |
|------------|---------------|
| C          | 4.00          |
| G          | 1.50          |
| X          | 2.50          |
| X1         | 6.50          |
| Y          | 1.70          |

## (2) Package Type: SMB



| Dimensions | Value (in mm) |
|------------|---------------|
| C          | 4.30          |
| G          | 1.80          |
| X          | 2.50          |
| X1         | 6.80          |
| Y          | 2.30          |

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