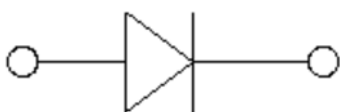


## General Purpose Pin Diodes



### Features

- Moisture sensitivity level 1
- Low diode capacitance
- Low diode forward resistance
- Small inductance

### Application

- Surface mount band-switching circuits.

### Mechanical data

- **Package:** SOD-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| Parameter                       | Symbol    | Unit               | Value       |
|---------------------------------|-----------|--------------------|-------------|
| Device marking code             |           |                    | A2          |
| Repetitive peak reverse voltage | $V_{RRM}$ | V                  | 35          |
| Forward current                 | $I_F$     | mA                 | 100         |
| Power dissipation               | $P_D$     | mW                 | 150         |
| Junction temperature            | $T_J$     | $^{\circ}\text{C}$ | -55 to +125 |
| Storage temperature             | $T_{STG}$ | $^{\circ}\text{C}$ | -55 to +125 |

■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| Parameter                | Symbol          | Unit | Conditions                    | Min | Typ | Max |
|--------------------------|-----------------|------|-------------------------------|-----|-----|-----|
| Breakdown voltage        | V <sub>R</sub>  | V    | I <sub>R</sub> =10uA          | 35  |     |     |
| Forward voltage          | V <sub>F</sub>  | V    | I <sub>F</sub> =10mA          |     |     | 1   |
| Reverse leakage current  | I <sub>R1</sub> | nA   | V <sub>R</sub> =20V           |     |     | 20  |
| Junction capacitance     | C <sub>J1</sub> | pF   | V <sub>R</sub> =1V, f =1MHZ   |     | 1.6 |     |
|                          | C <sub>J2</sub> | pF   | V <sub>R</sub> =3V, f =1MHZ   |     | 1.3 |     |
|                          | C <sub>J3</sub> | pF   | V <sub>R</sub> =6V, f =1MHZ   |     | 1.2 |     |
| Diode forward resistance | r <sub>D</sub>  | Ω    | I <sub>F</sub> =2mA; f=100MHz |     |     | 0.9 |

## ■ Thermal Characteristics

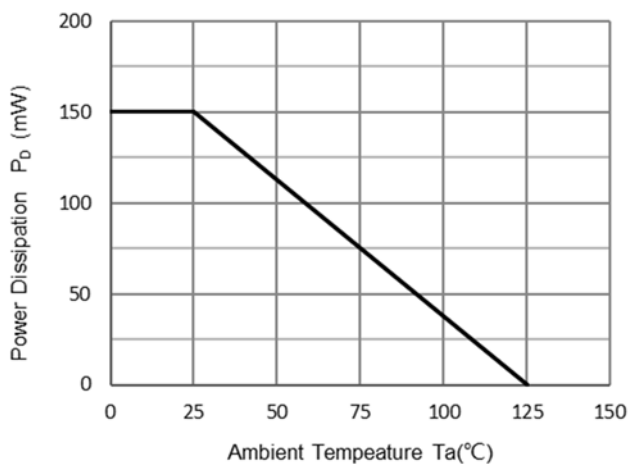
| Parameter                               | Symbol                           | Unit | Value |
|-----------------------------------------|----------------------------------|------|-------|
| Thermal resistance, junction-to-ambient | R <sub>θJ-A</sub> <sup>(1)</sup> | °C/W | 666   |
| Thermal resistance, junction-to-case    | R <sub>θJ-C</sub> <sup>(1)</sup> | °C/W | 533   |

## Note:

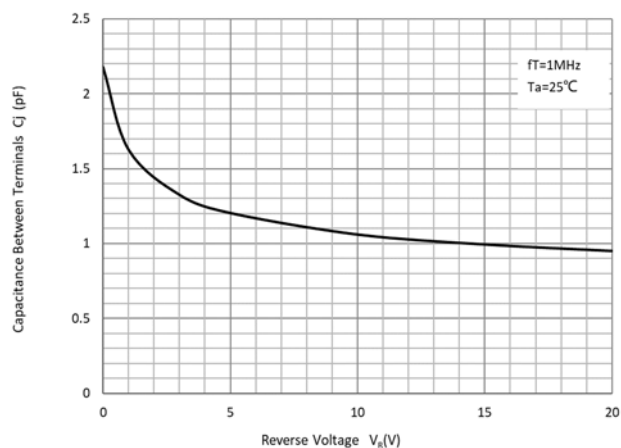
(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm\*9mm copper pad areas

## ■ Characteristics

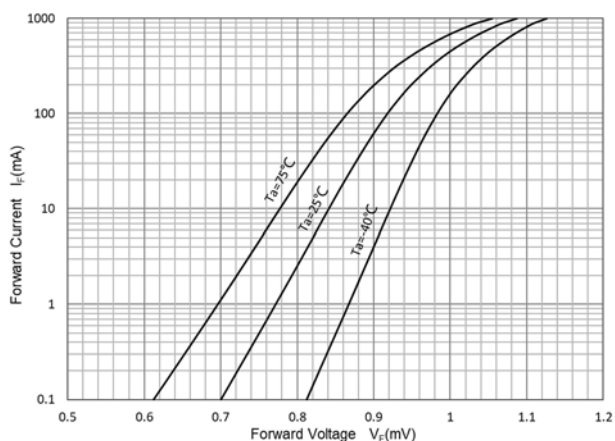
**Fig 1:  $P_D$ - $T_a$  Curve**



**Fig 2: Capacitance Capability**



**Fig 3: Typical Forward Characteristics**





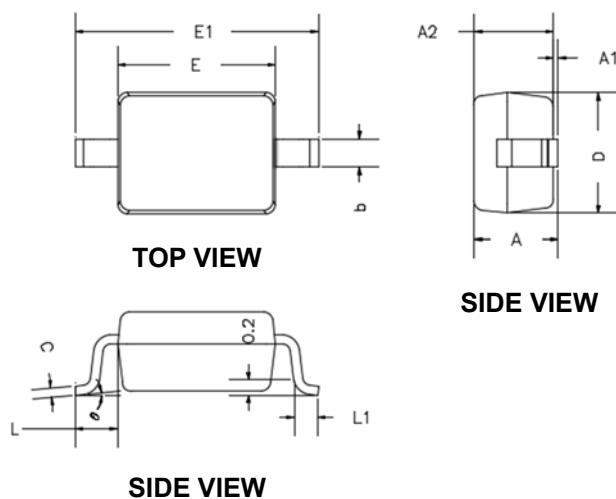
# BA592

**RoHS**  
COMPLIANT

## ■ Ordering Information

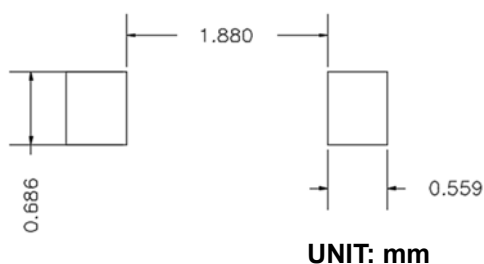
| Preferred P/N | Packing code | Unit weight(g)     | Minimum package(pcs) | Inner box quantity(pcs) | Outer carton quantity(pcs) | Delivery mode |
|---------------|--------------|--------------------|----------------------|-------------------------|----------------------------|---------------|
| BA592         | F2           | Approximate 0.0048 | 3000                 | 30000                   | 120000                     | 7" reel       |
| BA592         | F3           | Approximate 0.0048 | 10000                | /                       | 210000                     | 13" reel      |

## ■ Outline Dimensions



| DIMENSIONS |           |        |          |        |
|------------|-----------|--------|----------|--------|
| DIM        | INCHES    |        | MM       |        |
|            | MIN       | MAX    | MM       | MAX    |
| A          | ---       | 0.0393 | ---      | 1.0000 |
| A1         | 0.0000    | 0.0039 | 0.0000   | 0.1000 |
| A2         | 0.0314    | 0.0354 | 0.8000   | 0.9000 |
| b          | 0.0098    | 0.0157 | 0.2500   | 0.4000 |
| c          | 0.0031    | 0.0059 | 0.0800   | 0.1500 |
| D          | 0.0472    | 0.0551 | 1.2000   | 1.4000 |
| E          | 0.0629    | 0.0709 | 1.6000   | 1.8000 |
| E1         | 0.0984    | 0.1063 | 2.5000   | 2.7000 |
| L          | 0.0187TYP |        | 0.475TYP |        |
| L1         | 0.0098    | 0.0157 | 0.250    | 0.400  |
| θ          | 0°        | 8°     | 0°       | 8°     |

## ■ Suggested Pad Layout





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