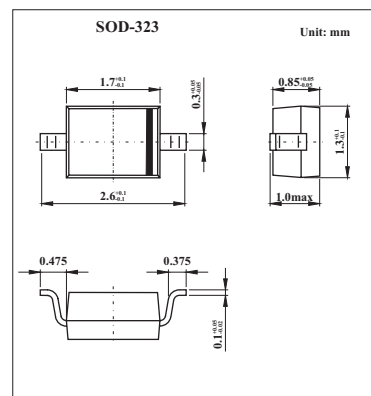


## SILICON SWITCHING DIODE

## BAS16-03W

## ■ Features

- For high-speed Switching applications

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                                                 | Symbol     | Value       | Unit             |
|-----------------------------------------------------------|------------|-------------|------------------|
| Diode reverse voltage                                     | $V_R$      | 80          | V                |
| Peak reverse voltage                                      | $V_{RM}$   | 85          |                  |
| Forward current                                           | $I_F$      | 250         | mA               |
| Non-repetitive peak surge forward current $t = 1.0 \mu s$ | $I_{FSM}$  | 4.5         | A                |
| Total power dissipation $T_s \leq 116^\circ\text{C}$      | $P_{tot}$  | 250         | mW               |
| Junction Temperature                                      | $T_j$      | 150         | $^\circ\text{C}$ |
| Storage Temperature                                       | $T_{stg}$  | -65 to +150 |                  |
| Junction soldering point <sup>(1)</sup>                   | $R_{thJS}$ | $\leq 135$  | K/W              |

Note:

1. For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

## SILICON SWITCHING DIODE

## BAS16-03W

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                                                                                                                                | Symbol     | Min | Typ | Max  | Unit          |
|------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|-----|------|---------------|
| Breakdown voltage<br>$I_{(BR)} = 100\ \mu\text{A}$                                                                                       | $V_{(BR)}$ | 85  |     |      | V             |
| Reverse current<br>$V_R = 75\text{ V}$<br>$V_R = 25\text{ V}, T_a = 150^\circ\text{C}$<br>$V_R = 75\text{ V}, T_a = 150^\circ\text{C}$   | $I_R$      |     |     | 0.1  | $\mu\text{A}$ |
|                                                                                                                                          |            |     |     | 30   |               |
|                                                                                                                                          |            |     |     | 50   |               |
| Forward voltage<br>$I_F = 1\text{ mA}$<br>$I_F = 10\text{ mA}$<br>$I_F = 50\text{ mA}$<br>$I_F = 100\text{ mA}$<br>$I_F = 150\text{ mA}$ | $V_F$      |     |     | 715  | mV            |
|                                                                                                                                          |            |     |     | 855  |               |
|                                                                                                                                          |            |     |     | 1000 |               |
|                                                                                                                                          |            |     |     | 1200 |               |
|                                                                                                                                          |            |     |     | 1250 |               |
| Forward recovery voltage<br>$I_F = 10\text{ mA}, t_p = 20\text{ ns}$                                                                     | $V_{fr}$   |     |     | 1.75 | V             |
| Diode capacitance<br>$V_R = 0; f = 1\text{ MHz}$                                                                                         | $C_T$      |     |     | 2    | V             |
| Reverse Recovery Time<br>$I_F = 10\text{ mA}; I_R = 10\text{ mA};$ measured at $I_R = 1\text{ mA}, R_L = 100\ \Omega$                    | $t_{rr}$   |     |     | 4    | nS            |

## ■ Marking

|         |   |
|---------|---|
| Marking | B |
|---------|---|