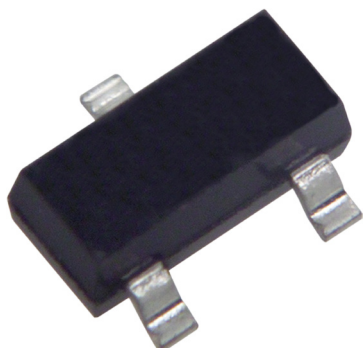


# Surface Mount Barrier Diode

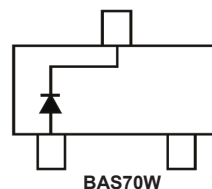


## Features:

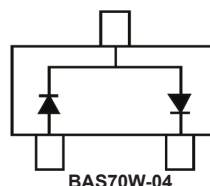
- Low turn-on voltage
- High breakdown voltage
- Guard ring protected
- Low capacitance
- Very small SMD package

## Applications:

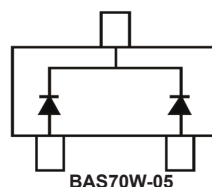
- High speed switching applications



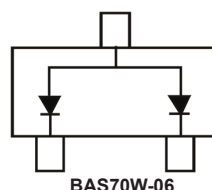
BAS70W



BAS70W-04



BAS70W-05



BAS70W-06

## Maximum Rating @ Ta=25°C (unless otherwise specified):

| Characteristic                                                                        | Symbol                          | Value       | Unit |
|---------------------------------------------------------------------------------------|---------------------------------|-------------|------|
| Peak repetitive reverse voltage<br>Working peak reverse voltage<br>DC reverse voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 70          | V    |
| Forward continuous current                                                            | $I_F$                           | 70          | mA   |
| Non-repetitive peak forward surge current @ $t_p=1\mu s$                              | $I_{FS}$                        | 100         | mA   |
| Power dissipation                                                                     | $P_D$                           | 200         | mW   |
| Junction temperature                                                                  | $T_J$                           | 150         | °C   |
| Storage temperature range                                                             | $T_{STG}$                       | -65 to +150 | °C   |

# Surface Mount Barrier Diode

**Electrical Characteristics @ Ta=25°C** (unless otherwise specified):

| Characteristic            | Symbol      | Min. | Max.         | Unit | Test Condition                                              |
|---------------------------|-------------|------|--------------|------|-------------------------------------------------------------|
| Reverse breakdown voltage | $V_{(BR)R}$ | 70   | -            | V    | $I_R = 10A$                                                 |
| Forward voltage           | $V_F$       | -    | 410<br>1,000 | mV   | $t_p < 300\mu s, I_F = 1mA$<br>$t_p < 300\mu s, I_F = 15mA$ |
| Reverse leakage current   | $I_R$       | -    | 100          | nA   | $t_p < 300\mu s, V_R = 50V$                                 |
| Junction capacitance      | $C_J$       | -    | 2            | pF   | $V_R = 0V, f = 1MHz$                                        |
| Reverse recovery time     | $t_{rr}$    | -    | 5            | ns   | $I_F = I_R = 10mA$<br>$R_L = 100\Omega$                     |

**Typical Characteristics @ Ta=25°C** (unless otherwise specified):

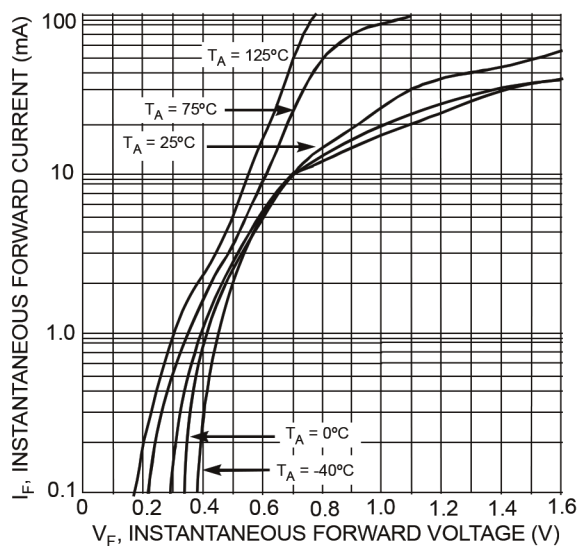


Fig. 1 Typical Forward Characteristics

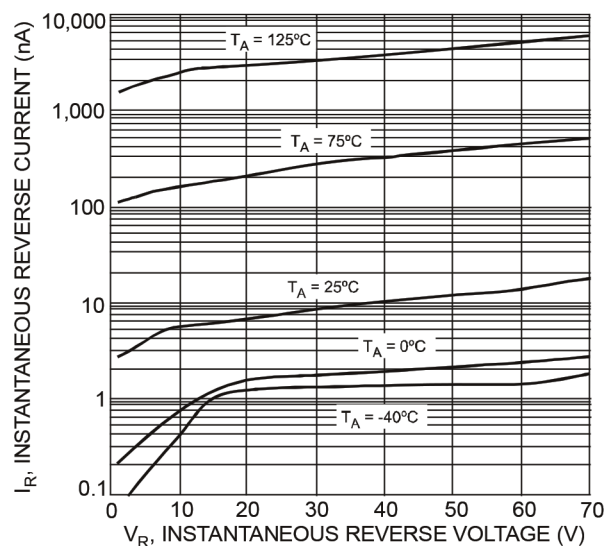


Fig. 2 Typical Reverse Characteristics

# Surface Mount Barrier Diode

Typical Characteristics @  $T_a=25^\circ\text{C}$  (unless otherwise specified):

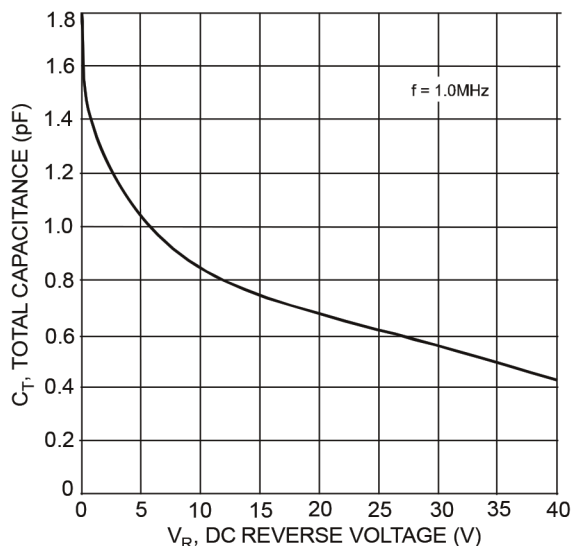


Fig. 3 Total Capacitance vs. Reverse Voltage

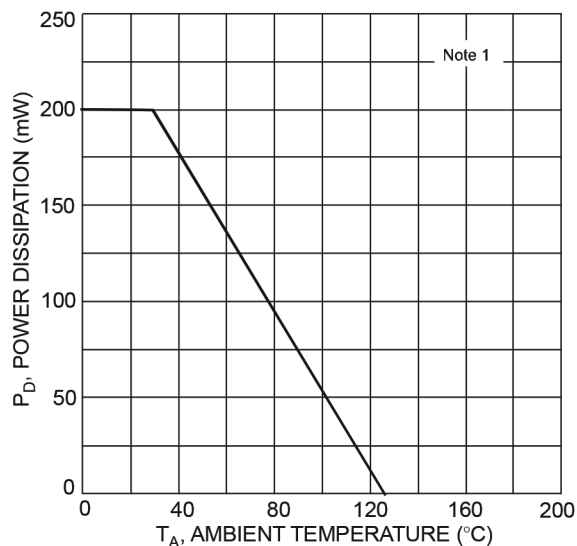
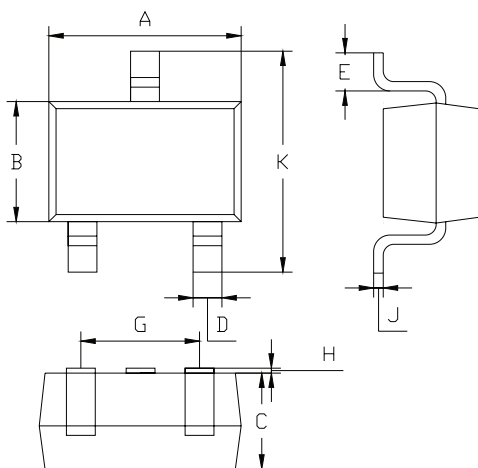


Fig. 4 Power Derating Curve, Total Package

## Package Outline

Plastic Surface Mounted Package

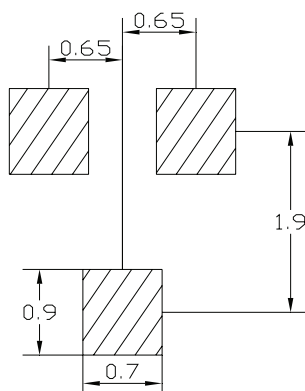


| SOT-323 |             |      |
|---------|-------------|------|
| Dim     | Min         | Max  |
| A       | 1.8         | 2.2  |
| B       | 1.15        | 1.35 |
| C       | 1 Typical   |      |
| D       | 0.15        | 0.35 |
| E       | 0.25        | 0.4  |
| G       | 1.2         | 1.4  |
| H       | 0.02        | 0.1  |
| J       | 0.1 Typical |      |
| K       | 2.1         | 2.3  |

Dimensions : Millimetres

# Surface Mount Barrier Diode

## Soldering Footprint



Dimensions : Millimetres

## Part Number Table

| Description                       | Part Number |
|-----------------------------------|-------------|
| Diode, Schottky, 70V, SOT323      | BAS70W      |
| Diode, Dual Schottky, 70V, SOT323 | BAS70W-04   |
|                                   | BAS70W-05   |
|                                   | BAS70W-06   |

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