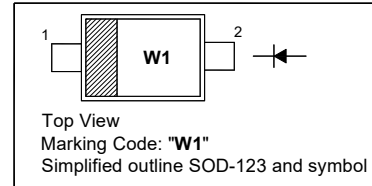


# BAS216W

## Silicon Epitaxial Planar Switching Diode

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |

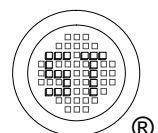


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                                 | Symbol    | Value         | Unit             |
|-------------------------------------------|-----------|---------------|------------------|
| Repetitive Peak Reverse Voltage           | $V_{RRM}$ | 85            | V                |
| Reverse Voltage                           | $V_R$     | 75            | V                |
| Continuous Forward Current                | $I_F$     | 250           | mA               |
| Repetitive Peak Forward Current           | $I_{FRM}$ | 500           | mA               |
| Non-repetitive Peak Forward Surge Current | $I_{FSM}$ | 0.5<br>1<br>4 | A                |
| Power Dissipation                         | $P_{tot}$ | 400           | mW               |
| Junction Temperature                      | $T_j$     | 150           | $^\circ\text{C}$ |
| Storage Temperature Range                 | $T_{stg}$ | - 65 to + 150 | $^\circ\text{C}$ |

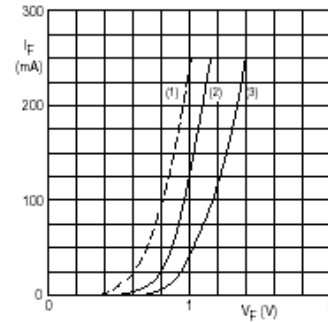
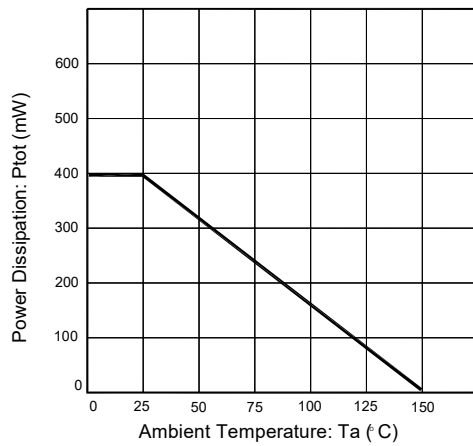
### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                                                                                                                                                       | Symbol    | Max.                        | Unit                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|-------------------------------------------------------|
| Forward Voltage<br>at $I_F = 1\text{ mA}$<br>at $I_F = 10\text{ mA}$<br>at $I_F = 50\text{ mA}$<br>at $I_F = 150\text{ mA}$                                                     | $V_F$     | 0.715<br>0.855<br>1<br>1.25 | V                                                     |
| Reverse Current<br>at $V_R = 25\text{ V}$<br>at $V_R = 75\text{ V}$<br>at $V_R = 25\text{ V}$ , $T_j = 150^\circ\text{C}$<br>at $V_R = 75\text{ V}$ , $T_j = 150^\circ\text{C}$ | $I_R$     | 30<br>1<br>30<br>50         | nA<br>$\mu\text{A}$<br>$\mu\text{A}$<br>$\mu\text{A}$ |
| Diode Capacitance<br>at $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$                                                                                                                 | $C_{tot}$ | 1.5                         | pF                                                    |
| Reverse Recovery Time<br>at $I_F = 10\text{ mA}$ , $V_R = 6\text{ V}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\ \Omega$                                                         | $t_{rr}$  | 4                           | ns                                                    |



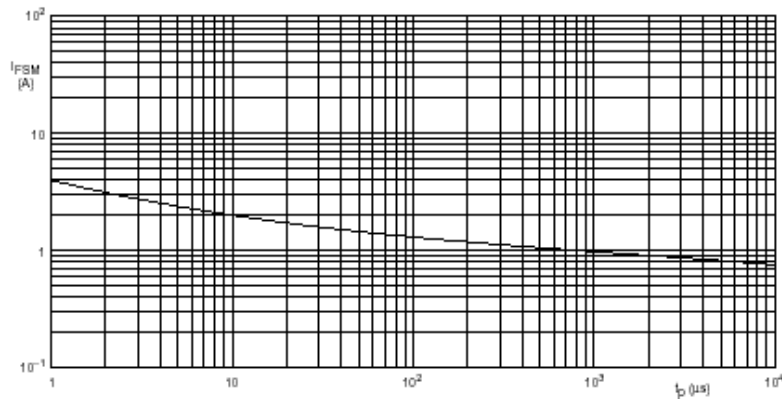
## Electrical Characteristics Curves

Power Dissipation vs Ambient Temperature



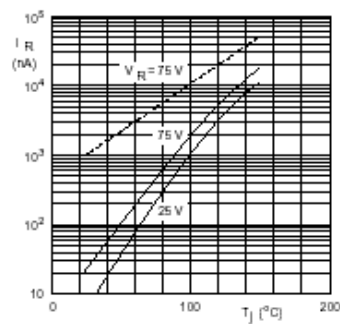
- (1)  $T_j = 150^\circ\text{C}$ ; typical values.  
 (2)  $T_j = 25^\circ\text{C}$ ; typical values.  
 (3)  $T_j = 25^\circ\text{C}$ ; maximum values.

Forward current as a function of forward voltage.



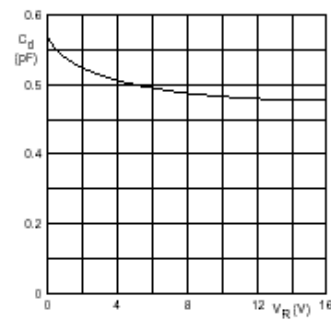
Based on square wave currents.  
 $T_j = 25^\circ\text{C}$  prior to surge.

Maximum permissible non-repetitive peak forward current as a function of pulse duration.



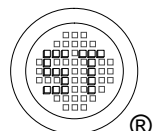
Dotted line: maximum values.  
 Solid line: typical values.

Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$ ;  $T_j = 25^\circ\text{C}$ .

Diode capacitance as a function of reverse voltage; typical values.

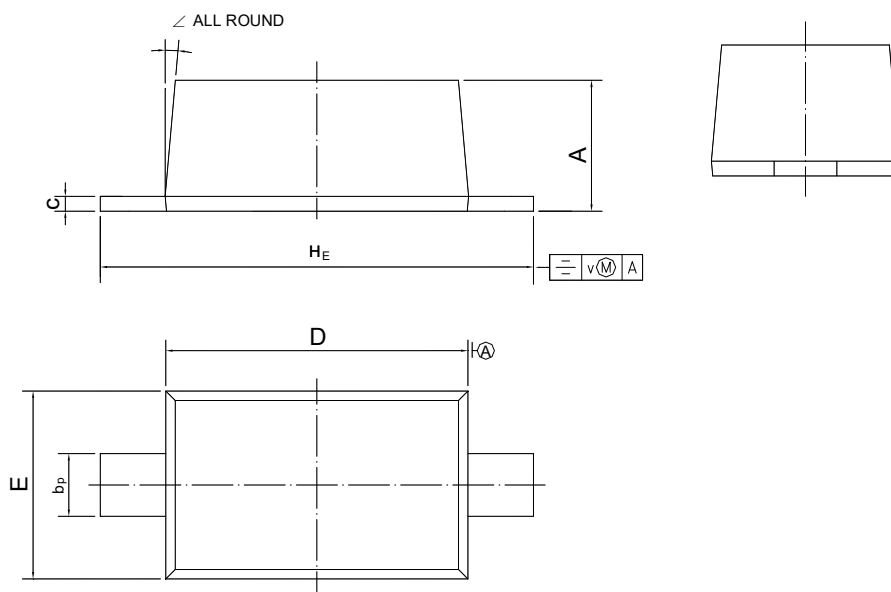


# BAS216W

## PACKAGE OUTLINE

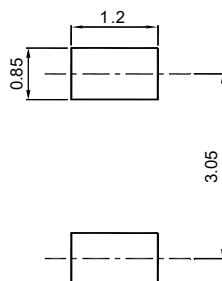
Plastic surface mounted package; 2 leads

SOD-123



| UNIT | A            | b <sub>p</sub> | c              | D          | E            | H <sub>E</sub> | v   | ∠  |
|------|--------------|----------------|----------------|------------|--------------|----------------|-----|----|
| mm   | 1.15<br>1.05 | 0.6<br>0.5     | 0.135<br>0.100 | 2.7<br>2.6 | 1.65<br>1.55 | 3.85<br>3.55   | 0.2 | 5° |

## Recommended Soldering Footprint



## Packing information

| Package | Tape Width (mm) | Pitch   |               | Reel Size |        | Per Reel Packing Quantity |
|---------|-----------------|---------|---------------|-----------|--------|---------------------------|
|         |                 | mm      | (inch)        | mm        | (inch) |                           |
| SOD-123 | 8               | 4 ± 0.1 | 0.157 ± 0.004 | 178       | 7      | 3,000                     |

## Marking information

"W1" = Part No

"III" = Cathode line

Font type: Arial

