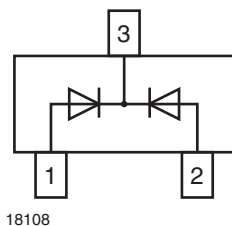




## Small Signal Switching Diode, Dual



## FEATURES

- Silicon epitaxial planar diode
- Fast switching dual diode with common cathode
- AEC-Q101 qualified available (part number on request)
- Base P/N-G3 - green, commercial grade
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

**DESIGN SUPPORT TOOLS** click logo to get started



## MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 8.1 mg

**Packaging codes / options:**

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

## PARTS TABLE

| PART    | ORDERING CODE              | CIRCUIT CONFIGURATION | TYPE MARKING | REMARKS       |
|---------|----------------------------|-----------------------|--------------|---------------|
| BAV70-G | BAV70-G3-08 or BAV70-G3-18 | Common cathode        | JJG          | Tape and reel |

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                           | TEST CONDITION         | SYMBOL    | VALUE | UNIT |
|-------------------------------------|------------------------|-----------|-------|------|
| Peak reverse voltage                |                        | $V_{RRM}$ | 70    | V    |
| Reverse voltage                     |                        | $V_R$     | 70    | V    |
| Forward current (continuous)        |                        | $I_F$     | 250   | mA   |
| Non repetitive peak forward current | $t_p = 1\ \mu\text{s}$ | $I_{FSM}$ | 2     | A    |
|                                     | $t_p = 1\ \text{ms}$   | $I_{FSM}$ | 1     | A    |
|                                     | $t_p = 1\ \text{s}$    | $I_{FSM}$ | 0.5   | A    |
| Power dissipation <sup>(1)</sup>    |                        | $P_{tot}$ | 350   | mW   |

## Note

<sup>(1)</sup> Device on fiberglass substrate

THERMAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                                                 | TEST CONDITION | SYMBOL     | VALUE       | UNIT               |
|-----------------------------------------------------------|----------------|------------|-------------|--------------------|
| Thermal resistance junction to ambient air <sup>(1)</sup> |                | $R_{thJA}$ | 430         | K/W                |
| Junction temperature                                      |                | $T_j$      | 150         | $^{\circ}\text{C}$ |
| Storage temperature range                                 |                | $T_{stg}$  | -65 to +150 | $^{\circ}\text{C}$ |
| Operating temperature range                               |                | $T_{op}$   | -55 to +150 | $^{\circ}\text{C}$ |

## Note

<sup>(1)</sup> Device on fiberglass substrate

| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                                                                                              |          |      |      |       |               |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------|------|------|-------|---------------|
| PARAMETER                                                                                                | TEST CONDITION                                                                               | SYMBOL   | MIN. | TYP. | MAX.  | UNIT          |
| Forward voltage                                                                                          | $I_F = 1\text{ mA}$                                                                          | $V_F$    |      |      | 0.715 | V             |
|                                                                                                          | $I_F = 10\text{ mA}$                                                                         | $V_F$    |      |      | 0.855 | V             |
|                                                                                                          | $I_F = 50\text{ mA}$                                                                         | $V_F$    |      |      | 1     | V             |
|                                                                                                          | $I_F = 150\text{ mA}$                                                                        | $V_F$    |      |      | 1.25  | V             |
| Reverse current                                                                                          | $V_R = 70\text{ V}$                                                                          | $I_R$    |      |      | 2500  | nA            |
|                                                                                                          | $V_R = 70\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$                                       | $I_R$    |      |      | 50    | $\mu\text{A}$ |
|                                                                                                          | $V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$                                       | $I_R$    |      |      | 30    | $\mu\text{A}$ |
| Diode capacitance                                                                                        | $V_R = 0\text{ V}, f = 1\text{ MHz}$                                                         | $C_D$    |      |      | 1.5   | pF            |
| Reverse recovery time                                                                                    | $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$ ,<br>$V_R = 6\text{ V}, R_L = 100\text{ }\Omega$ | $t_{rr}$ |      |      | 6     | ns            |

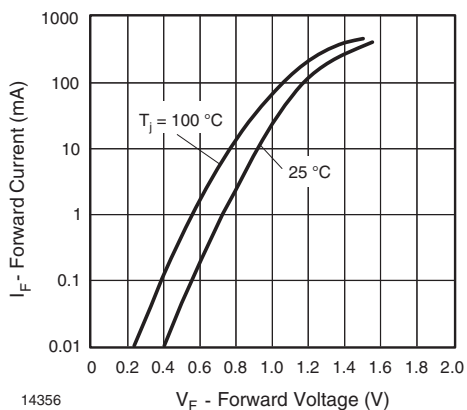
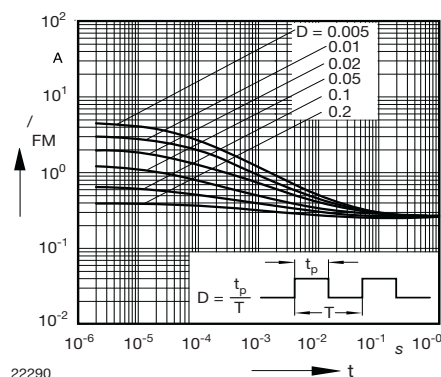
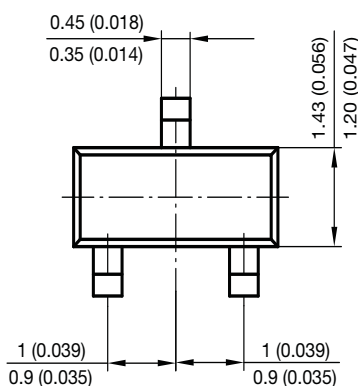
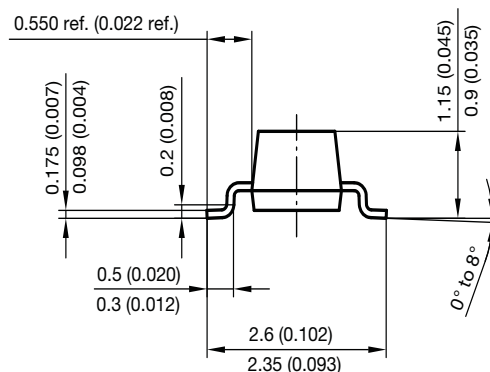
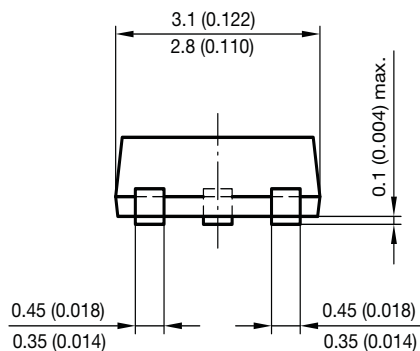
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

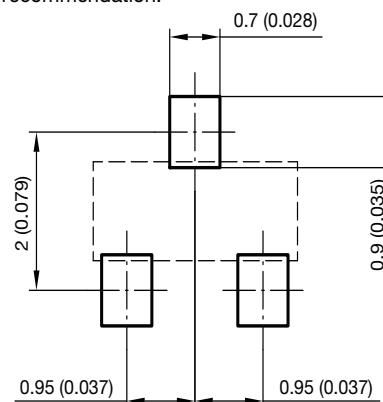

Fig. 2 - Peak forward current/ $I_{FM} = f(t_p)$



**PACKAGE DIMENSIONS** in millimeters (inches): **SOT-23**



Foot print recommendation:



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17418



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