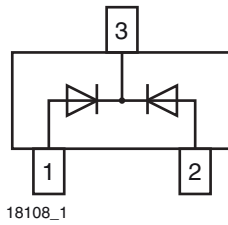
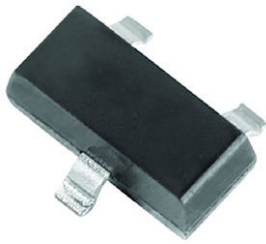




# Small Signal Switching Diode, Dual



18108\_1

### 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       |
| BAV23C-G    | BAV23C-G3-08 or BAV23C-G3-18 | Common cathode        | KT7          | Tape and reel |

| ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                            |           |       |      |
|---|----------------------------|-----------|-------|------|
| PARAMETER   | TEST CONDITION             | SYMBOL    | VALUE | UNIT |
| Continuous reverse voltage  |                            | $V_R$     | 200   | V    |
| Repetitive peak reverse voltage   |                            | $V_{RRM}$ | 250   | V    |
| Non-repetitive peak forward current   | $t = 1\text{ }\mu\text{s}$ | $I_{FSM}$ | 9.0   | A    |
| Non-repetitive peak forward surge current   | $t = 1\text{ s}$           | $I_{FSM}$ | 0.5   | A    |
| Maximum average forward rectified current <sup>(1)</sup>  |                            | $I_{FAV}$ | 200   | mA   |
| Forward continuous current <sup>(2)</sup>   |                            | $I_F$     | 400   | mA   |
| Repetitive peak forward current   |                            | $I_{FRM}$ | 625   | mA   |
| Power dissipation <sup>(2)</sup>  |                            | $P_{tot}$ | 350   | mW   |

#### Notes

<sup>(1)</sup> Measured under pulse conditions; pulse time =  $t_p \leq 0.3\text{ ms}$

<sup>(2)</sup> Device on fiberglass substrate

| THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                |            |             |                    |
|--|----------------|------------|-------------|--------------------|
| PARAMETER  | TEST CONDITION | SYMBOL     | VALUE       | UNIT               |
| Thermal resistance junction to ambient air <sup>(1)</sup>                                      |                | $R_{thJA}$ | 357         | 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          |
| Breakdown voltage  | $I_R = 100\text{ }\mu\text{A}$ , $t_p = 300\text{ }\mu\text{s}$                 | $V_{(BR)}$ | 250  |      |      | V             |
| Forward voltage  | $I_F = 100\text{ mA}$   | $V_F$      |      |      | 1    | V             |
|  | $I_F = 200\text{ mA}$   | $V_F$      |      |      | 1.25 | V             |
| Reverse current  | $V_R = 200\text{ V}$  | $I_R$      |      |      | 100  | nA            |
|  | $V_R = 200\text{ V}$ , $T_j = 150\text{ }^{\circ}\text{C}$                      | $I_R$      |      |      | 100  | $\mu\text{A}$ |
| Dynamic forward resistance   | $I_F = 10\text{ mA}$  | $r_f$      |      | 5    |      | $\Omega$      |
| Diode capacitance  | $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$   | $C_D$      |      |      | 5    | pF            |
| Reverse recovery time  | $I_F = I_R = 30\text{ mA}$ , $i_R = 3\text{ mA}$ ,<br>$R_L = 100\text{ }\Omega$ | $t_{rr}$   |      |      | 50   | ns            |

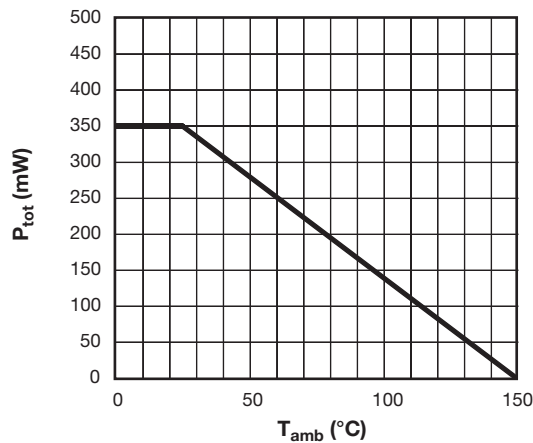


Fig. 1 -  $P_{tot}$  - Admissible Power Dissipation vs. Ambient Temperature

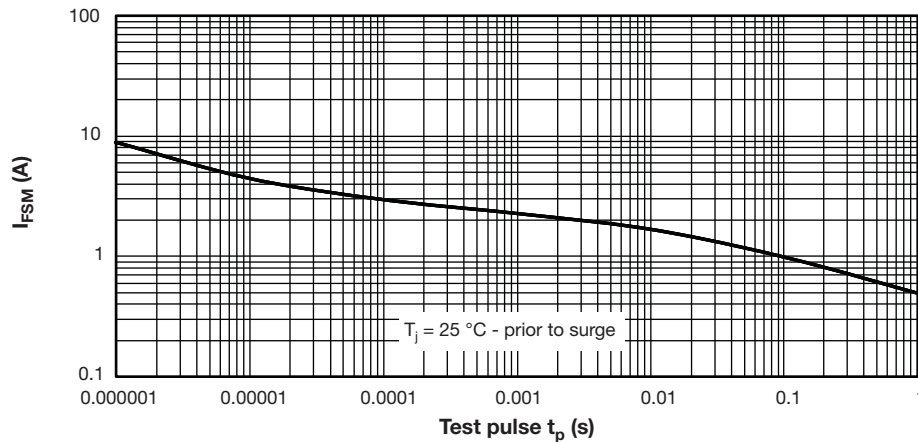


Fig. 2 -  $I_{FSM}$  - Non-Repetitive Peak Forward Current vs. Pulse Duration - Maximum Admissible Values of Square Pulses

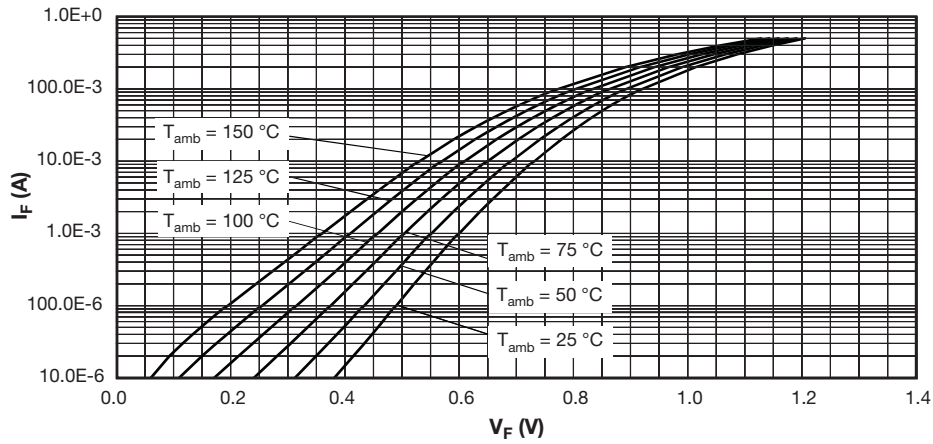


Fig. 3 -  $V_F$  - Typical Forward Current vs. Forward Voltage vs. Various Temperatures

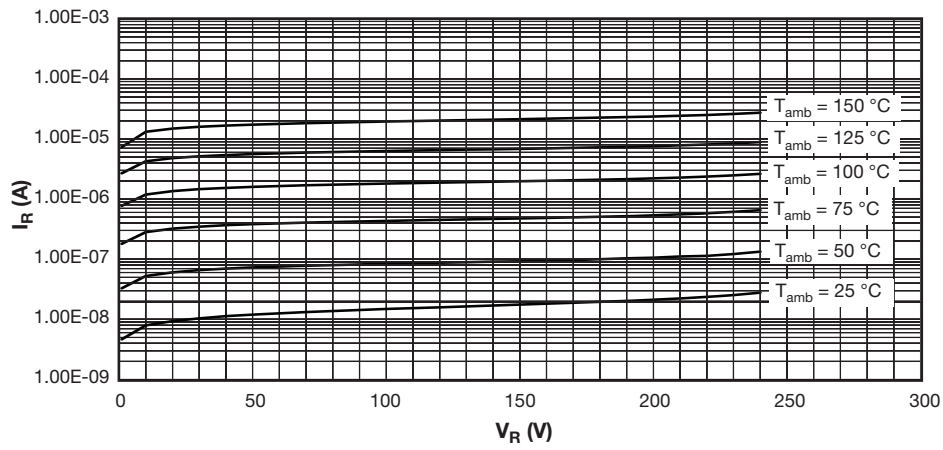
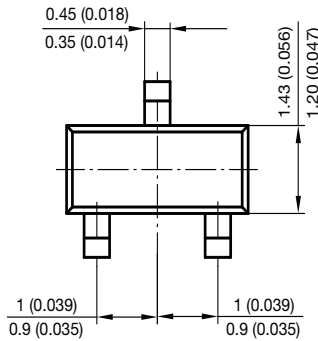
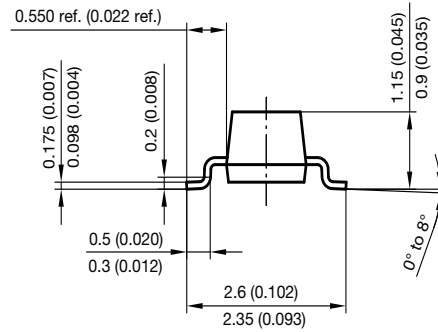
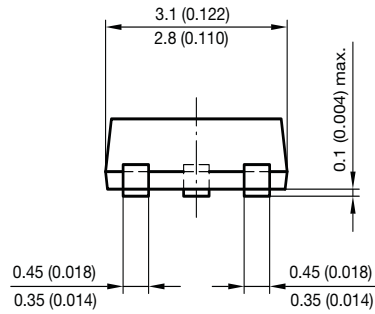


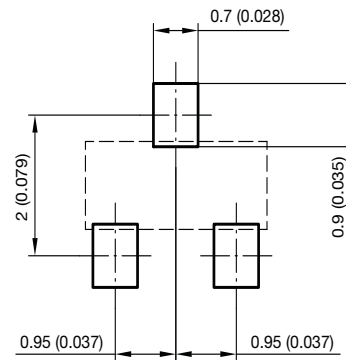
Fig. 4 -  $I_R$  - Typical Reverse Current vs. Reverse Voltage vs. Various Temperatures



PACKAGE DIMENSIONS in millimeters (inches): SOT-23



Foot print recommendation:



Document no.: 6.541-5014.01-4  
Rev. 8 - Date: 23.Sept.2009  
17418



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